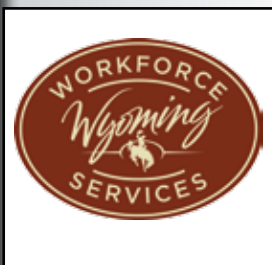
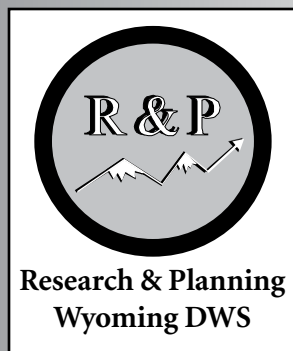


Higher Wages and More Work: Impact Evaluation of a State- Funded Incumbent Worker Training Program

**Appendix
February 2016**



Higher Wages and More Work: Impact Evaluation of a State-Funded Incumbent Worker Training Program

Appendix

Wyoming Department of Workforce Services

John Cox, Director

Internet Address: <http://doe.state.wy.us/LMI/>

Research & Planning

Tom Gallagher, Manager

Prepared by: Patrick Manning, Principal Economist, and Michael Moore, Editor

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Research & Planning

P.O. Box 2760

Casper, WY 82602

Phone: (307) 473-3807

Fax: (307) 473-3834

R&P Website: <http://doe.state.wy.us/LMI/>

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The Workforce Innovation and Opportunity Act of 2014: Required Training Program Impact Evaluation

The key purposes of the Workforce Innovation and Opportunity Act (WIOA) are to “improve the quality and labor market relevance of workforce investment, education, and economic development efforts to provide America’s workers with the skills and credentials necessary to secure and advance employment with family-sustaining wages and to provide America’s employers with the skilled workers the employers need to succeed in a global economy” (H.R. 803, 2014). The only way to empirically determine whether or not programs funded by WIOA attain the goals that fall under these purposes is through experimental impact evaluation. Impact evaluation is denoted by its research design: the random assignment from the same population to a group who receive training and to another group who receive no services and who are subject to some measurement such as wage gain.

Sec. 116 of WIOA states:

“For the purpose of improving the management and effectiveness of programs and activities carried out under this title, the Secretary, through grants, contracts, or cooperative agreements, shall provide for the continuing evaluation of the programs and activities under this title, including those programs and activities carried out under this section.”

Sec. 116 dictates that these types of independent evaluations must be carried out at least once every four years, and that, “evaluations conducted under this subsection shall utilize appropriate and rigorous methodology and research designs, including the use of control groups chosen by scientific random assignment methodologies.”

However, training program managers are rarely willing to allow the random assignment of training applicants to training and non-training groups, necessitating research designs that approximate experimental design. This article demonstrates how program evaluation can be productively carried out using a State funded incumbent worker training program: Wyoming’s Workforce Development Training Fund (WDTF).

For the WDTF program evaluation discussed in this article, a control group of individuals who did not receive WDTF assistance was matched to the WDTF participants for each period of the start of WDTF training. While this paper focuses specifically on the WDTF participants from second quarter 2007 (*2007Q2 WDTF training cohort*), the remaining 21 WDTF training cohorts for periods 2006Q3 to 2011Q4 are presented in the Appendix at http://doe.state.wy.us/LMI/education_we_connect/WDTF_appendix.htm.

The purpose of this article is to demonstrate how valid program impact evaluation can be carried out when random assignment to training and non-training groups from the same population is not possible. A benefit of this near-experimental design is that it is unobtrusive and does not disrupt the WIOA program environment. Conclusions about training outcomes from near-experimental designs have shortcomings. However, these limitations can be addressed in particular through research replication in other settings and for other similar programs. The net result is that even though the requirement of WIOA for random assignment is unlikely to occur in many states, the intent of the law, that rigorous scientific methods guide impact analysis, can be carried out in all states.

Summary

Higher Wages and More Work: Impact Evaluation of a State-Funded Incumbent Worker Training Program

The Research & Planning (R&P) section of the Wyoming Department of Workforce Services has undertaken an impact evaluation of the Wyoming Workforce Development Training Fund (WDTF) as part of its Workforce Data Quality Initiative grant. For this research, R&P sought to answer these questions:

- Do WDTF participants earn higher wages after training than they would without training?
- Do trained workers remain in the workforce longer?

For the research presented in this article, *WDTF participants* refers to the group of individuals who received training or assistance through the Wyoming Workforce Development Training Fund. For example, there were 579 WDTF participants in second quarter 2007 (2007Q2). This group is referred to in this article as the *2007Q2 WDTF training cohort*; an analysis of each WDTF training cohort (a group of individuals who received WDTF training in a particular year and quarter) is available in this Appendix.

For this analysis, R&P created a *control group* of 24,677 individuals who did not receive WDTF training but had similar characteristics as WDTF participants, such as gender, age, quarters worked in the period prior to training, and quarterly mean wages in the period prior to training.

In this example, WDTF participants received training in 2007Q2. The *base period* refers to the quarter of training (2007Q2) and the three previous quarters

Feature Article in Trends

A feature article discussing the research, methodology, and results was published in a feature article in the January 2016 issue of *Wyoming Labor Force Trends*, which is available at <http://doe.state.wy.us/LMI/trends/0116/a1.htm>.

(2006Q3, 2006Q4, and 2007Q1).

Post-training period refers to the 12 quarters after the WDTF participants received training; in this example, 2007Q3 to 2010Q2.

The *mean quarterly wage difference* for WDTF participants and the control group was calculated by subtracting the mean quarterly wage of the base period from the mean quarterly wage of the post-training period. The mean quarterly wage difference for 2007Q2 WDTF participants was \$929¹: a post-training period mean quarterly wage of \$16,471 minus a base period mean quarterly wage of \$15,542. By comparison, the mean quarterly wage difference for the control group (non-WDTF participants) was \$17: a post-training period mean quarterly wage of \$15,243 minus a base period mean quarterly wage of \$15,226.

In summary, the mean quarterly wage difference of WDTF participants

(Text continued on page 7)

¹ All wages are discussed in 2014 inflation-adjusted dollars.

Table 1

Table 1a: Distribution of WDTF Participants by Grant Type, 2006Q2-2014Q2

Grant Type	N	%
Existing Position	12,756	90.9%
New Position	1,283	9.1%
Total	14,039	100.0%

Table 1b: Distribution of WDTF Participants by Training Type, 2006Q2-2014Q2

Type of Training	N	%
Conferences/Seminars	4,357	31.0%
Employee-Specific Tech. Training	2,370	16.9%
Industry - Specific Tech. Training	2,100	15.0%
New Equip. Training	111	0.8%
Technical - Agriculture	32	0.2%
Tech. - Arts/Ent.	13	0.1%
Technical - Construction	246	1.8%
Technical - Education	400	2.8%
Technical - Finance	163	1.2%
Tech. - Health Care	1,438	10.2%
Technical - Info. Management	360	2.6%
Technical - Lodging/Food	68	0.5%
Technical - Management/Leadership	1,067	7.6%
Technical - Manufacturing	363	2.6%
Technical - Mining/Extraction	353	2.5%
Tech. - Real Estate	9	0.1%
Technical - Recreation	18	0.1%
Technical - Sales	163	1.2%
Technical - Scientific	49	0.3%
Technical - Transportation	31	0.2%
Technical - Utilities	233	1.7%
Trade Shows/Conventions	95	0.7%
Total	14,039	100.0%

Table 1c: Distribution of WDTF Participants by Business Type, 2006Q2-2014Q2

Business Type	N	%
County Hospitals	1,896	13.5%
Not For Profit	3,305	23.5%
Private	8,838	63.0%
Total	14,039	100.0%

Table 1d: Distribution of Wyoming Workforce Development Training Fund (WDTF) Participants by Industry, 2006Q2-2014Q2

NAICS ^a Code	WDTF Industry	N	%
11	Agriculture	95	0.7%
21	Mining	1,548	11.0%
22	Utilities	724	5.2%
23	Construction	855	6.1%
42	Wholesale Trade	76	0.5%
51	Information	140	1.0%
52	Finance & Insurance	809	5.8%
53	Real Estate & Rental & Leasing	19	0.1%
54	Professional & Tech. Services	1,157	8.2%
55	Mgmt. Of Companies & Enterprises	7	0.0%
56	Admin. & Waste Services	7	0.0%
61	Educational Services	1,118	8.0%
62	Health Care & Social Assistance	4,055	28.9%
71	Arts, Ent., & Recreation	158	1.1%
72	Acc. & Food Services	819	5.8%
81	Other Svcs. (Exc. Public Admin.)	788	5.6%
31-33	Manufacturing	1,043	7.4%
44-45	Retail Trade	443	3.2%
48-49	Transportation & Warehousing	178	1.3%
Total		14,039	100.0%

Table 1e: Distribution of WDTF Participants by Business Size, 2006Q2-2014Q2

WDTF Business Size (Number of Employees)	N	%
1-5	843	6.0%
6-10	961	6.8%
11-25	1,707	12.2%
26-50	1,394	9.9%
51-100	1,580	11.3%
Over 100	7,554	53.8%
Total	14,039	100.0%

Table 1f: Distribution of Wyoming Workforce Development Training Fund (WDTF) Participants by Occupation (2 Digit SOC Code), 2006Q2-2014Q2

SOC ^b 2-Digit Code	Position (2 Digit SOC ^b Code)	N	%
11	Management	1,856	13.2%
13	Business & Financial Op.	917	6.5%
15	Computer & Mathematical	220	1.6%
17	Architecture & Engineering	668	4.8%
19	Life, Physical, & Social Science	111	0.8%
21	Community & Social Services	579	4.1%
23	Legal	22	0.2%
25	Ed., Training, & Library	926	6.6%
27	Arts, Design, Ent., Sports, & Media	161	1.1%
29	Health Care Practitioners & Technical	2,273	16.2%
31	Health Care Support	909	6.5%
33	Protective Service	17	0.1%
35	Food Prep. & Serving Related	293	2.1%
37	Building & Grounds Cleaning & Maint.	61	0.4%
39	Personal Care & Service	69	0.5%
41	Sales & Related	625	4.5%
43	Office & Admin. Support	846	6.0%
45	Farming, Fishing, & Forestry	29	0.2%
47	Construction & Extraction	1,343	9.6%
49	Installation, Maint., & Repair	996	7.1%
51	Production	961	6.8%
53	Trans. & Material Moving	79	0.6%
	None Specified	78	0.6%
Total		14,039	100.0%

^aNorth American Industry Classification System.^bStandard Occupational Classification System.

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

(Text continued from page 5)

from 2007Q2 (\$929) was statistically significantly higher than the mean quarterly wage difference of the control group (\$17). An analysis of each of the WDTF training cohorts from 2007Q2 to 2010Q2 indicated that WDTF participants from nine of the 12 cohorts experienced a greater average quarterly wage increase

from the base period to the post-training period than each control group from that particular year and quarter.

A more thorough discussion of the research, methodology, and results is presented in a feature article in the January 2016 issue of *Wyoming Labor Force Trends*, which is available at <http://doe.state.wy.us/LMI/trends/0116/a1.htm>.

Definitions

WDTF participants refers to the group of individuals who received training or assistance through the Wyoming Workforce Development Training Fund.

2007Q2 WDTF training cohort refers to 579 WDTF participants in second quarter 2007 (2007Q2).

Control group refers to 24,677 individuals who did not receive WDTF training but had similar characteristics as WDTF participants from 2007Q2, such as gender, age, quarters worked in the period prior to training, and quarterly mean wages in the period prior to training.

Base period refers to the quarter of training (2007Q2) and the three previous quarters (2006Q3, 2006Q4, and 2007Q1).

Post-training period refers to the 12 quarters after the WDTF participants received training; in this example, 2007Q3 to 2010Q2.

The *mean quarterly wage difference* for WDTF participants and the control group was calculated by subtracting the mean quarterly wage of the base period from the mean quarterly wage of the post-training period.

Table 1g: Distribution of Wyoming Workforce Development Training Fund (WDTF) Participants (Existing Positions Only) by Purpose of Training, 2006Q2-2014Q2

Purpose of Training	N and %	No	Yes	Total
Enhance Employee Wages	N %	10,154 79.6%	2,602 20.4%	12,756 100.0%
Reduce Turnover	N %	5,667 44.4%	7,089 55.6%	12,756 100.0%
Enhance Employee Effectiveness	N %	467 3.7%	12,289 96.3%	12,756 100.0%
Enhance Profitability	N %	4,096 32.1%	8,660 67.9%	12,756 100.0%

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 2: T-test of Real (Inflation-Adjusted) Mean Quarterly Wages (Wages at Start Year-Quarter and the 3 Quarters Prior) between WDTF Participants and Control Group (Non-WDTF Participants) for Each Cohort, 2006Q3 to 2011Q4

Start Year-Quarter	WDTF Participants			Control Group			Significant Difference			
	N	Mean Wages in Start Qtr and 3 Qtrs Prior	St. Dev.	N	Mean Wages in Start Qtr and 3 Qtrs Prior	St. Dev.	$\alpha=0.05$	t-Value	d.f.	Pr > t
2006Q3	256	\$12,199	\$6,800	22,528	\$11,955	\$7,926	No	0.57	262.93	0.5698
2006Q4	410	\$14,304	\$9,580	5,740	\$14,031	\$12,298	No	0.55	510.46	0.5858
2007Q1	657	\$14,638	\$10,556	25,623	\$14,103	\$11,617	No	1.28	697.36	0.2016
2007Q2	579	\$15,542	\$10,027	24,677	\$15,226	\$13,029	No	0.74	624.68	0.4574
2007Q3	494	\$14,447	\$10,228	8,398	\$14,299	\$12,051	No	0.31	576.57	0.7581
2007Q4	761	\$16,078	\$10,556	16,742	\$16,107	\$15,463	No	-0.07	915.1	0.9423
2008Q1	337	\$14,612	\$11,432	5,729	\$13,812	\$9,696	No	1.26	365	0.2092
2008Q2	526	\$13,443	\$8,668	21,040	\$13,801	\$12,324	No	-0.93	579.37	0.3551
2008Q3	403	\$13,354	\$7,010	4,030	\$13,294	\$10,012	No	0.16	580.32	0.8764
2008Q4	426	\$13,991	\$9,029	15,372	\$13,848	\$13,814	No	0.32	481.87	0.7521
2009Q1	411	\$14,725	\$16,196	4,120	\$13,945	\$17,805	No	0.92	514.07	0.357
2009Q2	331	\$15,750	\$14,822	10,783	\$14,883	\$12,605	No	1.05	344.81	0.293
2009Q3	377	\$15,453	\$8,873	8,671	\$14,917	\$11,184	No	1.13	429.66	0.2571
2009Q4	869	\$17,415	\$6,302	35,629	\$16,709	\$10,365	Yes	3.20	986.21	0.0014
2010Q1	631	\$11,389	\$8,551	11,412	\$11,351	\$10,208	No	0.11	732.96	0.9132
2010Q2	535	\$15,680	\$14,474	10,165	\$15,043	\$14,335	No	0.99	590.47	0.321
2010Q3	556	\$12,951	\$8,447	1,114	\$13,131	\$10,811	No	-0.37	1375.2	0.7094
2010Q4	415	\$12,078	\$10,841	14,110	\$11,660	\$9,805	No	0.78	434.16	0.4382
2011Q1	385	\$15,642	\$10,529	6,545	\$15,280	\$15,331	No	0.64	485.3	0.5257
2011Q2	578	\$13,619	\$10,192	8,670	\$13,671	\$14,260	No	-0.12	736.61	0.9082
2011Q3	354	\$12,012	\$7,949	6,035	\$12,033	\$11,543	No	-0.05	445.34	0.9626
2011Q4	406	\$16,339	\$17,629	10,962	\$15,054	\$12,752	No	1.45	420.84	0.1466

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 3: Paired T-test of Difference in Real (Inflation-Adjusted) Mean Quarterly Wages (WDTF Participants Relative to Control Group) 4 Quarters (1 Year) after Training Start, 2006Q3 to 2011Q4

Start Year-Quarter	WDTF Participants			Control Group			Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.				
2006Q3	253	\$347	\$3,123	21,868	\$618	\$4,510	No	-1.36	264.3	0.1738
2006Q4	406	\$1,248	\$4,839	5,604	\$399	\$6,187	Yes	3.34	506.08	0.0009
2007Q1	649	\$709	\$6,242	25,032	\$358	\$7,076	No	1.41	691.88	0.1595
2007Q2	574	\$688	\$3,746	24,072	\$236	\$6,914	Yes	2.78	669.8	0.0056
2007Q3	490	\$1,153	\$8,607	8,188	\$368	\$6,602	Yes	1.98	524	0.0477
2007Q4	749	\$620	\$4,681	16,288	\$150	\$9,663	Yes	2.51	1067.9	0.0121
2008Q1	332	\$826	\$3,555	5,585	\$144	\$5,192	Yes	3.29	419.87	0.0011
2008Q2	518	\$446	\$3,260	20,368	\$65	\$7,123	Yes	2.51	649.89	0.0124
2008Q3	399	\$855	\$4,799	3,918	-\$237	\$6,113	Yes	4.21	538.93	<.0001
2008Q4	422	\$339	\$2,913	14,749	-\$463	\$6,062	Yes	5.33	531.57	<.0001
2009Q1	401	-\$349	\$4,999	3,998	-\$743	\$11,057	No	1.29	867.88	0.1972
2009Q2	328	-\$364	\$7,190	10,400	-\$636	\$6,362	No	0.68	343.34	0.4999
2009Q3	376	-\$9	\$3,000	8,458	-\$276	\$4,843	No	1.64	466.62	0.1024
2009Q4	863	\$90	\$2,721	34,911	-\$51	\$5,565	No	1.45	1049.2	0.1477
2010Q1	621	\$504	\$3,157	11,052	\$220	\$5,636	Yes	2.07	860.44	0.0388
2010Q2	519	\$205	\$8,947	9,883	\$117	\$7,375	No	0.22	555.58	0.8261
2010Q3	546	\$1,027	\$5,326	1,072	\$339	\$5,699	Yes	2.4	1164.4	0.0166
2010Q4	404	\$866	\$9,068	13,538	\$192	\$4,510	No	1.49	408.97	0.1372
2011Q1	376	\$1,072	\$9,305	6,384	\$130	\$7,746	No	1.92	406.2	0.055
2011Q2	575	\$920	\$4,764	8,392	\$192	\$4,855	Yes	3.54	658.38	0.0004
2011Q3	351	\$739	\$2,753	5,799	\$87	\$7,874	Yes	3.63	771.01	0.0003
2011Q4	400	\$321	\$5,500	10,663	-\$140	\$5,952	No	1.64	434.79	0.1019

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 4: Paired T-test of Difference in Real (Inflation-Adjusted) Mean Quarterly Wages (WDTF Participants Relative to Control Group) 8 Quarters (2 Years) after Training Start, 2006Q3 to 2011Q4

Start Year-Quarter	WDTF Participants			Control Group			Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.				
2006Q3	255	\$511	\$3,522	21,986	\$697	\$4,468	No	-0.84	263.57	0.4035
2006Q4	406	\$1,490	\$5,152	5,632	\$534	\$5,298	Yes	3.60	468.9	0.0003
2007Q1	650	\$885	\$6,223	25,126	\$387	\$6,957	Yes	2.01	691.62	0.0448
2007Q2	574	\$808	\$3,945	24,170	\$182	\$6,875	Yes	3.67	658.58	0.0003
2007Q3	492	\$1,073	\$5,423	8,224	\$214	\$6,546	Yes	3.37	580.07	0.0008
2007Q4	752	\$625	\$4,546	16,339	-\$211	\$8,506	Yes	4.68	1011.3	<.0001
2008Q1	333	\$887	\$3,808	5,601	-\$115	\$5,427	Yes	4.54	416.65	<.0001
2008Q2	520	\$278	\$3,122	20,478	-\$158	\$6,707	Yes	3.01	647.52	0.0027
2008Q3	399	\$668	\$4,115	3,933	-\$313	\$6,383	Yes	4.27	612.32	<.0001
2008Q4	422	\$304	\$3,058	14,859	-\$540	\$6,279	Yes	5.36	527.61	<.0001
2009Q1	406	-\$36	\$4,825	4,028	-\$649	\$11,292	Yes	2.06	946.53	0.0401
2009Q2	328	-\$429	\$7,006	10,474	-\$570	\$6,708	No	0.36	346.04	0.7203
2009Q3	377	\$137	\$4,495	8,504	-\$183	\$4,729	No	1.35	413.76	0.1773
2009Q4	864	\$182	\$2,961	35,037	-\$60	\$6,057	Yes	2.29	1050	0.0222
2010Q1	623	\$590	\$3,451	11,124	\$263	\$4,986	Yes	2.24	775.29	0.0255
2010Q2	522	\$132	\$9,579	9,930	\$77	\$6,751	No	0.13	548.54	0.8971
2010Q3	550	\$1,076	\$4,112	1,076	\$401	\$5,885	Yes	2.69	1474.9	0.0073
2010Q4	407	\$599	\$5,514	13,645	\$189	\$4,416	No	1.48	421.68	0.1386
2011Q1	378	\$893	\$5,963	6,410	\$63	\$8,166	Yes	2.57	464.67	0.0105
2011Q2	576	\$802	\$3,749	8,450	\$111	\$4,923	Yes	4.19	717.47	<.0001
2011Q3	351	\$1,090	\$3,337	5,843	\$37	\$6,888	Yes	5.28	549.95	<.0001
2011Q4	401	\$121	\$6,725	10,705	-\$161	\$6,375	No	0.83	427.37	0.4094

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 5: Paired T-test of Difference in Real (Inflation-Adjusted) Mean Quarterly Wages (WDTF Participants Relative to Control Group) 12 Quarters (3 Years) after Training Start, 2006Q3 to 2011Q4

Start Year-Quarter	WDTF Participants			Control Group			Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.	N	Difference in Mean Quarterly Wages since Start Yr-Qtr	St. Dev.				
2006Q3	255	\$750	\$3,952	22,031	\$721	\$4,638	No	0.12	262.16	0.9076
2006Q4	406	\$1,536	\$4,804	5,638	\$460	\$5,057	Yes	4.34	471.99	<.0001
2007Q1	650	\$913	\$6,190	25,164	\$260	\$6,987	Yes	2.65	692.4	0.0083
2007Q2	574	\$929	\$4,118	24,216	\$17	\$6,917	Yes	5.13	652.12	<.0001
2007Q3	492	\$989	\$4,447	8,236	\$97	\$6,218	Yes	4.21	611.92	<.0001
2007Q4	752	\$655	\$4,738	16,379	-\$323	\$8,755	Yes	5.26	1003.7	<.0001
2008Q1	333	\$934	\$4,639	5,616	-\$98	\$7,473	Yes	3.78	441.41	0.0002
2008Q2	520	\$320	\$3,248	20,530	-\$172	\$6,705	Yes	3.28	636.94	0.0011
2008Q3	399	\$717	\$4,472	3,937	-\$280	\$6,699	Yes	4.02	596.52	<.0001
2008Q4	423	\$314	\$3,306	14,917	-\$520	\$6,678	Yes	4.91	525.09	<.0001
2009Q1	406	\$26	\$4,921	4,035	-\$591	\$11,630	Yes	2.02	957.89	0.0435
2009Q2	328	-\$389	\$6,999	10,498	-\$513	\$6,919	No	0.32	347.27	0.7528
2009Q3	377	\$192	\$4,806	8,522	-\$177	\$4,865	No	1.46	410.82	0.1446
2009Q4	864	\$155	\$3,086	35,088	-\$57	\$6,236	No	1.92	1045	0.0555
2010Q1	623	\$658	\$3,539	11,155	\$294	\$5,128	Yes	2.43	775.79	0.0154
2010Q2	523	\$372	\$8,490	9,950	\$22	\$6,751	No	0.93	557.24	0.3542
2010Q3	550	\$1,124	\$4,290	1,079	\$400	\$5,898	Yes	2.82	1436.9	0.0048
2010Q4	407	\$624	\$4,811	13,684	\$249	\$4,589	No	1.55	428.27	0.1214
2011Q1	378	\$974	\$5,702	6,422	\$51	\$8,288	Yes	2.97	476.16	0.0031
2011Q2	576	\$941	\$3,822	8,472	\$152	\$5,250	Yes	4.66	731.16	<.0001
2011Q3	351	\$1,117	\$3,185	5,857	\$27	\$5,750	Yes	5.86	498.93	<.0001
2011Q4	402	\$198	\$6,711	10,724	-\$92	\$6,296	No	0.85	427.88	0.3939

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2006Q3 Cohort**Table 6: Characteristics of WDTF Participants (N = 256) and Control Group (Non-WDTF Participants; N = 22,528), 2006Q3 Cohort****Table 6a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.8%	2	<=19	0.8%	176
20-24	2.7%	7	20-24	2.7%	616
25-34	13.7%	35	25-34	13.7%	3,080
35-44	16.0%	41	35-44	16.0%	3,608
45-54	19.9%	51	45-54	19.9%	4,488
55-64	6.6%	17	55-64	6.6%	1,496
65+	0.8%	2	65+	0.8%	176
Total	60.5%	155	Total	60.5%	13,640
Male			Male		
<=19	1.2%	3	<=19	1.2%	264
20-24	3.1%	8	20-24	3.1%	704
25-34	11.7%	30	25-34	11.7%	2,640
35-44	8.6%	22	35-44	8.6%	1,936
45-54	9.4%	24	45-54	9.4%	2,112
55-64	4.7%	12	55-64	4.7%	1,056
65+	0.8%	2	65+	0.8%	176
Total	39.5%	101	Total	39.5%	8,888

Table 6b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2005Q4	1.2%	3	2005Q4	1.2%	264
2006Q1	4.7%	12	2006Q1	4.7%	1,056
2006Q2	5.5%	14	2006Q2	5.5%	1,232
2006Q3	88.7%	227	2006Q3	88.7%	19,976

Table 6c: Mean Annual Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<=\$400	0.0%	0	<=\$400	0.0%	0
\$400 to \$3,500	7.0%	18	\$400 to \$3,500	7.0%	1,584
\$3,500 to \$7,200	19.5%	50	\$3,500 to \$7,200	19.5%	4,400
\$7,200 to \$12,500	30.5%	78	\$7,200 to \$12,500	30.5%	6,864
\$12,500 to \$29,000	41.8%	107	\$12,500 to \$29,000	41.8%	9,416
>\$29,000	1.2%	3	>\$29,000	1.2%	264

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 7: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2006Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2006Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2005Q4	231	\$13,106	\$8,978	20,658	\$12,532	\$9,561	\$574	No	0.97	235.87	0.3355
2006Q1	239	\$11,928	\$6,444	20,949	\$11,959	\$8,250	-\$31	No	-0.07	246.98	0.9416
2006Q2	251	\$11,987	\$6,295	21,841	\$12,508	\$8,510	-\$522	No	-1.30	260.61	0.1951
2006Q3	256	\$12,761	\$7,826	22,528	\$11,838	\$9,461	\$924	No	1.87	263.54	0.0622
2006Q4	249	\$13,590	\$9,805	21,324	\$13,468	\$12,408	\$121	No	0.19	257.36	0.8466
2007Q1	244	\$12,363	\$6,350	20,564	\$12,826	\$11,495	-\$463	No	-1.12	262.26	0.2653
2007Q2	240	\$12,500	\$6,614	20,393	\$13,310	\$9,936	-\$809	No	-1.87	251.86	0.0625
2007Q3	231	\$12,953	\$9,185	19,941	\$12,590	\$9,513	\$364	No	0.60	235.75	0.5505
2007Q4	225	\$14,377	\$13,142	19,527	\$14,148	\$12,549	\$229	No	0.26	228.73	0.7951
2008Q1	222	\$12,935	\$7,925	19,044	\$13,143	\$9,690	-\$209	No	-0.39	228.77	0.6979
2008Q2	221	\$12,697	\$7,207	18,970	\$13,656	\$10,210	-\$959	No	-1.96	230.41	0.0517
2008Q3	216	\$13,442	\$9,995	18,631	\$12,860	\$9,568	\$582	No	0.85	219.59	0.3954
2008Q4	210	\$15,060	\$15,101	18,230	\$14,433	\$15,360	\$627	No	0.60	214.01	0.5504
2009Q1	203	\$13,642	\$7,847	17,726	\$13,336	\$9,818	\$306	No	0.55	209.31	0.5823
2009Q2	207	\$14,512	\$12,721	17,606	\$13,785	\$10,355	\$726	No	0.82	209.22	0.4141
2009Q3	205	\$13,742	\$7,400	17,321	\$12,769	\$10,133	\$973	No	1.86	213.15	0.0639

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2006Q3 Cohort

Table 8: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2006Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2006Q3	256	\$12,199	\$6,800	22,528	\$11,955	\$7,926	No	0.57	262.93	0.5698

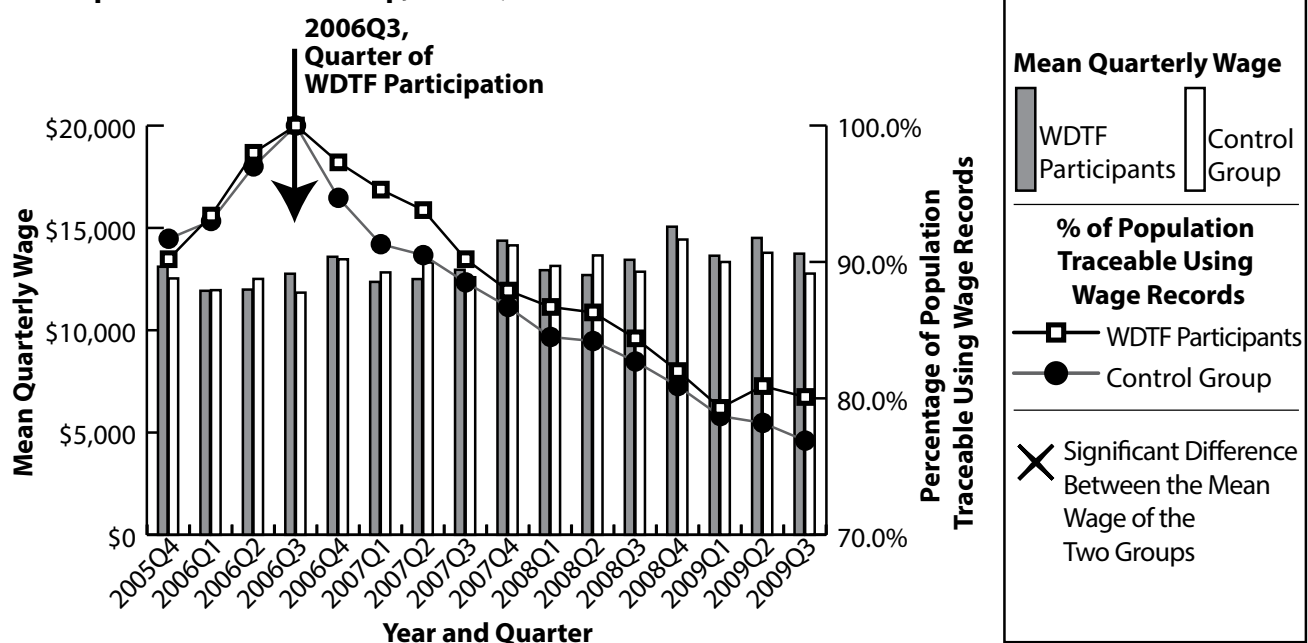
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 9: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2006Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2006Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	253	\$347	\$3,123	21,868	\$618	\$4,510	No	-1.36	264.3	0.1738
8	255	\$511	\$3,522	21,986	\$697	\$4,468	No	-0.84	263.57	0.4035
12	255	\$750	\$3,952	22,031	\$721	\$4,638	No	0.12	262.16	0.9076

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 1: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2006Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2006Q4 Cohort**Table 10: Characteristics of WDTF Participants (N = 410) and Control Group (Non-WDTF Participants; N = 5,740), 2006Q4 Cohort****Table 10a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.2%	1	<=19	0.2%	14
20-24	2.9%	12	20-24	2.9%	168
25-34	11.5%	47	25-34	11.5%	658
35-44	16.8%	69	35-44	16.8%	966
45-54	17.6%	72	45-54	17.6%	1,008
55-64	6.6%	27	55-64	6.6%	378
65+	0.0%	0	65+	0.0%	0
Total	55.6%	228	Total	55.6%	3,192
Male			Male		
<=19	0.0%	0	<=19	0.0%	0
20-24	4.4%	18	20-24	4.4%	252
25-34	11.0%	45	25-34	11.0%	630
35-44	14.1%	58	35-44	14.1%	812
45-54	11.2%	46	45-54	11.2%	644
55-64	3.4%	14	55-64	3.4%	196
65+	0.2%	1	65+	0.2%	14
Total	44.4%	182	Total	44.4%	2,548

Table 10b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2006Q1	1.5%	6	2005Q4	1.5%	84
2006Q2	4.9%	20	2006Q1	4.9%	280
2006Q3	5.4%	22	2006Q2	5.4%	308
2006Q4	88.3%	362	2006Q3	88.3%	5,068

Table 10c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<=\$400	0.0%	0	<=\$400	0.0%	0
\$400 to \$3,500	3.7%	15	\$400 to \$3,500	3.7%	210
\$3,500 to \$7,200	15.1%	62	\$3,500 to \$7,200	15.1%	868
\$7,200 to \$12,500	32.4%	133	\$7,200 to \$12,500	32.4%	1862
\$12,500 to \$29,000	43.4%	178	\$12,500 to \$29,000	43.4%	2492
>\$29,000	5.4%	22	>\$29,000	5.4%	308

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 11: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2006Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2006Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2006Q1	372	\$14,754	\$13,637	5,194	\$13,929	\$20,984	\$824	No	1.08	506.47	0.2815
2006Q2	381	\$13,603	\$8,653	5,316	\$14,201	\$11,705	-\$598	No	-1.27	485.61	0.205
2006Q3	397	\$15,190	\$10,110	5,590	\$13,698	\$11,569	\$1,492	Yes	2.81	472.78	0.0051
2006Q4	410	\$14,834	\$11,207	5,740	\$15,327	\$17,301	-\$493	No	-0.82	558.96	0.4107
2007Q1	406	\$15,763	\$15,271	5,486	\$14,217	\$12,417	\$1,546	Yes	1.99	445.52	0.047
2007Q2	395	\$14,168	\$7,918	5,382	\$14,760	\$14,352	-\$592	No	-1.33	604.32	0.1827
2007Q3	381	\$16,107	\$11,950	5,219	\$14,216	\$12,793	\$1,891	Yes	2.97	446.02	0.0032
2007Q4	376	\$15,899	\$15,295	5,130	\$16,292	\$21,898	-\$393	No	-0.46	495.33	0.6425
2008Q1	373	\$15,710	\$9,727	5,009	\$14,886	\$15,325	\$824	No	1.50	520.93	0.1335
2008Q2	369	\$14,955	\$8,379	4,982	\$15,472	\$22,563	-\$517	No	-0.96	851.31	0.3395
2008Q3	365	\$16,587	\$13,165	4,879	\$14,812	\$16,658	\$1,774	Yes	2.43	455.93	0.0154
2008Q4	364	\$16,665	\$17,044	4,798	\$16,603	\$19,711	\$62	No	0.07	440.06	0.9471
2009Q1	362	\$16,222	\$11,035	4,678	\$15,090	\$15,663	\$1,132	No	1.82	481.43	0.07
2009Q2	363	\$14,523	\$7,906	4,624	\$15,143	\$12,291	-\$620	No	-1.37	510.95	0.1717
2009Q3	354	\$16,146	\$9,906	4,541	\$14,457	\$14,817	\$1,689	Yes	2.96	485.73	0.0032
2009Q4	348	\$17,005	\$10,631	4,499	\$16,117	\$16,995	\$888	No	1.42	496.24	0.1549

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2006Q4 Cohort

Table 12: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2006Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2006Q4	410	\$14,304	\$9,580	5,740	\$14,031	\$12,298	No	0.55	510.46	0.5858

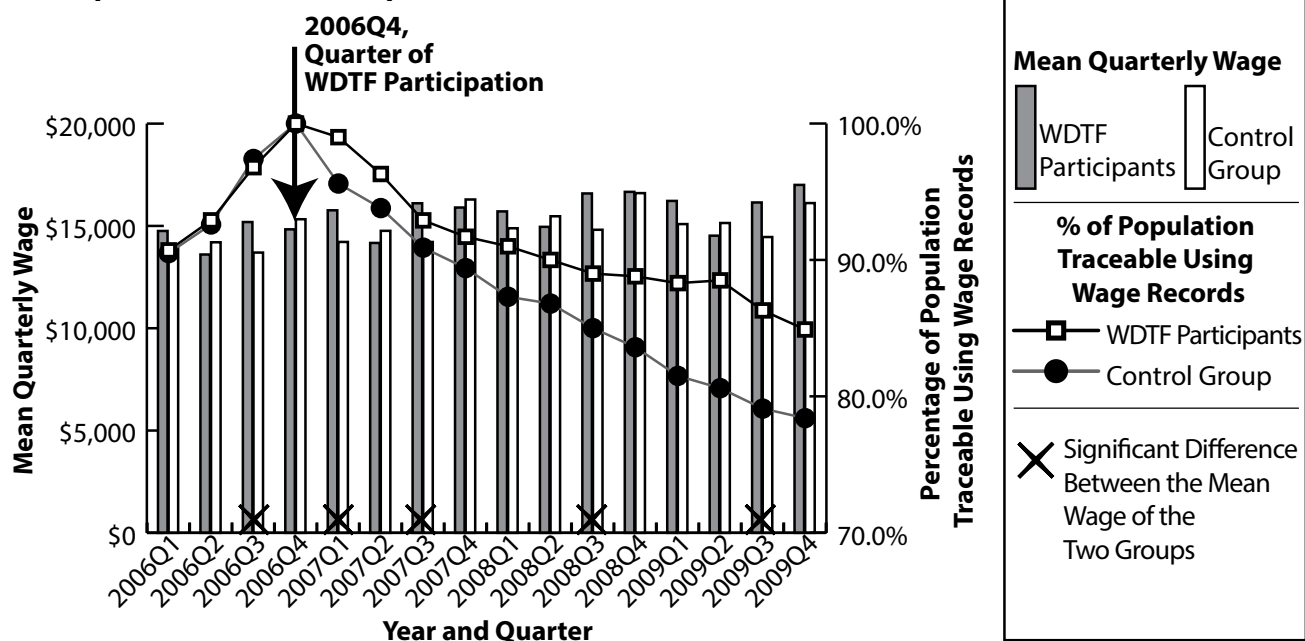
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 13: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2006Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2006Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	406	\$1,248	\$4,839	5,604	\$399	\$6,187	Yes	3.34	506.08	0.0009
8	406	\$1,490	\$5,152	5,632	\$534	\$5,298	Yes	3.60	468.9	0.0003
12	406	\$1,536	\$4,804	5,638	\$460	\$5,057	Yes	4.34	471.99	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 2: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2006Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2007Q1 Cohort**Table 14: Characteristics of WDTF Participants (N = 657) and Control Group (Non-WDTF Participants; N = 25,623), 2007Q1 Cohort****Table 14a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.3%	2	<=19	0.3%	78
20-24	4.6%	30	20-24	4.6%	1,170
25-34	13.4%	88	25-34	13.4%	3,432
35-44	14.8%	97	35-44	14.8%	3,783
45-54	12.8%	84	45-54	12.8%	3,276
55-64	6.5%	43	55-64	6.5%	1,677
65+	0.3%	2	65+	0.3%	78
Total	52.7%	346	Total	52.7%	13,494
Male			Male		
<=19	0.3%	2	<=19	0.3%	78
20-24	3.5%	23	20-24	3.5%	897
25-34	13.5%	89	25-34	13.5%	3,471
35-44	11.0%	72	35-44	11.0%	2,808
45-54	12.3%	81	45-54	12.3%	3,159
55-64	6.4%	42	55-64	6.4%	1,638
65+	0.3%	2	65+	0.3%	78
Total	47.3%	311	Total	47.3%	12,129

Table 14b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2006Q2	0.5%	3	2006Q2	0.5%	117
2006Q3	2.0%	13	2006Q3	2.0%	507
2006Q4	6.4%	42	2006Q4	6.4%	1,638
2007Q1	91.2%	599	2007Q1	91.2%	23,361

Table 14c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<=\$400	0.3%	2	<=\$400	0.3%	78
\$400 to \$3,500	3.3%	22	\$400 to \$3,500	3.3%	858
\$3,500 to \$7,200	15.8%	104	\$3,500 to \$7,200	15.8%	4,056
\$7,200 to \$12,500	31.8%	209	\$7,200 to \$12,500	31.8%	8,151
\$12,500 to \$29,000	44.4%	292	\$12,500 to \$29,000	44.4%	11,388
>\$29,000	4.3%	28	>\$29,000	4.3%	1,092

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 15: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2007Q1), the Three Quarters Prior to and 12 Quarters After Program Entry, 2007Q1 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2006Q2	604	\$13,676	\$9,400	23,873	\$14,014	\$14,572	-\$338	No	-0.86	678.50	0.3911
2006Q3	639	\$15,090	\$15,385	24,783	\$13,575	\$11,670	\$1,515	Yes	2.47	657.06	0.0137
2006Q4	651	\$15,531	\$15,353	25,210	\$15,206	\$15,262	\$325	No	0.53	683.59	0.5936
2007Q1	657	\$14,676	\$9,808	25,623	\$14,097	\$14,928	\$579	No	1.47	736.17	0.1418
2007Q2	644	\$14,264	\$8,402	24,661	\$14,754	\$17,511	-\$490	No	-1.40	796.88	0.1609
2007Q3	626	\$15,902	\$17,106	23,800	\$14,162	\$13,290	\$1,741	Yes	2.53	645.00	0.0118
2007Q4	611	\$17,251	\$23,858	23,282	\$15,857	\$17,299	\$1,393	No	1.43	626.95	0.1521
2008Q1	602	\$14,921	\$8,985	22,728	\$14,706	\$15,433	\$215	No	0.57	698.49	0.572
2008Q2	599	\$14,805	\$8,891	22,560	\$15,192	\$18,556	-\$386	No	-1.01	744.07	0.3144
2008Q3	589	\$16,642	\$18,256	22,046	\$14,527	\$15,203	\$2,115	Yes	2.79	609.99	0.0055
2008Q4	573	\$18,401	\$27,244	21,580	\$16,135	\$19,293	\$2,266	Yes	1.98	587.33	0.0484
2009Q1	557	\$15,383	\$9,198	21,045	\$14,785	\$15,663	\$598	No	1.48	644.52	0.1396
2009Q2	552	\$16,350	\$18,779	20,782	\$15,006	\$16,149	\$1,344	No	1.66	572.85	0.0965
2009Q3	543	\$16,413	\$13,296	20,270	\$14,199	\$13,489	\$2,215	Yes	3.83	572.29	0.0001
2009Q4	536	\$18,455	\$21,080	20,100	\$15,808	\$15,742	\$2,647	Yes	2.89	551.03	0.0041
2010Q1	527	\$14,701	\$8,855	19,711	\$14,586	\$15,977	\$115	No	0.29	621.43	0.7748

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2007Q1 Cohort

Table 16: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q1 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2007Q1	657	\$14,638	\$10,556	25,623	\$14,103	\$11,617	No	1.28	697.36	0.2016

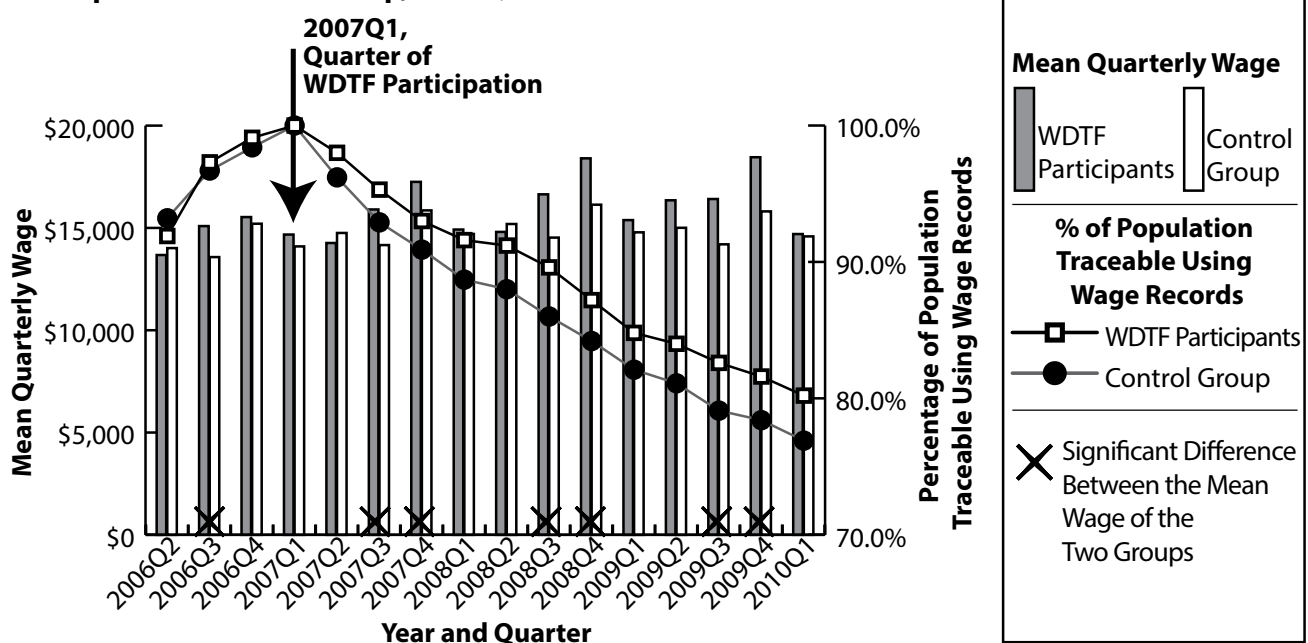
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 17: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2007Q1) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q1 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	649	\$709	\$6,242	25,032	\$358	\$7,076	No	1.41	691.88	0.1595
8	650	\$885	\$6,223	25,126	\$387	\$6,957	Yes	2.01	691.62	0.0448
12	650	\$913	\$6,190	25,164	\$260	\$6,987	Yes	2.65	692.4	0.0083

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 3: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2007Q1 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2007Q2 Cohort**Table 18: Characteristics of WDTF Participants (N = 579) and Control Group (Non-WDTF Participants; N = 24,677), 2007Q2 Cohort****Table 18a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.0%	0	<=19	0.0%	0
20-24	2.8%	16	20-24	2.8%	682
25-34	15.2%	88	25-34	15.2%	3,749
35-44	13.3%	77	35-44	13.3%	3,282
45-54	14.0%	81	45-54	14.0%	3,452
55-64	5.9%	34	55-64	5.9%	1,449
65+	0.2%	1	65+	0.2%	43
Total	51.3%	297	Total	51.3%	12,657
Male			Male		
<=19	0.2%	1	<=19	0.2%	43
20-24	4.8%	28	20-24	4.8%	1,195
25-34	11.6%	67	25-34	11.6%	2,856
35-44	12.3%	71	35-44	12.3%	3,026
45-54	13.1%	76	45-54	13.1%	3,239
55-64	6.4%	37	55-64	6.4%	1,576
65+	0.3%	2	65+	0.3%	85
Total	48.7%	282	Total	48.7%	12,020

Table 18b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2006Q3	0.2%	1	2006Q2	0.2%	43
2006Q4	1.4%	8	2006Q3	1.4%	341
2007Q1	3.3%	19	2006Q4	3.3%	810
2007Q2	95.2%	551	2007Q1	95.2%	23,484

Table 18c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<=\$400	0.0%	0	<=\$400	0.0%	0
\$400 to \$3,500	1.9%	11	\$400 to \$3,500	1.9%	472
\$3,500 to \$7,200	10.0%	58	\$3,500 to \$7,200	10.0%	2,474
\$7,200 to \$12,500	33.3%	193	\$7,200 to \$12,500	33.3%	8,224
\$12,500 to \$29,000	49.7%	288	\$12,500 to \$29,000	49.7%	12,271
>\$29,000	5.0%	29	>\$29,000	5.0%	1,236

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 19: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2007Q2), the Three Quarters Prior to and 12 Quarters After Program Entry, 2007Q2 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2006Q3	558	\$15,015	\$9,928	23,846	\$14,339	\$12,762	\$676	No	1.58	600.89	0.1152
2006Q4	566	\$15,376	\$9,333	24,166	\$16,152	\$16,684	-\$776	No	-1.91	652.64	0.0569
2007Q1	575	\$16,552	\$13,051	24,390	\$15,272	\$18,282	\$1,280	Yes	2.30	628.30	0.0218
2007Q2	579	\$15,621	\$11,164	24,677	\$15,573	\$16,558	\$48	No	0.10	639.16	0.919
2007Q3	567	\$16,101	\$12,160	23,715	\$14,918	\$13,402	\$1,183	Yes	2.28	599.34	0.0227
2007Q4	559	\$16,529	\$12,674	23,073	\$16,812	\$21,625	-\$282	No	-0.51	639.42	0.611
2008Q1	549	\$17,647	\$17,379	22,462	\$15,579	\$16,081	\$2,069	Yes	2.76	571.17	0.006
2008Q2	542	\$16,221	\$9,699	22,251	\$15,994	\$16,745	\$227	No	0.53	622.33	0.5984
2008Q3	538	\$17,153	\$14,040	21,756	\$15,352	\$16,609	\$1,801	Yes	2.92	574.80	0.0036
2008Q4	525	\$17,651	\$16,640	21,367	\$17,190	\$22,794	\$461	No	0.62	573.40	0.535
2009Q1	513	\$17,014	\$11,498	20,804	\$15,499	\$14,566	\$1,515	Yes	2.93	553.30	0.0036
2009Q2	510	\$16,755	\$11,099	20,558	\$15,601	\$14,699	\$1,155	Yes	2.30	554.23	0.0218
2009Q3	502	\$17,582	\$13,290	20,087	\$14,829	\$13,927	\$2,752	Yes	4.58	528.87	<.0001
2009Q4	495	\$17,575	\$10,839	19,873	\$16,621	\$18,092	\$954	No	1.89	564.87	0.0588
2010Q1	492	\$17,370	\$12,123	19,459	\$15,225	\$13,645	\$2,145	Yes	3.86	522.94	0.0001
2010Q2	487	\$17,224	\$11,104	19,440	\$15,793	\$16,207	\$1,431	Yes	2.77	539.22	0.0058

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2007Q2 Cohort

Table 20: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q2 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2007Q2	579	\$15,542	\$10,027	24,677	\$15,226	\$13,029	No	0.74	624.68	0.4574

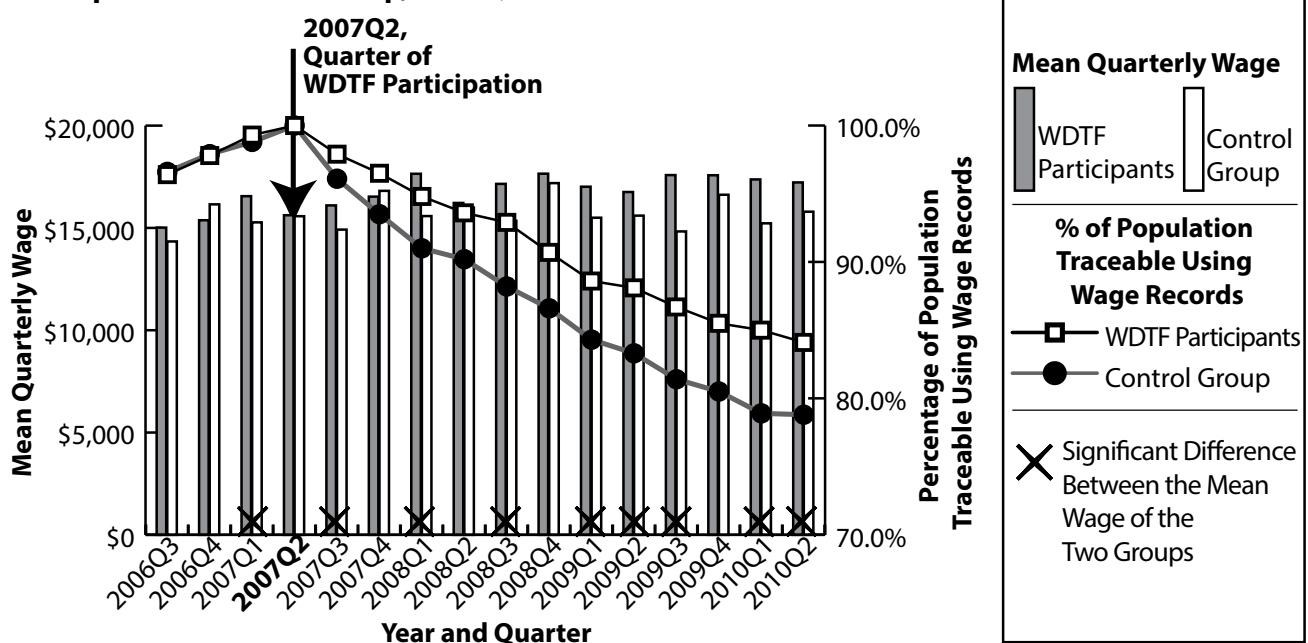
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 21: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2007Q2) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q2 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	574	\$688	\$3,746	24,072	\$236	\$6,914	Yes	2.78	669.8	0.0056
8	574	\$808	\$3,945	24,170	\$182	\$6,875	Yes	3.67	658.58	0.0003
12	574	\$929	\$4,118	24,216	\$17	\$6,917	Yes	5.13	652.12	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 4: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2007Q2 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2007Q3 Cohort**Table 22: Characteristics of WDTF Participants (N = 494) and Control Group (Non-WDTF Participants; N = 8,398), 2007Q3 Cohort****Table 22a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.0%	5	<=19	1.0%	85
20-24	4.3%	21	20-24	4.3%	357
25-34	12.1%	60	25-34	12.1%	1,020
35-44	16.0%	79	35-44	16.0%	1,343
45-54	15.0%	74	45-54	15.0%	1,258
55-64	9.1%	45	55-64	9.1%	765
65+	0.4%	2	65+	0.4%	34
Total	57.9%	286	Total	57.9%	4,862
Male			Male		
<=19	0.2%	1	<=19	0.2%	17
20-24	2.8%	14	20-24	2.8%	238
25-34	11.7%	58	25-34	11.7%	986
35-44	12.3%	61	35-44	12.3%	1,037
45-54	10.3%	51	45-54	10.3%	867
55-64	4.5%	22	55-64	4.5%	374
65+	0.2%	1	65+	0.2%	17
Total	42.1%	208	Total	42.1%	3,536

Table 22b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2006Q4	1.2%	6	2006Q4	1.2%	102
2007Q1	3.2%	16	2007Q1	3.2%	272
2007Q2	3.4%	17	2007Q2	3.4%	289
2007Q3	92.1%	455	2007Q3	92.1%	7,735

Table 22c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<=\$400	0.0%	0	<=\$400	0.0%	0
\$400 to \$3,500	5.3%	26	\$400 to \$3,500	5.3%	442
\$3,500 to \$7,200	17.4%	86	\$3,500 to \$7,200	17.4%	1,462
\$7,200 to \$12,500	25.7%	127	\$7,200 to \$12,500	25.7%	2,159
\$12,500 to \$29,000	46.0%	227	\$12,500 to \$29,000	46.0%	3,859
>\$29,000	5.7%	28	>\$29,000	5.7%	476

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 23: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2007Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2007Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2006Q4	459	\$15,219	\$17,633	7,881	\$15,174	\$15,415	\$46	No	0.05	499.62	0.9569
2007Q1	469	\$14,819	\$11,497	7,936	\$14,376	\$17,541	\$443	No	0.78	604.93	0.4341
2007Q2	487	\$13,526	\$8,718	8,238	\$14,610	\$12,145	-\$1,084	Yes	-2.60	603.43	0.0096
2007Q3	494	\$15,040	\$11,126	8,398	\$13,861	\$12,240	\$1,179	Yes	2.28	565.52	0.0232
2007Q4	486	\$16,015	\$16,790	8,042	\$15,818	\$19,683	\$197	No	0.25	568.67	0.804
2008Q1	477	\$16,190	\$12,997	7,803	\$14,718	\$15,801	\$1,472	Yes	2.37	565.63	0.0181
2008Q2	467	\$14,672	\$8,831	7,707	\$15,136	\$13,380	-\$464	No	-1.06	603.94	0.2875
2008Q3	462	\$16,995	\$35,021	7,511	\$14,759	\$19,122	\$2,236	No	1.36	478.05	0.1746
2008Q4	447	\$17,463	\$29,454	7,363	\$16,331	\$22,535	\$1,133	No	0.80	478.22	0.4247
2009Q1	437	\$16,268	\$11,902	7,145	\$14,835	\$15,117	\$1,433	Yes	2.40	525.97	0.0167
2009Q2	436	\$14,919	\$9,484	7,068	\$14,936	\$12,048	-\$17	No	-0.04	525.59	0.9715
2009Q3	430	\$15,675	\$12,106	6,898	\$14,045	\$12,003	\$1,630	Yes	2.71	483.07	0.007
2009Q4	418	\$17,021	\$14,915	6,794	\$16,090	\$20,994	\$931	No	1.21	524.38	0.2286
2010Q1	408	\$15,611	\$11,810	6,646	\$14,514	\$12,755	\$1,097	No	1.81	467.22	0.0705
2010Q2	402	\$15,210	\$9,499	6,684	\$14,961	\$12,330	\$249	No	0.50	486.09	0.6172
2010Q3	400	\$16,072	\$12,659	6,566	\$14,450	\$12,421	\$1,622	Yes	2.49	447.09	0.0131

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2007Q3 Cohort

Table 24: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2007Q3	494	\$14,447	\$10,228	8,398	\$14,299	\$12,051	No	0.31	576.57	0.7581

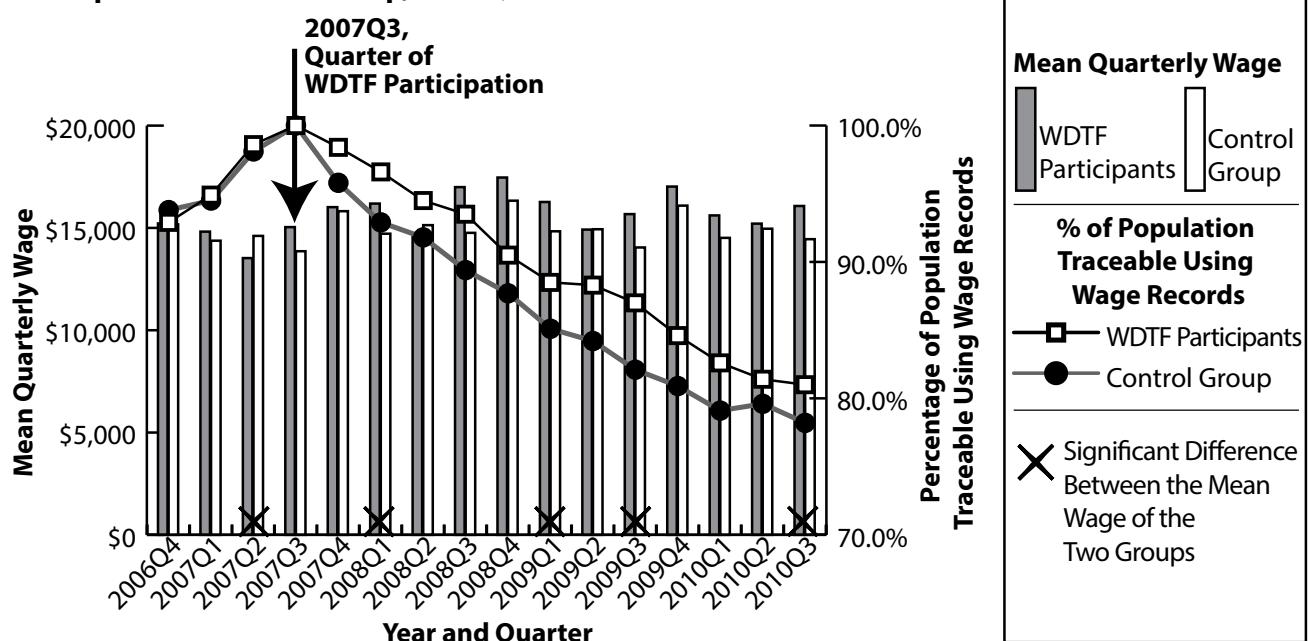
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 25: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2007Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	490	\$1,153	\$8,607	8,188	\$368	\$6,602	Yes	1.98	524	0.0477
8	492	\$1,073	\$5,423	8,224	\$214	\$6,546	Yes	3.37	580.07	0.0008
12	492	\$989	\$4,447	8,236	\$97	\$6,218	Yes	4.21	611.92	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 5: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2007Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2007Q4 Cohort**Table 26: Characteristics of WDTF Participants (N = 761) and Control Group (Non-WDTF Participants; N = 16,742), 2007Q4 Cohort****Table 26a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.2%	9	<=19	1.2%	198
20-24	6.0%	46	20-24	6.0%	1,012
25-34	14.2%	108	25-34	14.2%	2,376
35-44	12.0%	91	35-44	12.0%	2,002
45-54	12.4%	94	45-54	12.4%	2,068
55-64	5.9%	45	55-64	5.9%	990
65+	0.5%	4	65+	0.5%	88
Total	52.2%	397	Total	52.2%	8,734
Male			Male		
<=19	0.5%	4	<=19	0.5%	88
20-24	2.2%	17	20-24	2.2%	374
25-34	13.5%	103	25-34	13.5%	2,266
35-44	11.0%	84	35-44	11.0%	1,848
45-54	13.5%	103	45-54	13.5%	2,266
55-64	6.8%	52	55-64	6.8%	1,144
65+	0.1%	1	65+	0.1%	22
Total	47.8%	364	Total	47.8%	8,008

Table 26b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2007Q1	2.9%	22	2007Q1	2.9%	484
2007Q2	4.9%	37	2007Q2	4.9%	814
2007Q3	5.4%	41	2007Q3	5.4%	902
2007Q4	86.9%	661	2007Q4	86.9%	14,542

Table 26c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.1%	1	<=\$400	0.1%	22
\$400 to \$3,499	6.3%	48	\$400 to \$3,499	6.3%	1,056
\$3,500 to \$7,199	14.2%	108	\$3,500 to \$7,199	14.2%	2,376
\$7,200 to \$12,499	20.6%	157	\$7,200 to \$12,499	20.6%	3,454
\$12,500 to \$28,999	49.1%	374	\$12,500 to \$28,999	49.1%	8,228
>\$29,000	9.6%	73	>\$29,000	9.6%	1,606

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 27: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2007Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2007Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2007Q1	678	\$15,526	\$10,361	14,845	\$16,301	\$17,104	-\$775	No	-1.84	855.40	0.0666
2007Q2	696	\$16,047	\$10,801	15,355	\$16,729	\$19,724	-\$682	No	-1.55	920.02	0.121
2007Q3	728	\$16,525	\$11,659	16,044	\$15,719	\$15,365	\$807	No	1.80	845.86	0.0727
2007Q4	761	\$18,146	\$13,255	16,742	\$17,514	\$23,108	\$632	No	1.23	983.64	0.2177
2008Q1	749	\$15,876	\$9,465	15,872	\$16,107	\$16,293	-\$230	No	-0.62	970.90	0.5332
2008Q2	735	\$16,270	\$10,304	15,548	\$16,630	\$20,354	-\$360	No	-0.87	1,028.10	0.3843
2008Q3	704	\$17,196	\$12,044	15,095	\$16,225	\$21,747	\$970	Yes	1.99	932.03	0.0467
2008Q4	688	\$19,270	\$16,528	14,756	\$18,248	\$27,210	\$1,022	No	1.53	870.95	0.127
2009Q1	677	\$16,296	\$9,430	14,153	\$16,270	\$15,631	\$26	No	0.07	864.64	0.9459
2009Q2	674	\$17,101	\$11,434	13,994	\$16,360	\$20,202	\$741	No	1.57	889.62	0.1169
2009Q3	661	\$17,716	\$11,912	13,678	\$15,410	\$14,086	\$2,307	Yes	4.82	752.05	<.0001
2009Q4	658	\$19,054	\$13,782	13,475	\$17,699	\$23,179	\$1,356	Yes	2.37	850.23	0.0182
2010Q1	635	\$15,848	\$9,433	13,077	\$16,160	\$18,190	-\$312	No	-0.77	882.22	0.4433
2010Q2	633	\$17,419	\$12,149	13,136	\$16,536	\$19,980	\$882	No	1.72	806.81	0.086
2010Q3	632	\$17,609	\$14,608	13,000	\$15,874	\$15,710	\$1,735	Yes	2.90	703.85	0.0038
2010Q4	605	\$20,084	\$17,552	12,802	\$18,083	\$22,604	\$2,001	Yes	2.70	702.19	0.0071

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2007Q4 Cohort

Table 28: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2007Q4	761	\$16,078	\$10,556	16,742	\$16,107	\$15,463	No	-0.07	915.1	0.9423

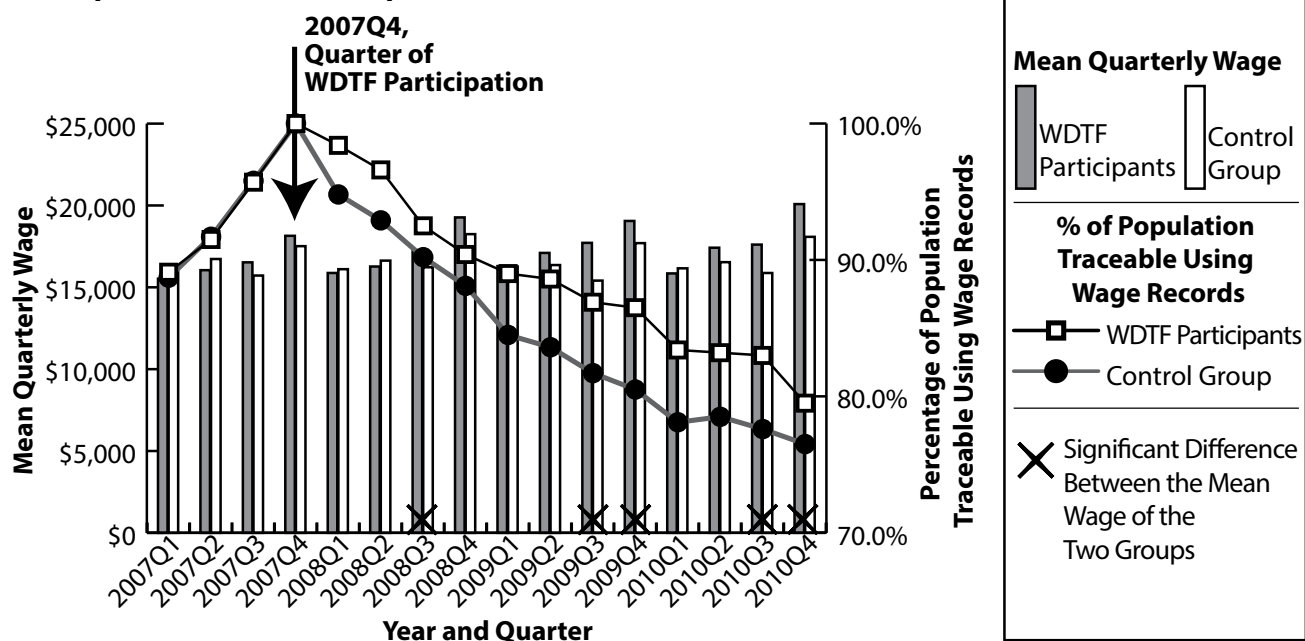
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 29: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2007Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2007Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	749	\$620	\$4,681	16,288	\$150	\$9,663	Yes	2.51	1067.9	0.0121
8	752	\$625	\$4,546	16,339	-\$211	\$8,506	Yes	4.68	1011.3	<.0001
12	752	\$655	\$4,738	16,379	-\$323	\$8,755	Yes	5.26	1003.7	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 6: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2007Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2008Q1 Cohort**Table 30: Characteristics of WDTF Participants (N = 337) and Control Group (Non-WDTF Participants; N = 5,729), 2008Q1 Cohort****Table 30a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.9%	3	<=19	0.9%	51
20-24	4.2%	14	20-24	4.2%	238
25-34	13.9%	47	25-34	13.9%	799
35-44	11.9%	40	35-44	11.9%	680
45-54	11.0%	37	45-54	11.0%	629
55-64	5.0%	17	55-64	5.0%	289
65+	0.0%	0	65+	0.0%	0
Total	46.9%	158	Total	46.9%	2,686
Male			Male		
<=19	1.2%	4	<=19	1.2%	68
20-24	5.3%	18	20-24	5.3%	306
25-34	14.5%	49	25-34	14.5%	833
35-44	11.6%	39	35-44	11.6%	663
45-54	15.1%	51	45-54	15.1%	867
55-64	5.3%	18	55-64	5.3%	306
65+	0.0%	0	65+	0.0%	0
Total	53.1%	179	Total	53.1%	3,043

Table 30b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2007Q2	3.6%	12	2007Q2	3.6%	204
2007Q3	3.9%	13	2007Q3	3.9%	221
2007Q4	6.2%	21	2007Q4	6.2%	357
2008Q1	86.4%	291	2008Q1	86.4%	4,947

Table 30c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	7.1%	24	\$400 to \$3,499	7.1%	408
\$3,500 to \$7,199	15.4%	52	\$3,500 to \$7,199	15.4%	884
\$7,200 to \$12,499	27.0%	91	\$7,200 to \$12,499	27.0%	1,547
\$12,500 to \$28,999	47.2%	159	\$12,500 to \$28,999	47.2%	2,703
>\$29,000	3.3%	11	>\$29,000	3.3%	187

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 31: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2008Q1), the Three Quarters Prior to and 12 Quarters After Program Entry, 2008Q1 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2007Q2	295	\$14,333	\$9,636	5,062	\$13,920	\$10,924	\$413	No	0.71	339.58	0.4782
2007Q3	314	\$13,973	\$10,043	5,270	\$13,610	\$10,359	\$363	No	0.62	353.86	0.535
2007Q4	319	\$17,036	\$25,471	5,444	\$15,175	\$14,447	\$1,861	No	1.29	330.10	0.197
2008Q1	337	\$14,347	\$10,034	5,729	\$13,666	\$10,197	\$682	No	1.21	377.98	0.2268
2008Q2	331	\$15,115	\$9,480	5,489	\$14,274	\$11,659	\$841	No	1.54	392.75	0.1232
2008Q3	323	\$14,912	\$9,037	5,250	\$14,021	\$11,124	\$891	No	1.70	384.63	0.0909
2008Q4	310	\$17,840	\$22,478	5,137	\$15,441	\$14,442	\$2,399	No	1.86	324.57	0.0643
2009Q1	305	\$15,217	\$10,027	4,944	\$13,972	\$10,659	\$1,245	Yes	2.10	347.75	0.0367
2009Q2	300	\$15,864	\$10,057	4,831	\$14,161	\$11,468	\$1,703	Yes	2.82	349.10	0.0051
2009Q3	294	\$15,801	\$10,049	4,728	\$13,484	\$10,049	\$2,318	Yes	3.84	330.49	0.0001
2009Q4	293	\$18,335	\$18,535	4,644	\$15,227	\$19,782	\$3,108	Yes	2.77	335.37	0.0059
2010Q1	286	\$15,127	\$9,617	4,542	\$13,886	\$11,341	\$1,240	Yes	2.09	336.93	0.0372
2010Q2	286	\$16,187	\$10,220	4,520	\$14,332	\$9,627	\$1,856	Yes	2.99	317.83	0.003
2010Q3	278	\$17,119	\$10,764	4,453	\$13,902	\$9,053	\$3,218	Yes	4.88	301.97	<.0001
2010Q4	273	\$16,909	\$12,175	4,397	\$15,666	\$19,773	\$1,242	No	1.56	367.77	0.1189
2011Q1	263	\$17,049	\$11,340	4,301	\$14,021	\$10,376	\$3,028	Yes	4.22	289.46	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2008Q1 Cohort

Table 32: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q1 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2008Q1	337	\$14,612	\$11,432	5,729	\$13,812	\$9,696	No	1.26	365	0.2092

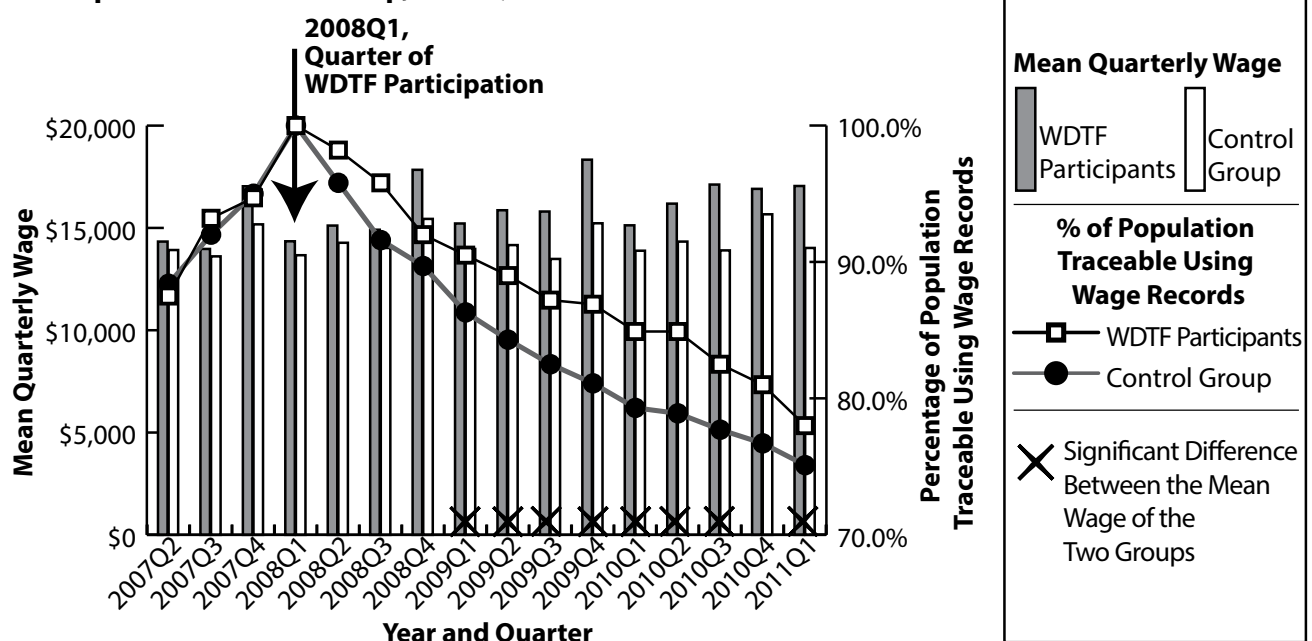
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 33: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2008Q1) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q1 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	332	\$826	\$3,555	5,585	\$144	\$5,192	Yes	3.29	419.87	0.0011
8	333	\$887	\$3,808	5,601	-\$115	\$5,427	Yes	4.54	416.65	<.0001
12	333	\$934	\$4,639	5,616	-\$98	\$7,473	Yes	3.78	441.41	0.0002

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 7: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2008Q1 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2008Q2 Cohort**Table 34: Characteristics of WDTF Participants (N = 526) and Control Group (Non-WDTF Participants; N = 21,040), 2008Q2 Cohort****Table 34a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.0%	5	<=19	1.0%	200
20-24	5.1%	27	20-24	5.1%	1,080
25-34	12.7%	67	25-34	12.7%	2,680
35-44	14.1%	74	35-44	14.1%	2,960
45-54	12.0%	63	45-54	12.0%	2,520
55-64	5.3%	28	55-64	5.3%	1,120
65+	0.0%	0	65+	0.0%	0
Total	50.2%	264	Total	50.2%	10,560
Male			Male		
<=19	0.4%	2	<=19	0.4%	80
20-24	4.9%	26	20-24	4.9%	1,040
25-34	14.6%	77	25-34	14.6%	3,080
35-44	13.1%	69	35-44	13.1%	2,760
45-54	12.7%	67	45-54	12.7%	2,680
55-64	3.6%	19	55-64	3.6%	760
65+	0.4%	2	65+	0.4%	80
Total	49.8%	262	Total	49.8%	10,480

Table 34b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2007Q3	2.5%	13	2007Q3	2.5%	520
2007Q4	4.0%	21	2007Q4	4.0%	840
2008Q1	7.2%	38	2008Q1	7.2%	1,520
2008Q2	86.3%	454	2008Q2	86.3%	18,160

Table 34c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	4.6%	24	\$400 to \$3,499	4.6%	960
\$3,500 to \$7,199	15.6%	82	\$3,500 to \$7,199	15.6%	3,280
\$7,200 to \$12,499	36.5%	192	\$7,200 to \$12,499	36.5%	7,680
\$12,500 to \$28,999	38.4%	202	\$12,500 to \$28,999	38.4%	8,080
>\$29,000	4.9%	26	>\$29,000	4.9%	1,040

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 35: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2008Q2), the Three Quarters Prior to and 12 Quarters After Program Entry, 2008Q2 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2007Q3	463	\$13,788	\$8,542	18,871	\$13,688	\$14,437	\$99	No	0.24	528.96	0.8089
2007Q4	486	\$13,895	\$9,360	19,499	\$15,271	\$19,856	-\$1,376	Yes	-3.07	599.73	0.0022
2008Q1	510	\$14,367	\$11,199	19,990	\$13,920	\$13,463	\$447	No	0.89	547.21	0.3762
2008Q2	526	\$13,102	\$8,192	21,040	\$13,874	\$12,610	-\$772	Yes	-2.10	588.99	0.036
2008Q3	515	\$14,286	\$8,820	20,000	\$13,852	\$15,202	\$434	No	1.08	595.56	0.2822
2008Q4	500	\$14,348	\$9,053	19,136	\$15,535	\$20,810	-\$1,188	Yes	-2.75	645.96	0.0061
2009Q1	489	\$14,638	\$12,890	18,397	\$14,064	\$14,201	\$574	No	0.97	519.99	0.3332
2009Q2	473	\$13,577	\$8,163	18,126	\$14,158	\$13,427	-\$581	No	-1.50	540.94	0.1353
2009Q3	460	\$14,532	\$8,721	17,641	\$13,604	\$12,516	\$928	Yes	2.22	509.59	0.0266
2009Q4	449	\$15,077	\$8,768	17,263	\$15,338	\$20,115	-\$260	No	-0.59	578.77	0.5552
2010Q1	439	\$14,388	\$11,504	16,812	\$13,982	\$13,885	\$406	No	0.73	471.94	0.4682
2010Q2	427	\$14,018	\$8,421	16,891	\$14,369	\$12,374	-\$351	No	-0.84	473.74	0.4023
2010Q3	421	\$15,144	\$10,028	16,711	\$14,008	\$12,466	\$1,136	Yes	2.28	453.32	0.023
2010Q4	419	\$15,566	\$9,904	16,449	\$15,796	\$20,385	-\$230	No	-0.45	512.93	0.6511
2011Q1	414	\$14,342	\$9,456	16,023	\$14,182	\$15,532	\$160	No	0.33	472.52	0.74
2011Q2	409	\$14,260	\$8,959	16,057	\$14,683	\$13,754	-\$423	No	-0.93	458.41	0.3544

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2008Q2 Cohort

Table 36: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q2 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2008Q2	526	\$13,443	\$8,668	21,040	\$13,801	\$12,324	No	-0.93	579.37	0.3551

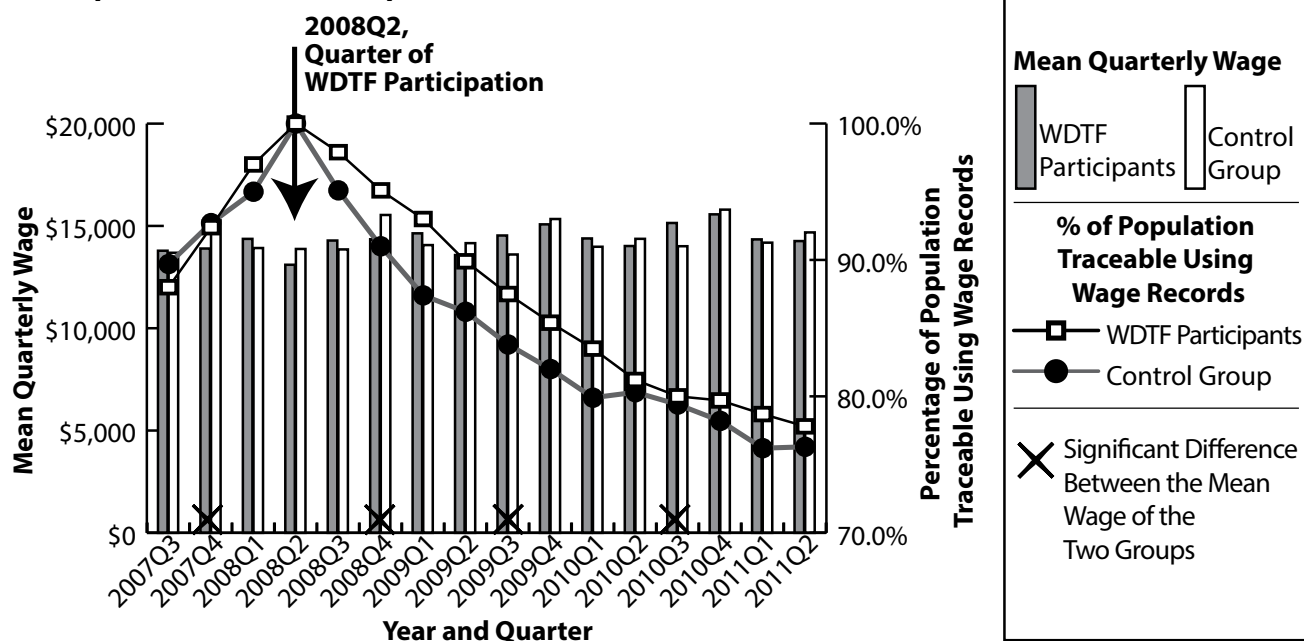
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 37: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2008Q2) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q2 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	518	\$446	\$3,260	20,368	\$65	\$7,123	Yes	2.51	649.89	0.0124
8	520	\$278	\$3,122	20,478	-\$158	\$6,707	Yes	3.01	647.52	0.0027
12	520	\$320	\$3,248	20,530	-\$172	\$6,705	Yes	3.28	636.94	0.0011

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 8: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2008Q2 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2008Q3 Cohort**Table 38: Characteristics of WDTF Participants (N = 403) and Control Group (Non-WDTF Participants; N = 4,030), 2008Q3 Cohort****Table 38a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.0%	0	<=19	0.0%	0
20-24	4.2%	17	20-24	4.2%	170
25-34	16.6%	67	25-34	16.6%	670
35-44	18.1%	73	35-44	18.1%	730
45-54	15.4%	62	45-54	15.4%	620
55-64	6.5%	26	55-64	6.5%	260
65+	0.5%	2	65+	0.5%	20
Total	61.3%	247	Total	61.3%	2,470
Male			Male		
<=19	0.0%	0	<=19	0.0%	0
20-24	2.5%	10	20-24	2.5%	100
25-34	14.9%	60	25-34	14.9%	600
35-44	10.2%	41	35-44	10.2%	410
45-54	7.7%	31	45-54	7.7%	310
55-64	3.2%	13	55-64	3.2%	130
65+	0.2%	1	65+	0.2%	10
Total	38.7%	156	Total	38.7%	1,560

Table 38b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2007Q4	2.0%	8	2007Q4	2.0%	80
2008Q1	4.7%	19	2008Q1	4.7%	190
2008Q2	5.0%	20	2008Q2	5.0%	200
2008Q3	88.3%	356	2008Q3	88.3%	3,560

Table 38c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.2%	1	<\$400	0.2%	10
\$400 to \$3,499	3.0%	12	\$400 to \$3,499	3.0%	120
\$3,500 to \$7,199	16.9%	68	\$3,500 to \$7,199	16.9%	680
\$7,200 to \$12,499	32.0%	129	\$7,200 to \$12,499	32.0%	1,290
\$12,500 to \$28,999	45.4%	183	\$12,500 to \$28,999	45.4%	1,830
>\$29,000	2.5%	10	>\$29,000	2.5%	100

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 39: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2008Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2008Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2007Q4	357	\$13,258	\$8,232	3,663	\$14,241	\$17,169	-\$983	No	-1.89	709.49	0.0591
2008Q1	375	\$13,073	\$7,995	3,704	\$13,073	\$9,217	\$0	No	0.00	480.54	0.9993
2008Q2	395	\$13,062	\$6,851	3,903	\$13,465	\$9,950	-\$404	No	-1.06	577.51	0.2884
2008Q3	403	\$14,611	\$7,773	4,030	\$13,129	\$10,681	\$1,482	Yes	3.51	566.14	0.0005
2008Q4	399	\$14,433	\$8,076	3,836	\$14,297	\$11,322	\$137	No	0.31	574.88	0.7581
2009Q1	389	\$14,566	\$11,240	3,666	\$13,317	\$9,825	\$1,248	Yes	2.11	453.16	0.0357
2009Q2	377	\$13,673	\$6,621	3,581	\$13,692	\$12,299	-\$19	No	-0.05	689.23	0.9623
2009Q3	368	\$14,717	\$7,808	3,485	\$12,903	\$10,094	\$1,814	Yes	4.11	506.30	<.0001
2009Q4	360	\$15,205	\$8,292	3,404	\$14,479	\$14,579	\$726	No	1.44	625.07	0.1497
2010Q1	359	\$13,576	\$8,157	3,307	\$13,462	\$12,546	\$114	No	0.24	561.47	0.8136
2010Q2	351	\$13,688	\$7,444	3,292	\$13,777	\$9,441	-\$89	No	-0.21	478.84	0.8359
2010Q3	350	\$14,943	\$8,481	3,246	\$13,158	\$9,261	\$1,786	Yes	3.71	443.74	0.0002
2010Q4	345	\$15,945	\$12,931	3,207	\$14,572	\$11,218	\$1,373	No	1.90	401.67	0.0585
2011Q1	337	\$14,266	\$9,093	3,132	\$13,696	\$15,809	\$570	No	1.00	583.46	0.3175
2011Q2	337	\$14,837	\$10,926	3,134	\$13,968	\$9,373	\$868	No	1.40	391.03	0.161
2011Q3	327	\$14,833	\$9,206	3,093	\$13,461	\$10,720	\$1,372	Yes	2.52	425.24	0.0121

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2008Q3 Cohort

Table 40: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2008Q3	403	\$13,354	\$7,010	4,030	\$13,294	\$10,012	No	0.16	580.32	0.8764

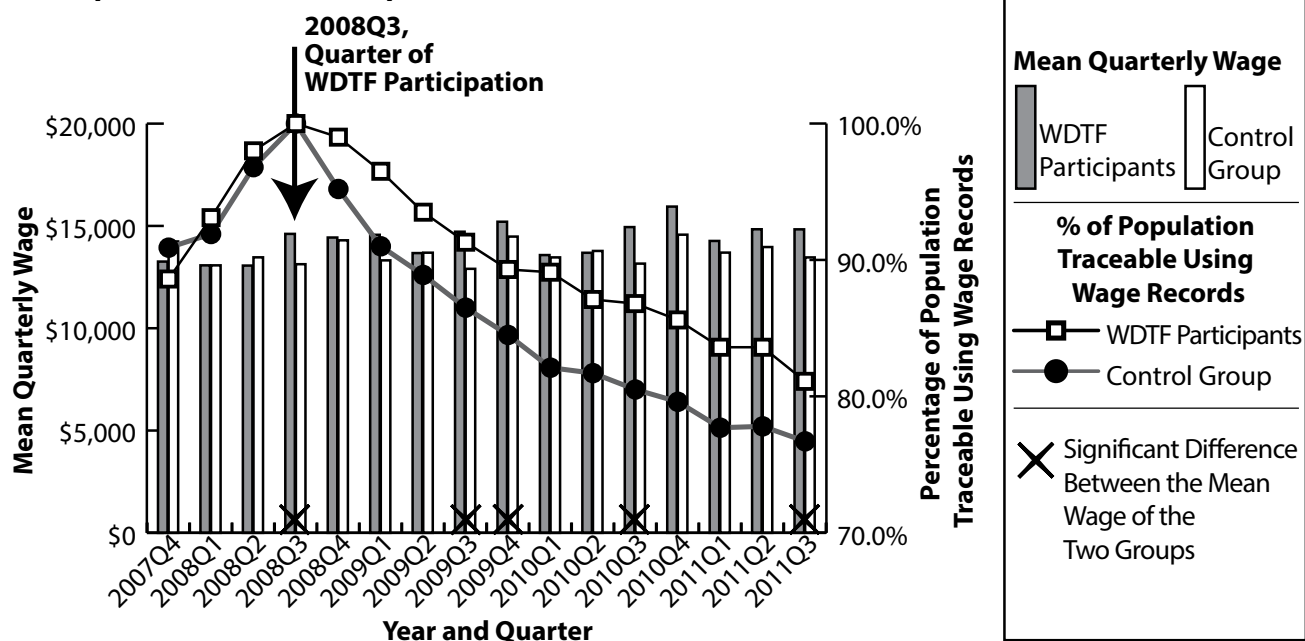
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 41: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2008Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	399	\$855	\$4,799	3,918	-\$237	\$6,113	Yes	4.21	538.93	<.0001
8	399	\$668	\$4,115	3,933	-\$313	\$6,383	Yes	4.27	612.32	<.0001
12	399	\$717	\$4,472	3,937	-\$280	\$6,699	Yes	4.02	596.52	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 9: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2008Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2008Q4 Cohort**Table 42: Characteristics of WDTF Participants (N = 426) and Control Group (Non-WDTF Participants; N = 15,372), 2008Q4 Cohort****Table 42a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.5%	2	<=19	0.5%	72
20-24	6.6%	28	20-24	6.6%	1,008
25-34	18.3%	78	25-34	18.3%	2,808
35-44	14.8%	63	35-44	14.8%	2,268
45-54	9.6%	41	45-54	9.6%	1,476
55-64	6.1%	26	55-64	6.1%	936
65+	0.5%	2	65+	0.7%	108
Total	56.3%	240	Total	56.4%	8,676
Male			Male		
<=19	0.5%	2	<=19	0.5%	72
20-24	1.4%	6	20-24	1.4%	216
25-34	16.4%	70	25-34	16.4%	2,520
35-44	8.7%	37	35-44	8.7%	1,332
45-54	10.3%	44	45-54	10.3%	1,584
55-64	5.6%	24	55-64	5.6%	864
65+	0.7%	3	65+	0.7%	108
Total	43.7%	186	Total	43.6%	6,696

Table 42b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2008Q1	2.6%	11	2008Q1	2.6%	396
2008Q2	5.9%	25	2008Q2	5.9%	900
2008Q3	7.7%	33	2008Q3	7.7%	1,188
2008Q4	83.8%	357	2008Q4	83.8%	12,888

Table 42c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	6.3%	27	\$400 to \$3,499	6.3%	972
\$3,500 to \$7,199	16.9%	72	\$3,500 to \$7,199	16.9%	2,592
\$7,200 to \$12,499	28.6%	122	\$7,200 to \$12,499	28.8%	4,428
\$12,500 to \$28,999	43.0%	183	\$12,500 to \$28,999	42.9%	6,588
>\$29,000	5.2%	22	>\$29,000	5.2%	792

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 43: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2008Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2008Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2008Q1	365	\$14,800	\$11,782	13,254	\$14,083	\$15,313	\$717	No	1.14	398.63	0.2565
2008Q2	388	\$13,342	\$8,415	13,987	\$14,235	\$15,971	-\$893	Yes	-1.99	468.08	0.0468
2008Q3	409	\$14,727	\$10,708	14,699	\$13,857	\$15,773	\$871	No	1.60	458.70	0.1109
2008Q4	426	\$14,909	\$8,532	15,372	\$14,824	\$17,416	\$84	No	0.19	528.62	0.8472
2009Q1	422	\$14,711	\$11,712	14,301	\$13,874	\$14,733	\$836	No	1.43	461.21	0.1523
2009Q2	405	\$13,603	\$7,711	13,874	\$13,998	\$18,031	-\$395	No	-0.96	542.84	0.339
2009Q3	386	\$15,698	\$11,786	13,349	\$13,377	\$13,424	\$2,321	Yes	3.80	414.41	0.0002
2009Q4	378	\$15,190	\$9,266	13,058	\$14,801	\$15,748	\$389	No	0.78	442.59	0.4337
2010Q1	374	\$14,459	\$10,873	12,576	\$13,880	\$17,039	\$579	No	0.99	429.41	0.3206
2010Q2	367	\$14,128	\$8,211	12,546	\$14,171	\$13,242	-\$43	No	-0.10	423.74	0.9234
2010Q3	358	\$16,143	\$12,447	12,342	\$13,775	\$14,264	\$2,369	Yes	3.53	384.70	0.0005
2010Q4	348	\$16,475	\$10,066	12,152	\$15,229	\$16,428	\$1,246	Yes	2.23	401.89	0.0266
2011Q1	339	\$15,340	\$10,930	11,760	\$14,079	\$16,062	\$1,262	Yes	2.06	381.35	0.0399
2011Q2	338	\$15,072	\$8,991	11,762	\$14,425	\$13,500	\$647	No	1.28	382.04	0.2007
2011Q3	334	\$16,338	\$11,481	11,570	\$14,282	\$16,144	\$2,056	Yes	3.18	372.07	0.0016
2011Q4	331	\$15,905	\$9,970	11,431	\$15,093	\$18,048	\$813	No	1.42	395.49	0.1572

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2008Q4 Cohort

Table 44: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2008Q4	426	\$13,991	\$9,029	15,372	\$13,848	\$13,814	No	0.32	481.87	0.7521

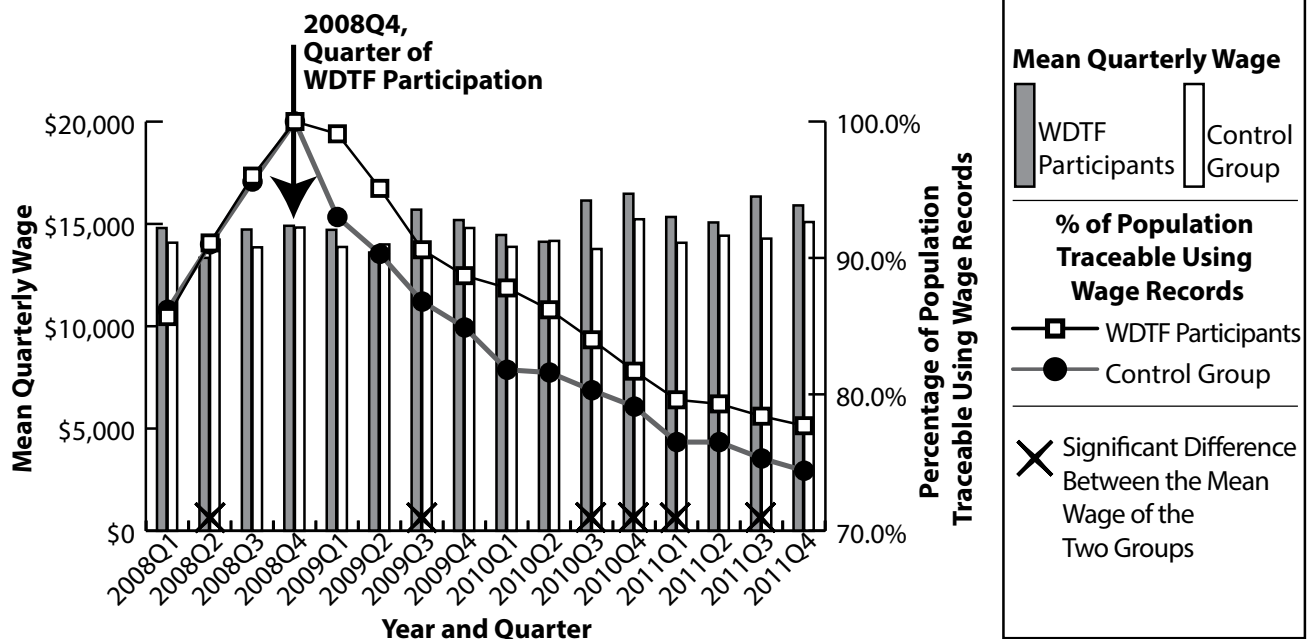
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 45: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2008Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2008Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	422	\$339	\$2,913	14,749	-\$463	\$6,062	Yes	5.33	531.57	<.0001
8	422	\$304	\$3,058	14,859	-\$540	\$6,279	Yes	5.36	527.61	<.0001
12	423	\$314	\$3,306	14,917	-\$520	\$6,678	Yes	4.91	525.09	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 10: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2008Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2009Q1 Cohort**Table 46: Characteristics of WDTF Participants (N = 411) and Control Group (Non-WDTF Participants; N = 4,120), 2009Q1 Cohort****Table 46a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.0%	4	<=19	1.0%	40
20-24	5.1%	21	20-24	5.1%	210
25-34	16.5%	68	25-34	16.5%	680
35-44	11.2%	46	35-44	11.2%	460
45-54	15.3%	63	45-54	15.3%	630
55-64	7.5%	31	55-64	7.5%	310
65+	1.2%	5	65+	1.5%	60
Total	57.9%	238	Total	58.0%	2,390
Male			Male		
<=19	0.7%	3	<=19	0.7%	30
20-24	4.9%	20	20-24	4.9%	200
25-34	12.7%	52	25-34	12.6%	520
35-44	11.4%	47	35-44	11.4%	470
45-54	8.0%	33	45-54	8.0%	330
55-64	4.4%	18	55-64	4.4%	180
65+	0.0%	0	65+	0.0%	0
Total	42.1%	173	Total	42.0%	1,730

Table 46b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2008Q2	2.9%	12	2008Q2	2.9%	120
2008Q3	2.7%	11	2008Q3	2.7%	110
2008Q4	7.5%	31	2008Q4	7.5%	310
2009Q1	86.9%	357	2009Q1	86.9%	3,580

Table 46c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	6.3%	26	\$400 to \$3,499	6.3%	260
\$3,500 to \$7,199	18.2%	75	\$3,500 to \$7,199	18.2%	750
\$7,200 to \$12,499	30.4%	125	\$7,200 to \$12,499	30.6%	1,260
\$12,500 to \$28,999	38.7%	159	\$12,500 to \$28,999	38.6%	1,590
>\$29,000	6.3%	26	>\$29,000	6.3%	260

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 47: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2009Q1), the Three Quarters Prior to and 12 Quarters After Program Entry, 2009Q1 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2008Q2	365	\$14,633	\$18,503	3,680	\$14,201	\$21,477	\$432	No	0.42	466.96	0.6752
2008Q3	385	\$14,445	\$13,598	3,859	\$13,980	\$19,395	\$465	No	0.61	553.43	0.541
2008Q4	394	\$14,707	\$12,411	3,931	\$15,576	\$23,668	-\$869	No	-1.19	722.15	0.2345
2009Q1	411	\$16,573	\$28,933	4,120	\$13,548	\$17,979	\$3,025	Yes	2.08	442.13	0.0381
2009Q2	400	\$13,733	\$10,990	3,916	\$13,483	\$12,119	\$250	No	0.43	503.48	0.6677
2009Q3	388	\$14,672	\$12,031	3,744	\$13,193	\$13,216	\$1,479	Yes	2.28	489.06	0.0229
2009Q4	378	\$14,783	\$11,896	3,613	\$14,880	\$16,620	-\$97	No	-0.14	544.32	0.8852
2010Q1	370	\$16,276	\$27,438	3,510	\$13,638	\$14,483	\$2,638	No	1.82	390.96	0.0691
2010Q2	366	\$14,168	\$12,284	3,458	\$13,990	\$12,566	\$178	No	0.26	449.74	0.7923
2010Q3	355	\$15,549	\$15,988	3,399	\$13,793	\$13,430	\$1,755	Yes	2.00	407.87	0.0466
2010Q4	349	\$15,788	\$13,343	3,306	\$15,350	\$16,903	\$438	No	0.57	474.47	0.5707
2011Q1	342	\$18,655	\$43,823	3,250	\$14,100	\$17,794	\$4,556	No	1.91	352.92	0.0575
2011Q2	340	\$14,943	\$15,754	3,249	\$14,328	\$14,554	\$615	No	0.69	401.93	0.4906
2011Q3	331	\$16,616	\$19,527	3,155	\$14,372	\$15,317	\$2,244	Yes	2.03	373.82	0.0435
2011Q4	333	\$15,605	\$12,529	3,104	\$15,268	\$17,785	\$337	No	0.45	488.60	0.6563
2012Q1	328	\$15,302	\$15,474	3,022	\$14,589	\$15,231	\$712	No	0.79	398.90	0.4282

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2009Q1 Cohort

Table 48: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q1 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2009Q1	411	\$14,725	\$16,196	4,120	\$13,945	\$17,805	No	0.92	514.07	0.357

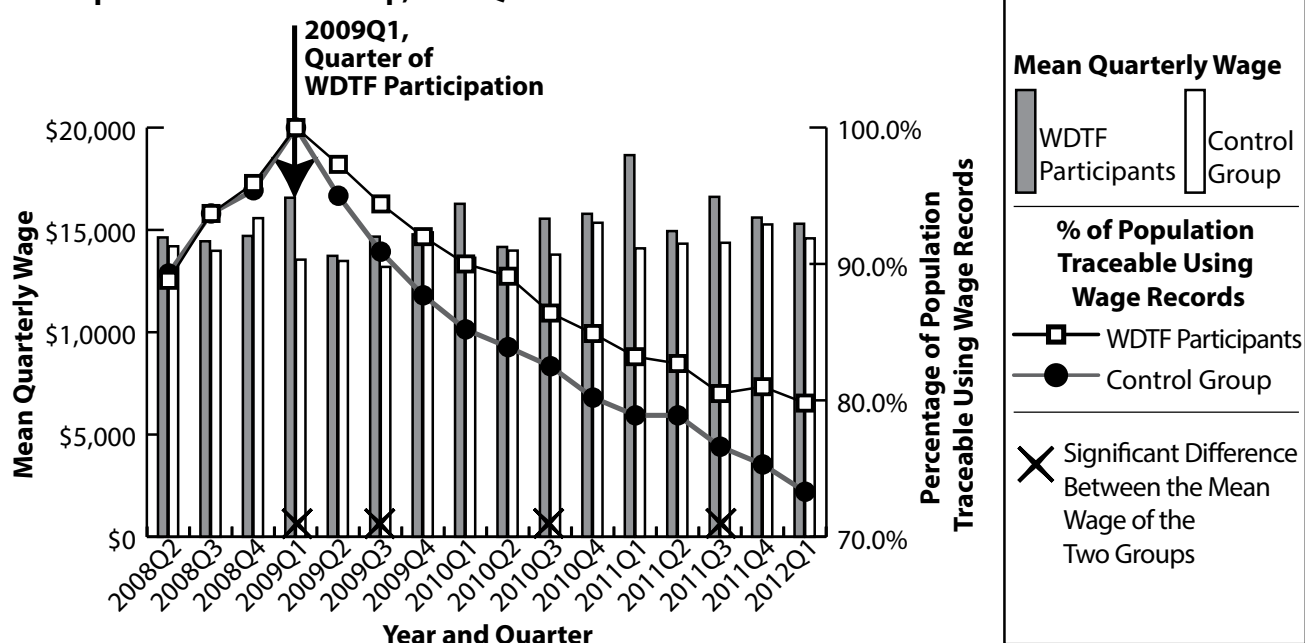
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 49: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2009Q1) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q1 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	401	-\$349	\$4,999	3,998	-\$743	\$11,057	No	1.29	867.88	0.1972
8	406	-\$36	\$4,825	4,028	-\$649	\$11,292	Yes	2.06	946.53	0.0401
12	406	\$26	\$4,921	4,035	-\$591	\$11,630	Yes	2.02	957.89	0.0435

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 11: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2009Q1 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2009Q2 Cohort**Table 50: Characteristics of WDTF Participants (N = 331) and Control Group (Non-WDTF Participants; N = 10,783), 2009Q2 Cohort****Table 50a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.6%	2	<=19	0.6%	66
20-24	3.0%	10	20-24	3.0%	327
25-34	14.8%	49	25-34	14.8%	1,596
35-44	16.0%	53	35-44	16.0%	1,724
45-54	11.8%	39	45-54	11.8%	1,269
55-64	7.3%	24	55-64	7.3%	782
65+	0.3%	1	65+	0.3%	33
Total	53.8%	178	Total	53.8%	5,797
Male			Male		
<=19	0.3%	1	<=19	0.3%	33
20-24	5.7%	19	20-24	5.7%	619
25-34	14.2%	47	25-34	14.2%	1,532
35-44	10.9%	36	35-44	10.9%	1,173
45-54	10.0%	33	45-54	10.0%	1,075
55-64	5.1%	17	55-64	5.1%	554
65+	0.0%	0	65+	0.0%	0
Total	46.2%	153	Total	46.2%	4,986

Table 50b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2008Q3	0.3%	1	2008Q3	0.3%	33
2008Q4	2.7%	9	2008Q4	2.7%	296
2009Q1	6.3%	21	2009Q1	6.4%	691
2009Q2	90.6%	300	2009Q2	90.5%	9,763

Table 50c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	4.2%	14	\$400 to \$3,499	4.3%	460
\$3,500 to \$7,199	11.5%	38	\$3,500 to \$7,199	11.5%	1,241
\$7,200 to \$12,499	30.2%	100	\$7,200 to \$12,499	30.2%	3,258
\$12,500 to \$28,999	47.7%	158	\$12,500 to \$28,999	47.7%	5,139
>\$29,000	6.3%	21	>\$29,000	6.4%	685

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 51: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2009Q2), the Three Quarters Prior to and 12 Quarters After Program Entry, 2009Q2 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2008Q3	305	\$16,097	\$12,302	10,103	\$14,672	\$18,751	\$1,425	No	1.96	348.09	0.0514
2008Q4	322	\$17,433	\$34,615	10,349	\$16,277	\$19,227	\$1,156	No	0.60	327.19	0.5514
2009Q1	324	\$15,910	\$13,488	10,515	\$14,729	\$13,383	\$1,180	No	1.55	342.88	0.1216
2009Q2	331	\$14,579	\$10,624	10,783	\$14,641	\$15,250	-\$62	No	-0.10	373.02	0.9175
2009Q3	327	\$15,456	\$11,348	10,164	\$14,016	\$12,323	\$1,440	Yes	2.25	351.19	0.0249
2009Q4	320	\$16,873	\$17,203	9,826	\$15,620	\$14,486	\$1,253	No	1.29	333.90	0.1988
2010Q1	305	\$14,922	\$14,852	9,496	\$14,558	\$13,879	\$364	No	0.42	321.28	0.6728
2010Q2	302	\$14,743	\$11,356	9,435	\$15,058	\$15,458	-\$314	No	-0.47	337.73	0.6405
2010Q3	291	\$15,514	\$10,360	9,250	\$14,543	\$12,292	\$971	No	1.56	316.23	0.1186
2010Q4	291	\$17,574	\$19,425	9,012	\$16,306	\$20,598	\$1,268	No	1.09	311.43	0.275
2011Q1	287	\$15,032	\$10,905	8,775	\$14,851	\$14,995	\$181	No	0.27	322.43	0.7852
2011Q2	288	\$14,740	\$11,805	8,751	\$15,303	\$15,603	-\$563	No	-0.79	320.92	0.4322
2011Q3	279	\$15,380	\$10,104	8,606	\$14,917	\$12,942	\$463	No	0.75	308.33	0.4564
2011Q4	283	\$16,728	\$15,792	8,454	\$15,880	\$14,872	\$847	No	0.89	298.99	0.3744
2012Q1	276	\$15,817	\$13,010	8,206	\$15,335	\$13,303	\$482	No	0.61	294.67	0.5456
2012Q2	275	\$15,490	\$10,736	8,228	\$15,365	\$19,402	\$125	No	0.18	336.95	0.8548

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2009Q2 Cohort

Table 52: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q2 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2009Q2	331	\$15,750	\$14,822	10,783	\$14,883	\$12,605	No	1.05	344.81	0.293

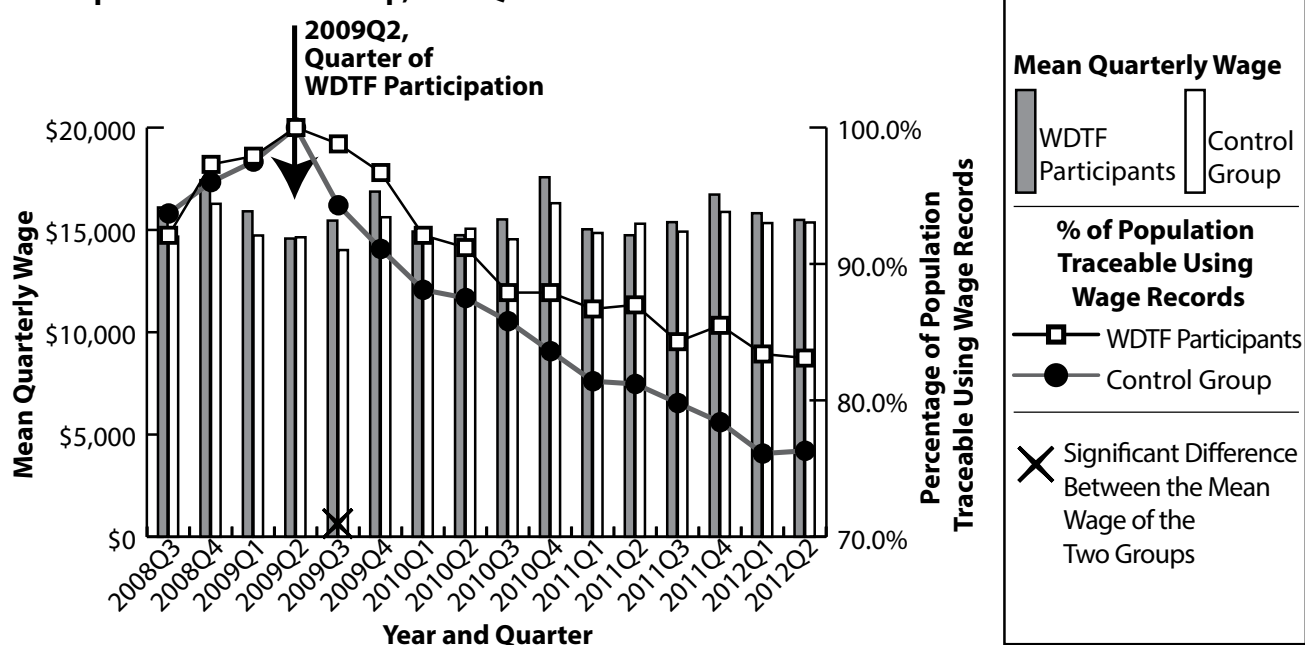
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 53: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2009Q2) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q2 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	328	-\$364	\$7,190	10,400	-\$636	\$6,362	No	0.68	343.34	0.4999
8	328	-\$429	\$7,006	10,474	-\$570	\$6,708	No	0.36	346.04	0.7203
12	328	-\$389	\$6,999	10,498	-\$513	\$6,919	No	0.32	347.27	0.7528

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 12: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2009Q2 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2009Q3 Cohort**Table 54: Characteristics of WDTF Participants (N = 377) and Control Group (Non-WDTF Participants; N = 8,671), 2009Q3 Cohort****Table 54a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.3%	1	<=19	0.3%	23
20-24	6.1%	23	20-24	6.1%	529
25-34	15.6%	59	25-34	15.6%	1,357
35-44	9.8%	37	35-44	9.8%	851
45-54	17.0%	64	45-54	17.0%	1,472
55-64	5.8%	22	55-64	5.8%	506
65+	0.3%	1	65+	0.3%	23
Total	54.9%	207	Total	54.9%	4,761
Male			Male		
<=19	0.3%	1	<=19	0.3%	23
20-24	4.5%	17	20-24	4.5%	391
25-34	16.2%	61	25-34	16.2%	1,403
35-44	10.3%	39	35-44	10.3%	897
45-54	9.5%	36	45-54	9.5%	828
55-64	4.2%	16	55-64	4.2%	368
65+	0.0%	0	65+	0.0%	0
Total	45.1%	170	Total	45.1%	3,910

Table 54b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2008Q4	1.1%	4	2008Q4	1.1%	92
2009Q1	1.9%	7	2009Q1	1.9%	161
2009Q2	4.2%	16	2009Q2	4.2%	368
2009Q3	92.8%	350	2009Q3	92.8%	8,050

Table 54c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0	0
\$400 to \$3,499	2.4%	9	\$400 to \$3,499	2.4%	207
\$3,500 to \$7,199	14.3%	54	\$3,500 to \$7,199	14.3%	1,242
\$7,200 to \$12,499	27.9%	105	\$7,200 to \$12,499	27.9%	2,415
\$12,500 to \$28,999	49.3%	186	\$12,500 to \$28,999	49.3%	4,278
>\$29,000	6.1%	23	>\$29,000	6.1%	529

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 55: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2009Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2009Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2008Q4	353	\$15,786	\$10,672	8,253	\$16,156	\$15,618	-\$370	No	-0.62	419.29	0.5335
2009Q1	364	\$16,024	\$10,603	8,307	\$14,955	\$14,590	\$1,070	No	1.85	425.61	0.0651
2009Q2	372	\$14,611	\$8,344	8,487	\$14,928	\$11,098	-\$317	No	-0.71	430.64	0.4805
2009Q3	377	\$15,929	\$8,617	8,671	\$14,208	\$11,033	\$1,720	Yes	3.74	431.41	0.0002
2009Q4	375	\$16,433	\$9,556	8,313	\$15,821	\$15,372	\$612	No	1.17	466.13	0.241
2010Q1	366	\$15,519	\$9,911	7,974	\$14,708	\$12,532	\$811	No	1.51	420.44	0.1314
2010Q2	367	\$14,858	\$8,060	7,882	\$15,096	\$11,039	-\$238	No	-0.54	432.56	0.5879
2010Q3	350	\$15,581	\$8,715	7,714	\$14,743	\$11,636	\$838	No	1.73	407.61	0.0843
2010Q4	338	\$17,487	\$16,403	7,553	\$16,563	\$19,399	\$923	No	1.00	380.44	0.316
2011Q1	323	\$15,834	\$13,716	7,358	\$14,997	\$12,621	\$837	No	1.08	346.36	0.2824
2011Q2	315	\$14,978	\$7,496	7,288	\$15,484	\$11,365	-\$506	No	-1.14	379.33	0.2539
2011Q3	306	\$16,165	\$9,236	7,143	\$15,348	\$13,674	\$817	No	1.48	364.83	0.1398
2011Q4	309	\$16,838	\$10,463	7,052	\$16,379	\$15,888	\$459	No	0.73	373.21	0.4631
2012Q1	306	\$16,543	\$11,860	6,863	\$15,590	\$15,086	\$953	No	1.36	350.52	0.1755
2012Q2	303	\$15,680	\$9,812	6,829	\$15,366	\$11,300	\$313	No	0.54	338.53	0.5893
2012Q3	296	\$15,408	\$9,356	6,737	\$14,824	\$11,699	\$583	No	1.04	336.85	0.3004

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2009Q3 Cohort

Table 56: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2009Q3	377	\$15,453	\$8,873	8,671	\$14,917	\$11,184	No	1.13	429.66	0.2571

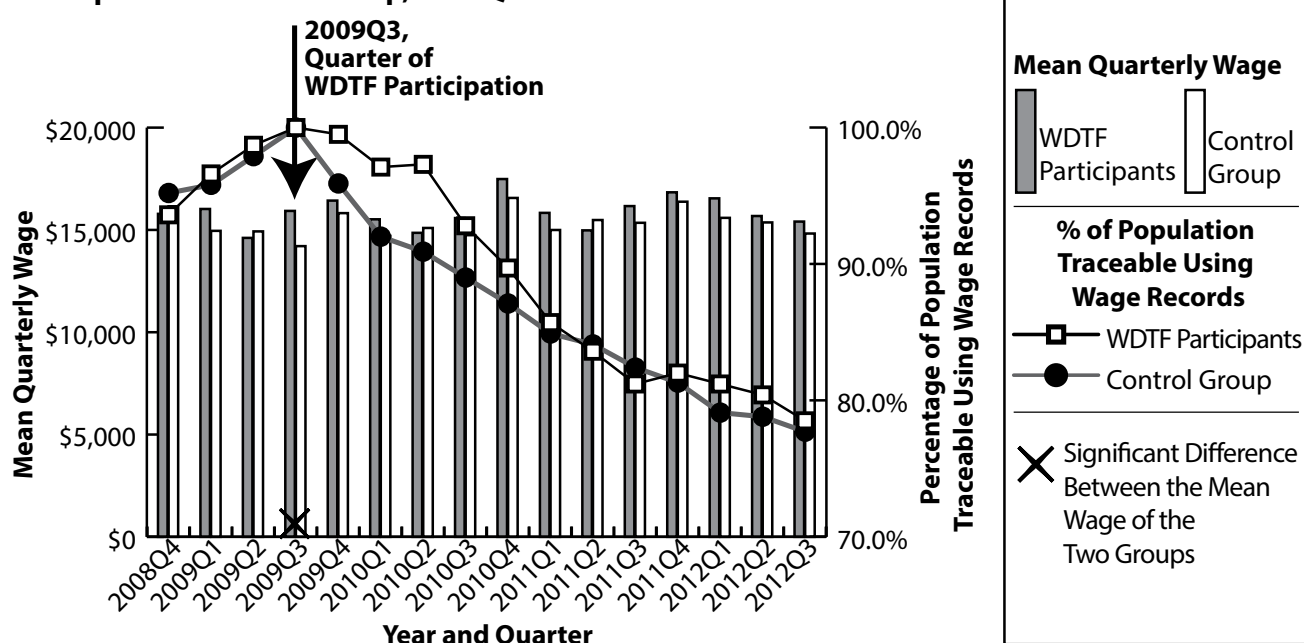
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 57: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2009Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	376	-\$9	\$3,000	8,458	-\$276	\$4,843	No	1.64	466.62	0.1024
8	377	\$137	\$4,495	8,504	-\$183	\$4,729	No	1.35	413.76	0.1773
12	377	\$192	\$4,806	8,522	-\$177	\$4,865	No	1.46	410.82	0.1446

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 13: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2009Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2009Q4 Cohort**Table 58: Characteristics of WDTF Participants (N = 869) and Control Group (Non-WDTF Participants; N = 35,629), 2009Q4 Cohort****Table 58a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.0%	0	<=19	0.0%	0
20-24	2.0%	17	20-24	2.0%	697
25-34	8.4%	73	25-34	8.4%	2,993
35-44	8.4%	73	35-44	8.4%	2,993
45-54	8.2%	71	45-54	8.2%	2,911
55-64	3.5%	30	55-64	3.5%	1,230
65+	0.2%	2	65+	0.2%	82
Total	30.6%	266	Total	30.6%	10,906
Male			Male		
<=19	0.1%	1	<=19	0.1%	41
20-24	3.3%	29	20-24	3.3%	1,189
25-34	17.6%	153	25-34	17.6%	6,273
35-44	17.0%	148	35-44	17.0%	6,068
45-54	20.4%	177	45-54	20.4%	7,257
55-64	10.7%	93	55-64	10.7%	3,813
65+	0.2%	2	65+	0.2%	82
Total	69.4%	603	Total	69.4%	24,723

Table 58b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2009Q1	0.7%	6	2009Q1	0.7%	246
2009Q2	1.3%	11	2009Q2	1.3%	451
2009Q3	2.6%	23	2009Q3	2.6%	943
2009Q4	95.4%	829	2009Q4	95.4%	33,989

Table 58c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	1.6%	14	\$400 to \$3,499	1.6%	574
\$3,500 to \$7,199	4.7%	41	\$3,500 to \$7,199	4.7%	1,681
\$7,200 to \$12,499	15.7%	136	\$7,200 to \$12,499	15.7%	5,576
\$12,500 to \$28,999	75.9%	660	\$12,500 to \$28,999	75.9%	27,060
>\$29,000	2.1%	18	>\$29,000	2.1%	738

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 59: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2009Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2009Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2009Q1	836	\$16,873	\$7,109	34,307	\$16,579	\$11,490	\$294	No	1.16	944.60	0.2459
2009Q2	851	\$17,785	\$6,800	34,826	\$16,736	\$9,709	\$1,049	Yes	4.39	936.73	<.0001
2009Q3	857	\$16,638	\$6,446	35,171	\$16,182	\$9,938	\$457	Yes	2.02	957.94	0.0441
2009Q4	869	\$18,799	\$6,812	35,629	\$17,650	\$16,265	\$1,149	Yes	4.66	1125.60	<.0001
2010Q1	860	\$16,036	\$5,970	34,349	\$16,460	\$13,341	-\$423	No	-1.96	1086.80	0.0502
2010Q2	852	\$17,454	\$6,351	33,743	\$16,918	\$10,883	\$537	Yes	2.38	981.71	0.0175
2010Q3	829	\$17,912	\$6,740	32,949	\$16,486	\$12,181	\$1,426	Yes	5.85	969.53	<.0001
2010Q4	820	\$19,625	\$7,293	32,229	\$18,245	\$15,929	\$1,379	Yes	5.11	1029.50	<.0001
2011Q1	812	\$17,553	\$6,792	31,474	\$16,690	\$14,073	\$863	Yes	3.44	1000.30	0.0006
2011Q2	802	\$17,882	\$6,349	31,104	\$17,246	\$12,394	\$636	Yes	2.71	965.92	0.0069
2011Q3	787	\$18,003	\$6,681	30,600	\$17,091	\$15,527	\$912	Yes	3.59	1019.00	0.0003
2011Q4	786	\$19,383	\$7,358	30,242	\$17,955	\$16,737	\$1,429	Yes	5.11	1009.90	<.0001
2012Q1	781	\$18,781	\$7,525	29,508	\$17,304	\$13,024	\$1,477	Yes	5.28	908.43	<.0001
2012Q2	771	\$17,645	\$6,483	29,459	\$17,122	\$11,819	\$524	Yes	2.15	909.61	0.0317
2012Q3	758	\$17,195	\$6,384	28,853	\$16,629	\$14,433	\$566	Yes	2.29	973.52	0.022
2012Q4	749	\$18,719	\$7,305	28,511	\$18,178	\$18,602	\$541	No	1.87	1023.80	0.0614

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2009Q4 Cohort

Table 60: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2009Q4	869	\$17,415	\$6,302	35,629	\$16,709	\$10,365	Yes	3.20	986.21	0.0014

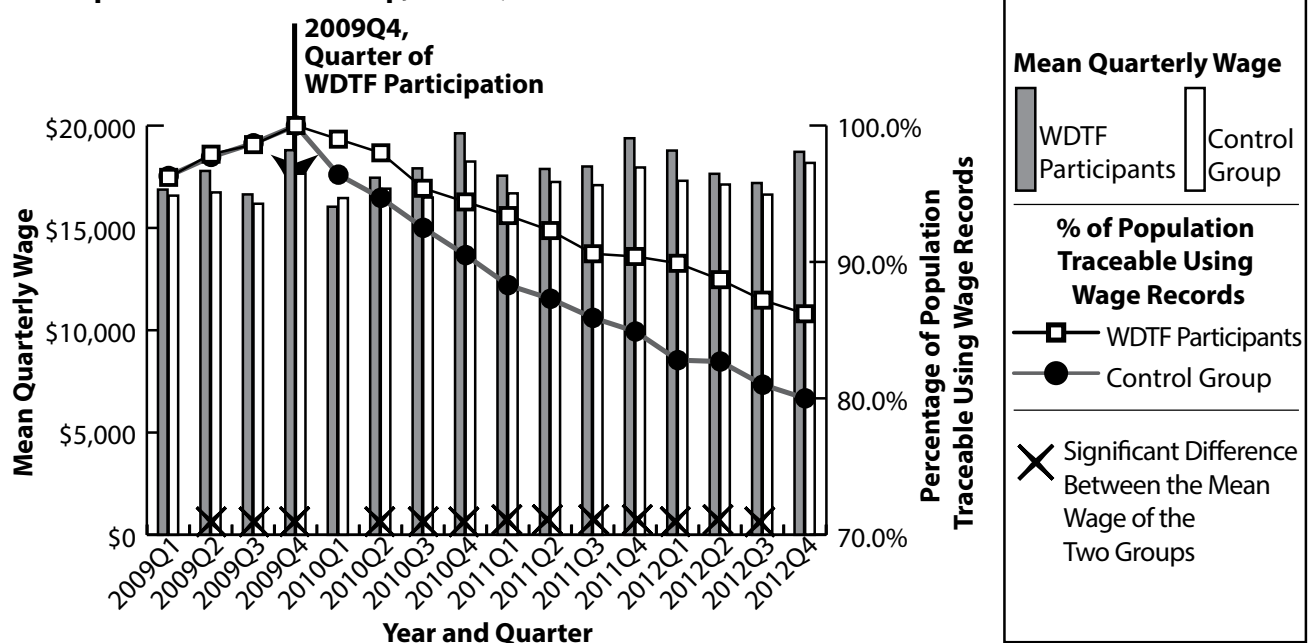
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 61: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2009Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2009Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	863	\$90	\$2,721	34,911	-\$51	\$5,565	No	1.45	1049.2	0.1477
8	864	\$182	\$2,961	35,037	-\$60	\$6,057	Yes	2.29	1050	0.0222
12	864	\$155	\$3,086	35,088	-\$57	\$6,236	No	1.92	1045	0.0555

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 14: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2009Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2010Q1 Cohort**Table 62: Characteristics of WDTF Participants (N = 631) and Control Group (Non-WDTF Participants; N = 11,412), 2010Q1 Cohort****Table 62a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.1%	7	<=19	1.1%	126
20-24	4.0%	25	20-24	3.9%	450
25-34	13.6%	86	25-34	13.6%	1,548
35-44	11.9%	75	35-44	11.8%	1,350
45-54	12.5%	79	45-54	12.5%	1,422
55-64	7.3%	46	55-64	7.3%	828
65+	0.8%	5	65+	0.8%	90
Total	51.2%	323	Total	50.9%	5,814
Male			Male		
<=19	0.6%	4	<=19	0.6%	72
20-24	3.6%	23	20-24	3.6%	414
25-34	14.4%	91	25-34	14.4%	1,638
35-44	11.3%	71	35-44	11.2%	1,278
45-54	11.6%	73	45-54	11.5%	1,314
55-64	6.3%	40	55-64	6.3%	720
65+	1.0%	6	65+	1.4%	162
Total	48.8%	308	Total	49.1%	5,598

Table 62b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2009Q2	2.5%	16	2009Q2	2.5%	288
2009Q3	3.2%	20	2009Q3	3.2%	360
2009Q4	5.1%	32	2009Q4	5.0%	576
2010Q1	89.2%	563	2010Q1	89.3%	10,188

Table 62c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.5%	3	<\$400	0.5%	54
\$400 to \$3,499	12.7%	80	\$400 to \$3,499	12.9%	1,476
\$3,500 to \$7,199	23.5%	148	\$3,500 to \$7,199	23.5%	2,682
\$7,200 to \$12,499	30.9%	195	\$7,200 to \$12,499	30.8%	3,510
\$12,500 to \$28,999	29.3%	185	\$12,500 to \$28,999	29.2%	3,330
>\$29,000	3.2%	20	>\$29,000	3.2%	360

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 63: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2010Q1), the Three Quarters Prior to and 12 Quarters After Program Entry, 2010Q1 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2009Q2	572	\$12,437	\$14,149	10,448	\$11,739	\$10,321	\$698	No	1.16	604.73	0.2456
2009Q3	593	\$11,210	\$8,048	10,667	\$11,506	\$11,291	-\$296	No	-0.85	728.18	0.3961
2009Q4	608	\$12,492	\$9,307	10,961	\$12,438	\$12,037	\$54	No	0.14	724.53	0.8911
2010Q1	631	\$10,853	\$8,257	11,412	\$11,092	\$12,052	-\$239	No	-0.69	786.56	0.4926
2010Q2	613	\$12,327	\$11,267	10,855	\$11,697	\$11,043	\$630	No	1.35	680.10	0.1783
2010Q3	597	\$11,859	\$8,279	10,313	\$11,843	\$15,978	\$16	No	0.04	878.37	0.9662
2010Q4	582	\$13,177	\$9,246	10,036	\$13,027	\$14,914	\$150	No	0.37	768.54	0.715
2011Q1	566	\$11,861	\$8,139	9,713	\$11,990	\$15,248	-\$129	No	-0.34	817.73	0.732
2011Q2	563	\$12,480	\$11,141	9,590	\$12,148	\$11,677	\$332	No	0.68	636.67	0.494
2011Q3	544	\$13,101	\$9,294	9,357	\$12,328	\$13,247	\$774	No	1.84	678.29	0.0668
2011Q4	541	\$13,297	\$9,344	9,152	\$13,099	\$14,621	\$198	No	0.46	706.74	0.6455
2012Q1	525	\$12,473	\$8,798	8,956	\$12,641	\$14,618	-\$168	No	-0.41	706.25	0.6852
2012Q2	521	\$13,584	\$14,626	8,947	\$12,299	\$11,000	\$1,284	Yes	1.97	554.79	0.0491
2012Q3	507	\$12,843	\$9,160	8,704	\$12,158	\$12,359	\$685	No	1.60	618.59	0.1096
2012Q4	499	\$13,422	\$9,647	8,611	\$13,550	\$21,671	-\$128	No	-0.26	827.74	0.7945
2013Q1	489	\$12,656	\$9,908	8,400	\$12,722	\$14,480	-\$65	No	-0.14	616.33	0.8907

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2010Q1 Cohort

Table 64: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q1 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2010Q1	631	\$11,389	\$8,551	11,412	\$11,351	\$10,208	No	0.11	732.96	0.9132

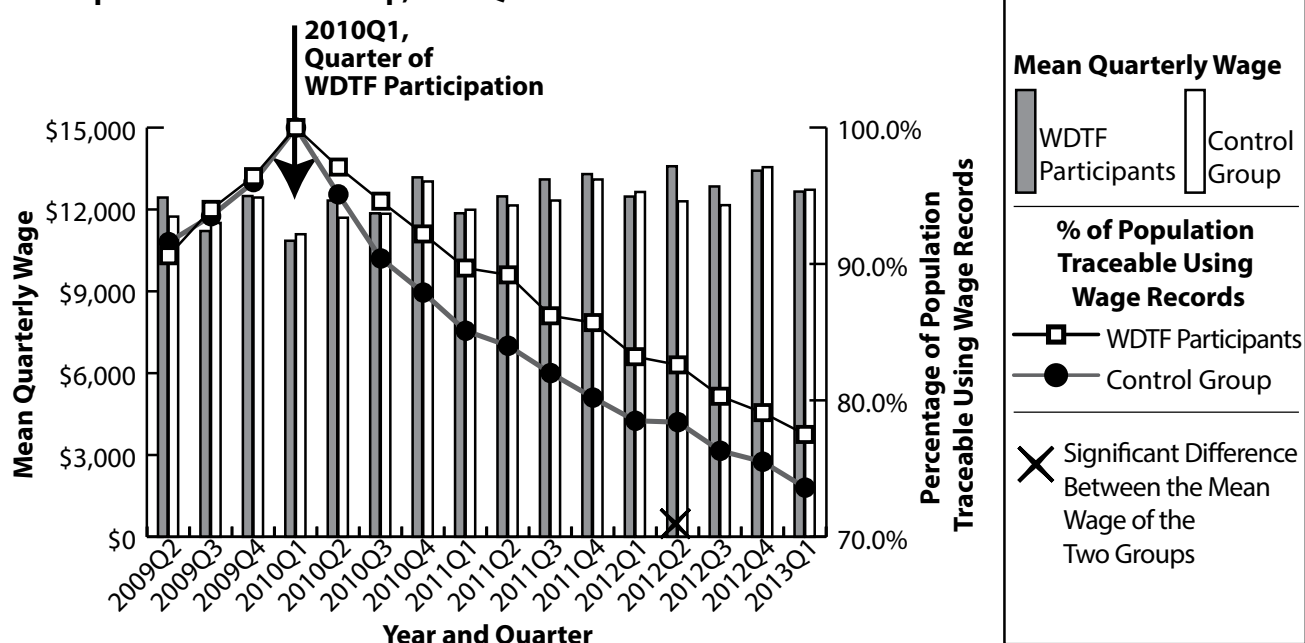
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 65: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2010Q1) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q1 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	621	\$504	\$3,157	11,052	\$220	\$5,636	Yes	2.07	860.44	0.0388
8	623	\$590	\$3,451	11,124	\$263	\$4,986	Yes	2.24	775.29	0.0255
12	623	\$658	\$3,539	11,155	\$294	\$5,128	Yes	2.43	775.79	0.0154

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 15: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2010Q1 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2010Q2 Cohort**Table 66: Characteristics of WDTF Participants (N = 535) and Control Group (Non-WDTF Participants; N = 10,165), 2010Q2 Cohort****Table 66a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.6%	3	<=19	0.6%	57
20-24	2.8%	15	20-24	2.8%	285
25-34	11.4%	61	25-34	11.4%	1,159
35-44	9.5%	51	35-44	9.5%	969
45-54	15.1%	81	45-54	15.1%	1,539
55-64	7.1%	38	55-64	7.1%	722
65+	0.9%	5	65+	0.9%	95
Total	47.5%	254	Total	47.5%	4,826
Male			Male		
<=19	0.0%	0	<=19	0.0%	0
20-24	3.4%	18	20-24	3.4%	342
25-34	15.5%	83	25-34	15.5%	1,577
35-44	11.4%	61	35-44	11.4%	1,159
45-54	14.8%	79	45-54	14.8%	1,501
55-64	7.5%	40	55-64	7.5%	760
65+	0.0%	0	65+	0.0%	0
Total	52.5%	281	Total	52.5%	5,339

Table 66b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2009Q3	0.9%	5	2009Q3	0.9%	95
2009Q4	2.6%	14	2009Q4	2.6%	266
2010Q1	4.7%	25	2010Q1	4.7%	475
2010Q2	91.8%	491	2010Q2	91.8%	9,329

Table 66c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.6%	3	<\$400	0.6%	57
\$400 to \$3,499	4.3%	23	\$400 to \$3,499	4.3%	437
\$3,500 to \$7,199	11.2%	60	\$3,500 to \$7,199	11.2%	1,140
\$7,200 to \$12,499	30.3%	162	\$7,200 to \$12,499	30.3%	3,078
\$12,500 to \$28,999	47.7%	255	\$12,500 to \$28,999	47.7%	4,845
>\$29,000	6.0%	32	>\$29,000	6.0%	608

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 67: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2010Q2), the Three Quarters Prior to and 12 Quarters After Program Entry, 2010Q2 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2009Q3	500	\$15,634	\$9,551	9,593	\$14,612	\$12,868	\$1,022	Yes	2.29	597.62	0.0226
2009Q4	511	\$18,287	\$44,046	9,750	\$16,582	\$22,979	\$1,705	No	0.87	524.65	0.3854
2010Q1	526	\$14,737	\$9,612	9,860	\$15,041	\$17,525	-\$303	No	-0.67	726.51	0.5048
2010Q2	535	\$15,281	\$9,396	10,165	\$15,053	\$13,025	\$227	No	0.53	647.12	0.5942
2010Q3	516	\$16,220	\$9,609	9,704	\$14,741	\$13,195	\$1,479	Yes	3.33	623.13	0.0009
2010Q4	503	\$17,147	\$10,900	9,380	\$17,010	\$26,063	\$137	No	0.25	852.69	0.8054
2011Q1	488	\$16,331	\$14,627	9,120	\$15,362	\$20,971	\$969	No	1.39	599.64	0.1654
2011Q2	483	\$15,863	\$10,176	9,003	\$15,792	\$17,544	\$71	No	0.14	647.07	0.887
2011Q3	472	\$16,410	\$10,210	8,803	\$15,336	\$15,293	\$1,075	Yes	2.16	590.69	0.0311
2011Q4	462	\$16,626	\$10,369	8,662	\$16,752	\$25,534	-\$126	No	-0.23	802.99	0.8203
2012Q1	456	\$16,671	\$12,424	8,430	\$15,715	\$16,851	\$956	No	1.57	549.76	0.1176
2012Q2	446	\$16,416	\$11,193	8,414	\$15,490	\$14,053	\$926	No	1.68	522.28	0.0938
2012Q3	443	\$17,040	\$21,615	8,232	\$14,894	\$13,658	\$2,146	Yes	2.07	461.19	0.0392
2012Q4	441	\$19,954	\$53,448	8,083	\$16,893	\$24,302	\$3,062	No	1.20	449.98	0.2322
2013Q1	429	\$16,290	\$11,098	7,932	\$15,535	\$14,344	\$755	No	1.35	508.61	0.1776
2013Q2	425	\$16,737	\$12,797	7,907	\$15,597	\$12,705	\$1,140	No	1.79	470.04	0.0741

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2010Q2 Cohort

Table 68: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q2 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2010Q2	535	\$15,680	\$14,474	10,165	\$15,043	\$14,335	No	0.99	590.47	0.321

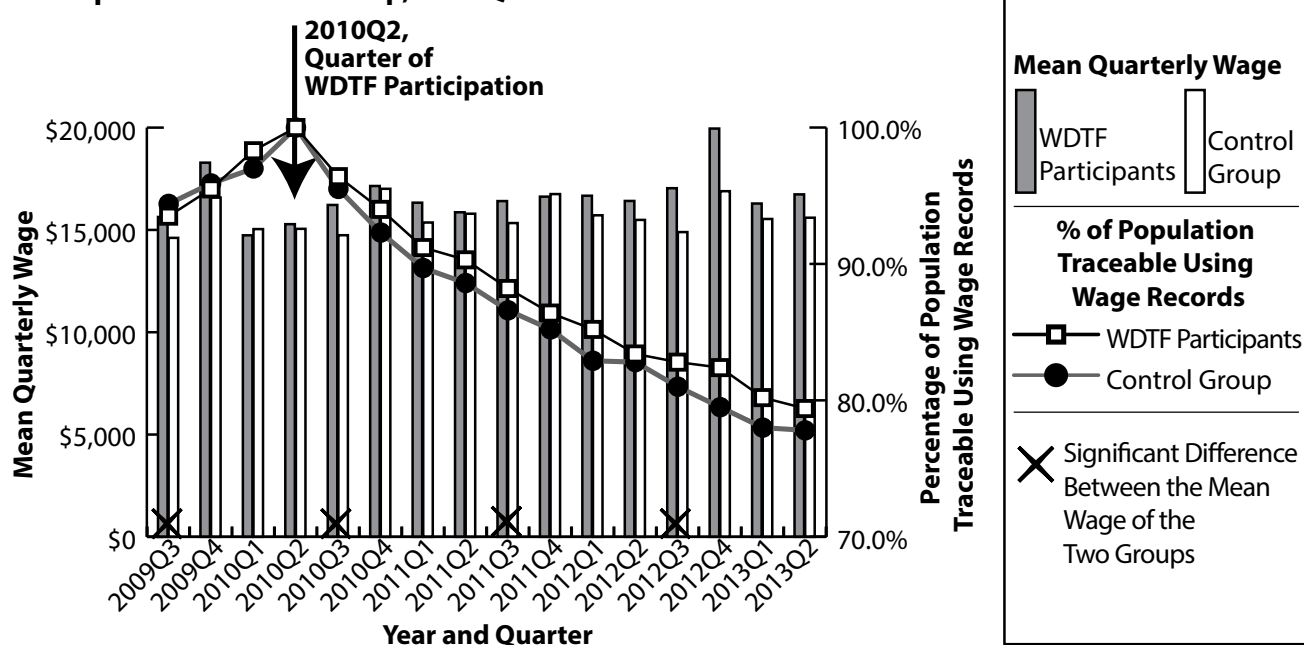
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 69: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2010Q2) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q2 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	519	\$205	\$8,947	9,883	\$117	\$7,375	No	0.22	555.58	0.8261
8	522	\$132	\$9,579	9,930	\$77	\$6,751	No	0.13	548.54	0.8971
12	523	\$372	\$8,490	9,950	\$22	\$6,751	No	0.93	557.24	0.3542

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 16: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2010Q2 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2010Q3 Cohort**Table 70: Characteristics of WDTF Participants (N = 556) and Control Group (Non-WDTF Participants; N = 1,114), 2010Q3 Cohort****Table 70a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.7%	4	<=19	1.4%	8
20-24	3.1%	17	20-24	6.8%	38
25-34	11.0%	61	25-34	15.1%	84
35-44	11.0%	61	35-44	11.0%	61
45-54	11.0%	61	45-54	11.5%	64
55-64	7.4%	41	55-64	8.6%	48
65+	0.5%	3	65+	0.9%	5
Total	44.6%	248	Total	55.4%	308
Male			Male		
<=19	0.7%	8	<=19	1.4%	16
20-24	3.1%	34	20-24	6.8%	76
25-34	11.0%	122	25-34	15.1%	168
35-44	11.0%	122	35-44	11.0%	122
45-54	11.0%	122	45-54	11.5%	128
55-64	7.4%	82	55-64	8.6%	96
65+	0.7%	8	65+	0.9%	10
Total	44.7%	498	Total	55.3%	616

Table 70b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2009Q4	2.0%	11	2009Q4	2.0%	22
2010Q1	7.0%	39	2010Q1	7.0%	78
2010Q2	5.6%	31	2010Q2	5.6%	62
2010Q3	85.5%	475	2010Q3	85.5%	952

Table 70c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<=\$400	0.0%	0
\$400 to \$3,499	6.5%	36	\$400 to \$3,499	6.5%	72
\$3,500 to \$7,199	20.0%	111	\$3,500 to \$7,199	19.9%	222
\$7,200 to \$12,499	28.1%	156	\$7,200 to \$12,499	28.0%	312
\$12,500 to \$28,999	41.4%	230	\$12,500 to \$28,999	41.5%	462
>\$29,000	4.1%	23	>\$29,000	4.1%	46

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 71: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2010Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2010Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2009Q4	491	\$14,108	\$10,244	984	\$14,919	\$27,417	-\$812	No	-0.82	1391.50	0.4119
2010Q1	493	\$12,222	\$8,164	1,003	\$13,075	\$10,644	-\$853	No	-1.71	1234.50	0.0872
2010Q2	542	\$12,950	\$8,636	1,071	\$13,056	\$8,718	-\$107	No	-0.23	1095.60	0.8154
2010Q3	556	\$13,746	\$9,058	1,114	\$12,904	\$9,777	\$842	No	1.74	1187.80	0.0816
2010Q4	543	\$15,777	\$12,085	1,047	\$14,889	\$16,628	\$888	No	1.22	1419.70	0.2243
2011Q1	513	\$13,203	\$11,151	988	\$13,254	\$9,954	-\$50	No	-0.09	939.85	0.9313
2011Q2	506	\$13,767	\$8,682	975	\$13,768	\$9,033	-\$1	No	0.00	1058.50	0.9981
2011Q3	492	\$14,596	\$9,097	968	\$13,797	\$9,647	\$799	No	1.55	1040.20	0.1206
2011Q4	477	\$15,984	\$12,428	940	\$14,471	\$10,626	\$1,513	Yes	2.27	836.29	0.0234
2012Q1	458	\$14,938	\$10,428	902	\$14,475	\$12,056	\$462	No	0.73	1044.00	0.464
2012Q2	464	\$14,425	\$9,536	897	\$14,093	\$9,369	\$332	No	0.61	921.97	0.5408
2012Q3	461	\$14,378	\$8,944	886	\$13,759	\$11,363	\$619	No	1.10	1139.40	0.2733
2012Q4	448	\$16,532	\$14,452	867	\$14,710	\$10,241	\$1,822	Yes	2.38	685.25	0.0177
2013Q1	442	\$14,725	\$9,211	849	\$14,252	\$11,691	\$473	No	0.80	1091.60	0.4258
2013Q2	437	\$14,292	\$8,930	846	\$14,226	\$10,006	\$66	No	0.12	973.68	0.904
2013Q3	426	\$14,482	\$8,825	825	\$13,765	\$9,072	\$717	No	1.35	880.15	0.1775

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2010Q3 Cohort

Table 72: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2010Q3	556	\$12,951	\$8,447	1,114	\$13,131	\$10,811	No	-0.37	1375.2	0.7094

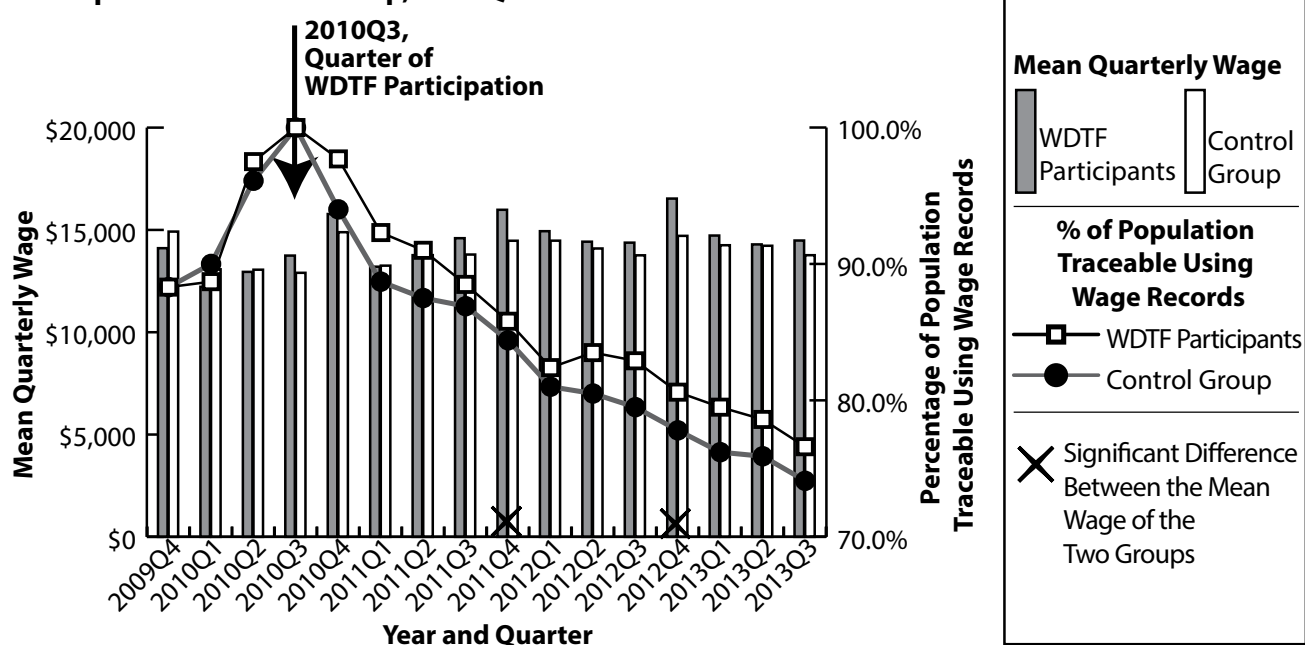
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 73: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2010Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	546	\$1,027	\$5,326	1,072	\$339	\$5,699	Yes	2.4	1164.4	0.0166
8	550	\$1,076	\$4,112	1,076	\$401	\$5,885	Yes	2.69	1474.9	0.0073
12	550	\$1,124	\$4,290	1,079	\$400	\$5,898	Yes	2.82	1436.9	0.0048

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 17: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2010Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2010Q4 Cohort**Table 74: Characteristics of WDTF Participants (N = 415) and Control Group (Non-WDTF Participants; N = 14,110), 2010Q4 Cohort****Table 74a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.0%	4	<=19	1.0%	136
20-24	5.5%	23	20-24	5.5%	782
25-34	17.3%	72	25-34	17.3%	2,448
35-44	14.2%	59	35-44	14.2%	2,006
45-54	11.6%	48	45-54	11.6%	1,632
55-64	4.3%	18	55-64	4.3%	612
65+	0.5%	2	65+	0.5%	68
Total	54.5%	226	Total	54.5%	7,684
Male			Male		
<=19	1.2%	5	<=19	1.2%	170
20-24	5.1%	21	20-24	5.1%	714
25-34	14.0%	58	25-34	14.0%	1,972
35-44	11.1%	46	35-44	11.1%	1,564
45-54	7.0%	29	45-54	7.0%	986
55-64	7.2%	30	55-64	7.2%	1,020
65+	0.0%	0	65+	0.0%	0
Total	45.5%	189	Total	45.5%	6,426

Table 74b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2010Q1	1.4%	4	2010Q1	1.4%	28
2010Q2	4.5%	13	2010Q2	4.5%	91
2010Q3	5.9%	17	2010Q3	5.9%	119
2010Q4	88.2%	253	2010Q4	88.2%	1,778

Table 74c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.2%	1	<=\$400	0.2%	34
\$400 to \$3,499	7.0%	29	\$400 to \$3,499	7.0%	986
\$3,500 to \$7,199	27.0%	112	\$3,500 to \$7,199	27.0%	3,808
\$7,200 to \$12,499	30.6%	127	\$7,200 to \$12,499	30.6%	4,318
\$12,500 to \$28,999	32.0%	133	\$12,500 to \$28,999	32.0%	4,522
>\$29,000	3.1%	13	>\$29,000	3.1%	442

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 75: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2010Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2010Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2010Q1	362	\$12,088	\$12,893	12,191	\$11,712	\$10,502	\$376	No	0.55	375.36	0.5833
2010Q2	370	\$11,574	\$10,069	12,709	\$12,089	\$10,512	-\$516	No	-0.97	392.78	0.3325
2010Q3	403	\$12,825	\$13,268	13,690	\$11,636	\$10,270	\$1,189	No	1.78	416.30	0.0752
2010Q4	415	\$13,192	\$10,666	14,110	\$12,586	\$12,444	\$606	No	1.14	447.79	0.2569
2011Q1	399	\$12,941	\$16,490	13,094	\$11,740	\$11,184	\$1,201	No	1.44	409.23	0.1493
2011Q2	389	\$11,976	\$11,612	12,832	\$12,302	\$11,448	-\$325	No	-0.54	411.19	0.5866
2011Q3	359	\$15,073	\$32,596	12,443	\$12,327	\$10,797	\$2,746	No	1.59	360.27	0.1119
2011Q4	352	\$14,713	\$22,322	12,134	\$13,000	\$15,170	\$1,713	No	1.43	360.47	0.1536
2012Q1	349	\$12,640	\$10,959	11,677	\$12,418	\$10,648	\$221	No	0.37	367.90	0.7101
2012Q2	340	\$13,274	\$11,824	11,658	\$12,586	\$11,149	\$687	No	1.06	356.80	0.2908
2012Q3	327	\$13,918	\$15,637	11,371	\$12,205	\$9,983	\$1,713	Yes	1.97	333.69	0.0498
2012Q4	312	\$15,105	\$16,046	11,183	\$13,416	\$16,425	\$1,689	No	1.83	329.44	0.0678
2013Q1	317	\$13,456	\$13,560	10,928	\$12,674	\$11,941	\$782	No	1.01	330.37	0.3109
2013Q2	312	\$14,112	\$12,655	10,891	\$12,916	\$12,332	\$1,196	No	1.65	328.14	0.1006
2013Q3	299	\$14,062	\$14,646	10,647	\$12,558	\$11,290	\$1,503	No	1.76	308.03	0.0794
2013Q4	295	\$15,371	\$16,678	10,490	\$13,747	\$16,533	\$1,624	No	1.65	310.47	0.0999

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2010Q4 Cohort

Table 76: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2010Q4	415	\$12,078	\$10,841	14,110	\$11,660	\$9,805	No	0.78	434.16	0.4382

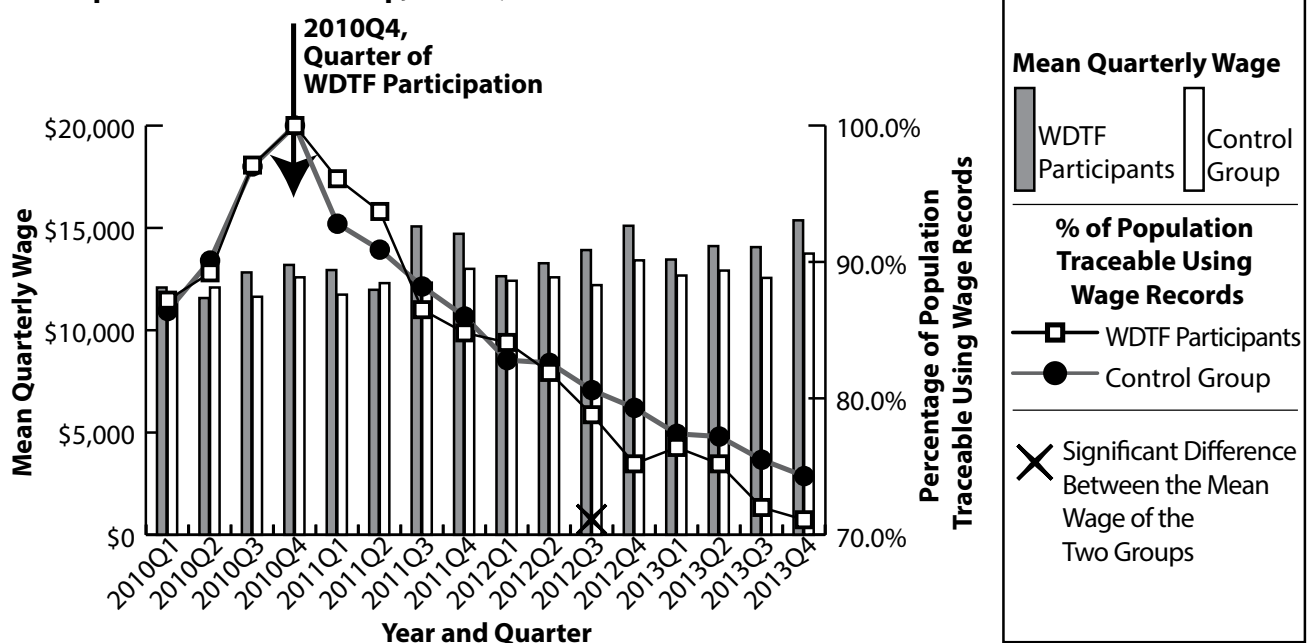
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 77: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2010Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2010Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	404	\$866	\$9,068	13,538	\$192	\$4,510	No	1.49	408.97	0.1372
8	407	\$599	\$5,514	13,645	\$189	\$4,416	No	1.48	421.68	0.1386
12	407	\$624	\$4,811	13,684	\$249	\$4,589	No	1.55	428.27	0.1214

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 18: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2010Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2011Q1 Cohort**Table 78: Characteristics of WDTF Participants (N = 385) and Control Group (Non-WDTF Participants; N = 6,545), 2011Q1 Cohort****Table 78a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.0%	0	<=19	0.0%	0
20-24	2.1%	8	20-24	2.1%	136
25-34	16.4%	63	25-34	16.4%	1,071
35-44	9.9%	38	35-44	9.9%	646
45-54	9.1%	35	45-54	9.1%	595
55-64	3.6%	14	55-64	3.6%	238
65+	0.3%	1	65+	0.3%	17
Total	41.3%	159	Total	41.3%	2,703
Male			Male		
<=19	0.0%	0	<=19	0.0%	0
20-24	3.1%	12	20-24	3.1%	204
25-34	13.2%	51	25-34	13.2%	867
35-44	16.9%	65	35-44	16.9%	1,105
45-54	17.7%	68	45-54	17.7%	1,156
55-64	7.3%	28	55-64	7.3%	476
65+	0.5%	2	65+	0.5%	34
Total	58.7%	226	Total	58.7%	3,842

Table 78b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2010Q2	1.8%	7	2010Q2	1.8%	119
2010Q3	2.6%	10	2010Q3	2.6%	170
2010Q4	5.7%	22	2010Q4	5.7%	374
2011Q1	89.9%	346	2011Q1	89.9%	5,882

Table 78c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.0%	0	<\$400	0.0%	0
\$400 to \$3,499	5.7%	22	\$400 to \$3,499	5.7%	374
\$3,500 to \$7,199	14.3%	55	\$3,500 to \$7,199	14.3%	935
\$7,200 to \$12,499	28.1%	108	\$7,200 to \$12,499	28.1%	1,836
\$12,500 to \$28,999	45.7%	176	\$12,500 to \$28,999	45.7%	2,992
>\$29,000	6.2%	24	>\$29,000	6.2%	408

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 79: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2011Q1), the Three Quarters Prior to and 12 Quarters After Program Entry, 2011Q1 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2010Q2	348	\$14,636	\$9,191	6,020	\$15,191	\$18,313	-\$555	No	-1.02	522.95	0.3104
2010Q3	368	\$16,006	\$10,682	6,201	\$14,946	\$13,153	\$1,060	No	1.82	435.80	0.069
2010Q4	376	\$16,564	\$10,480	6,343	\$16,879	\$23,411	-\$316	No	-0.51	626.46	0.6081
2011Q1	385	\$16,433	\$15,181	6,545	\$15,264	\$21,909	\$1,169	No	1.43	483.43	0.1546
2011Q2	374	\$15,704	\$10,554	6,306	\$15,279	\$13,859	\$425	No	0.74	452.92	0.4585
2011Q3	360	\$19,229	\$41,190	6,034	\$15,529	\$14,476	\$3,700	No	1.70	364.31	0.0903
2011Q4	350	\$18,594	\$12,814	5,886	\$16,339	\$18,617	\$2,255	Yes	3.10	441.70	0.002
2012Q1	343	\$16,120	\$15,420	5,692	\$16,474	\$24,491	-\$354	No	-0.40	453.24	0.692
2012Q2	337	\$16,420	\$9,941	5,662	\$15,430	\$14,401	\$990	No	1.72	424.78	0.0855
2012Q3	322	\$17,033	\$10,627	5,522	\$15,572	\$23,169	\$1,460	Yes	2.18	521.28	0.0296
2012Q4	319	\$20,266	\$16,088	5,425	\$17,113	\$27,072	\$3,153	Yes	3.24	432.02	0.0013
2013Q1	314	\$17,436	\$21,151	5,322	\$16,218	\$17,713	\$1,219	No	1.00	339.41	0.3178
2013Q2	318	\$17,311	\$11,223	5,260	\$15,613	\$13,084	\$1,699	Yes	2.59	371.09	0.0098
2013Q3	312	\$18,146	\$25,460	5,110	\$15,326	\$14,325	\$2,820	No	1.94	323.13	0.0535
2013Q4	313	\$19,903	\$13,905	5,035	\$17,368	\$25,632	\$2,535	Yes	2.93	456.46	0.0036
2014Q1	301	\$17,119	\$14,548	4,959	\$16,544	\$19,258	\$575	No	0.65	366.95	0.5146

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2011Q1 Cohort

Table 80: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q1 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2011Q1	385	\$15,642	\$10,529	6,545	\$15,280	\$15,331	No	0.64	485.3	0.5257

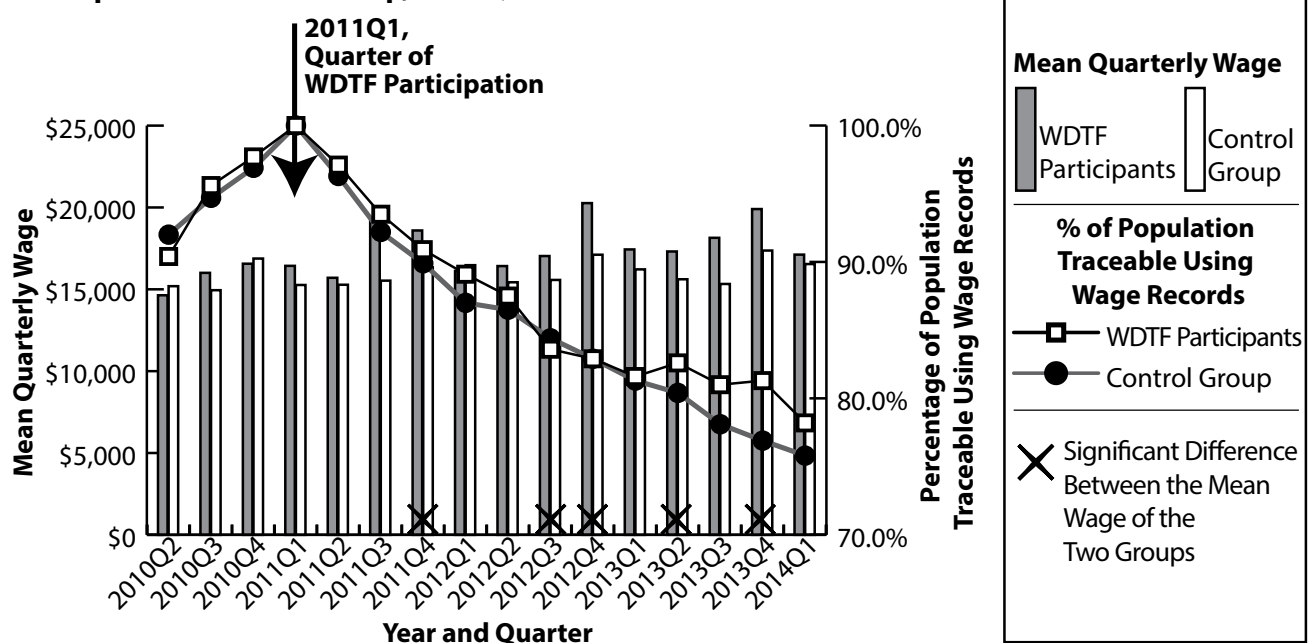
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 81: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2011Q1) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q1 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	376	\$1,072	\$9,305	6,384	\$130	\$7,746	No	1.92	406.2	0.055
8	378	\$893	\$5,963	6,410	\$63	\$8,166	Yes	2.57	464.67	0.0105
12	378	\$974	\$5,702	6,422	\$51	\$8,288	Yes	2.97	476.16	0.0031

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 19: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2011Q1 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2011Q2 Cohort**Table 82: Characteristics of WDTF Participants (N = 578) and Control Group (Non-WDTF Participants; N = 8,670), 2011Q2 Cohort****Table 82a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	1.6%	9	<=19	1.6%	135
20-24	5.4%	31	20-24	5.4%	465
25-34	13.0%	75	25-34	13.0%	1,125
35-44	10.7%	62	35-44	10.7%	930
45-54	11.4%	66	45-54	11.4%	990
55-64	5.0%	29	55-64	5.0%	435
65+	0.3%	2	65+	0.3%	30
Total	47.4%	274	Total	47.4%	4,110
Male			Male		
<=19	2.6%	15	<=19	2.6%	225
20-24	6.4%	37	20-24	6.4%	555
25-34	14.5%	84	25-34	14.5%	1,260
35-44	14.0%	81	35-44	14.0%	1,215
45-54	10.2%	59	45-54	10.2%	885
55-64	4.8%	28	55-64	4.8%	420
65+	0.0%	0	65+	0.0%	0
Total	52.6%	304	Total	52.6%	4,560

Table 82b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2010Q3	3.6%	21	2010Q3	3.6%	315
2010Q4	4.8%	28	2010Q4	4.8%	420
2011Q1	5.7%	33	2011Q1	5.7%	495
2011Q2	85.8%	496	2011Q2	85.8%	7,440

Table 82c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.2%	1	<\$400	0.2%	15
\$400 to \$3,499	10.0%	58	\$400 to \$3,499	10.0%	870
\$3,500 to \$7,199	15.1%	87	\$3,500 to \$7,199	15.1%	1,305
\$7,200 to \$12,499	31.5%	182	\$7,200 to \$12,499	31.5%	2,730
\$12,500 to \$28,999	37.5%	217	\$12,500 to \$28,999	37.5%	3,255
>\$29,000	5.7%	33	>\$29,000	5.7%	495

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 83: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2011Q2), the Three Quarters Prior to and 12 Quarters After Program Entry, 2011Q2 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2010Q3	509	\$13,669	\$10,423	7,798	\$13,723	\$14,398	-\$54	No	-0.11	641.79	0.9125
2010Q4	525	\$15,404	\$13,200	7,880	\$15,424	\$16,694	-\$19	No	-0.03	641.14	0.9748
2011Q1	548	\$13,994	\$12,159	8,052	\$14,035	\$19,654	-\$41	No	-0.07	757.22	0.9426
2011Q2	578	\$13,502	\$9,184	8,670	\$13,747	\$14,906	-\$245	No	-0.59	795.84	0.5539
2011Q3	569	\$14,798	\$19,340	8,234	\$14,086	\$16,439	\$712	No	0.86	626.02	0.3917
2011Q4	558	\$15,593	\$12,981	7,825	\$14,992	\$16,710	\$601	No	1.04	695.72	0.301
2012Q1	539	\$14,777	\$13,495	7,539	\$14,624	\$20,619	\$153	No	0.24	731.12	0.807
2012Q2	539	\$14,063	\$9,053	7,589	\$14,286	\$16,224	-\$223	No	-0.52	808.47	0.6061
2012Q3	530	\$13,975	\$9,513	7,393	\$13,970	\$15,794	\$5	No	0.01	756.58	0.9919
2012Q4	511	\$16,253	\$13,715	7,130	\$15,553	\$21,627	\$700	No	1.06	706.35	0.2881
2013Q1	495	\$15,038	\$13,947	6,915	\$14,644	\$16,496	\$394	No	0.60	597.47	0.5497
2013Q2	497	\$14,152	\$8,940	6,953	\$14,411	\$12,500	-\$259	No	-0.61	643.42	0.5452
2013Q3	490	\$15,949	\$20,593	6,826	\$14,190	\$13,130	\$1,759	No	1.86	517.93	0.0629
2013Q4	481	\$15,832	\$12,316	6,703	\$15,965	\$24,313	-\$133	No	-0.21	781.62	0.8346
2014Q1	465	\$15,072	\$13,281	6,599	\$14,704	\$14,703	\$367	No	0.57	547.32	0.5673
2014Q2	462	\$14,552	\$8,788	6,511	\$14,795	\$13,899	-\$243	No	-0.55	637.75	0.5835

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2011Q2 Cohort

Table 84: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q2 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2011Q2	578	\$13,619	\$10,192	8,670	\$13,671	\$14,260	No	-0.12	736.61	0.9082

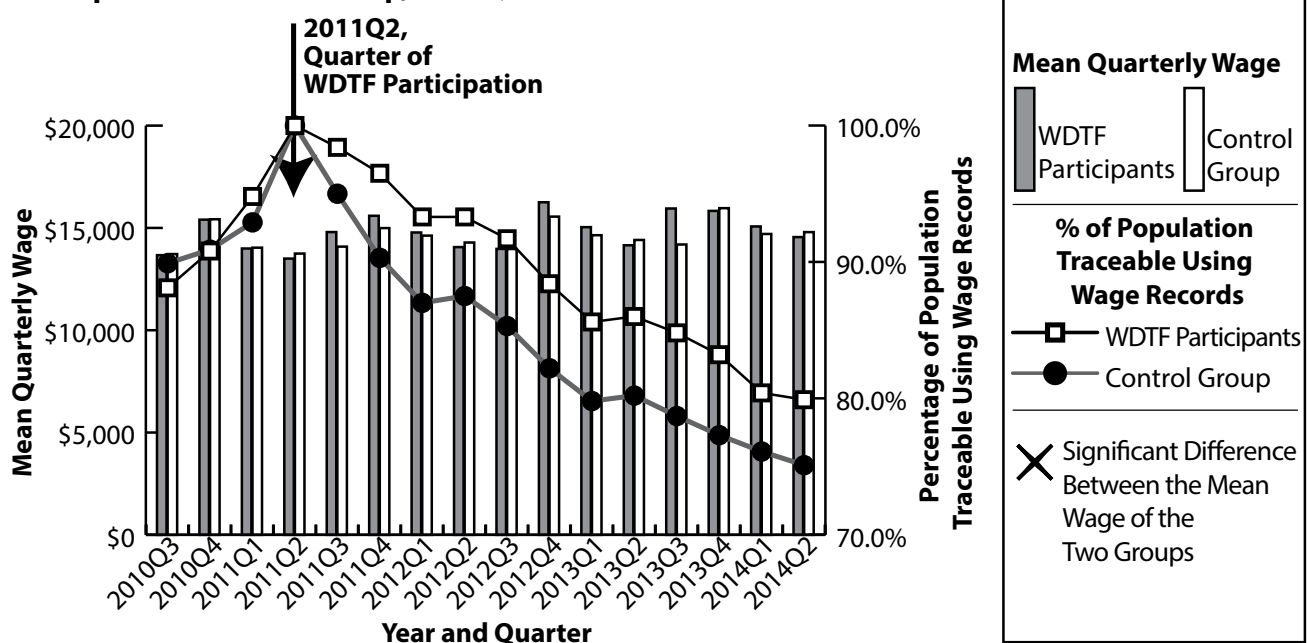
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 85: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2011Q2) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q2 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	575	\$920	\$4,764	8,392	\$192	\$4,855	Yes	3.54	658.38	0.0004
8	576	\$802	\$3,749	8,450	\$111	\$4,923	Yes	4.19	717.47	<.0001
12	576	\$941	\$3,822	8,472	\$152	\$5,250	Yes	4.66	731.16	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 20: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2011Q2 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2011Q3 Cohort**Table 86: Characteristics of WDTF Participants (N = 354) and Control Group (Non-WDTF Participants; N = 6,035), 2011Q3 Cohort****Table 86a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	3.4%	12	<=19	3.4%	204
20-24	6.5%	23	20-24	6.5%	391
25-34	20.9%	74	25-34	20.8%	1,258
35-44	13.8%	49	35-44	13.8%	833
45-54	13.8%	49	45-54	13.8%	833
55-64	8.5%	30	55-64	8.5%	510
65+	0.0%	0	65+	0.3%	17
Total	66.9%	237	Total	67.0%	4,046
Male			Male		
<=19	0.3%	1	<=19	0.3%	17
20-24	3.7%	13	20-24	3.7%	221
25-34	8.2%	29	25-34	8.2%	493
35-44	7.1%	25	35-44	7.0%	425
45-54	7.6%	27	45-54	7.6%	459
55-64	5.9%	21	55-64	5.9%	357
65+	0.3%	1	65+	0.3%	17
Total	33.1%	117	Total	33.0%	1,989

Table 86b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2010Q4	3.4%	12	2010Q4	3.4%	204
2011Q1	6.2%	22	2011Q1	6.2%	374
2011Q2	4.2%	15	2011Q2	4.2%	255
2011Q3	86.2%	305	2011Q3	86.2%	5,202

Table 86c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.8%	3	<\$400	0.8%	51
\$400 to \$3,499	10.2%	36	\$400 to \$3,499	10.1%	612
\$3,500 to \$7,199	22.0%	78	\$3,500 to \$7,199	22.0%	1,326
\$7,200 to \$12,499	24.9%	88	\$7,200 to \$12,499	24.8%	1,496
\$12,500 to \$28,999	39.5%	140	\$12,500 to \$28,999	39.7%	2,397
>\$29,000	2.5%	9	>\$29,000	2.5%	153

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 87: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2011Q3), the Three Quarters Prior to and 12 Quarters After Program Entry, 2011Q3 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results				
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t
2010Q4	306	\$12,908	\$8,896	5,382	\$13,114	\$12,248	-\$206	No	-0.39	374.04	0.7003
2011Q1	319	\$11,735	\$8,787	5,380	\$12,051	\$14,354	-\$316	No	-0.60	425.96	0.5515
2011Q2	342	\$11,847	\$7,594	5,728	\$12,352	\$12,087	-\$505	No	-1.15	451.34	0.2521
2011Q3	354	\$12,918	\$8,242	6,035	\$11,846	\$10,625	\$1,072	Yes	2.34	424.95	0.02
2011Q4	344	\$13,098	\$7,755	5,643	\$13,166	\$18,857	-\$68	No	-0.14	629.88	0.8893
2012Q1	332	\$13,267	\$8,728	5,359	\$12,554	\$13,889	\$713	No	1.38	442.33	0.167
2012Q2	329	\$13,035	\$7,986	5,342	\$12,871	\$17,024	\$163	No	0.33	534.69	0.7433
2012Q3	321	\$13,365	\$8,537	5,166	\$12,201	\$15,789	\$1,164	Yes	2.22	469.15	0.027
2012Q4	317	\$13,959	\$8,967	5,007	\$13,432	\$19,026	\$527	No	0.92	519.16	0.3565
2013Q1	313	\$14,386	\$11,109	4,860	\$12,635	\$13,047	\$1,751	Yes	2.67	369.70	0.0079
2013Q2	307	\$13,232	\$7,894	4,887	\$13,032	\$14,925	\$200	No	0.40	457.44	0.6888
2013Q3	302	\$14,071	\$14,078	4,819	\$12,206	\$13,665	\$1,865	Yes	2.24	337.52	0.0259
2013Q4	288	\$14,113	\$9,064	4,671	\$13,402	\$16,814	\$711	No	1.21	420.56	0.2272
2014Q1	279	\$14,445	\$15,711	4,543	\$12,662	\$11,814	\$1,783	No	1.86	297.62	0.0634
2014Q2	275	\$13,573	\$8,751	4,493	\$12,899	\$11,540	\$674	No	1.21	335.20	0.2255
2014Q3	271	\$13,668	\$8,826	4,406	\$12,550	\$9,553	\$1,118	Yes	2.01	310.21	0.0449

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2011Q3 Cohort

Table 88: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q3 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2011Q3	354	\$12,012	\$7,949	6,035	\$12,033	\$11,543	No	-0.05	445.34	0.9626

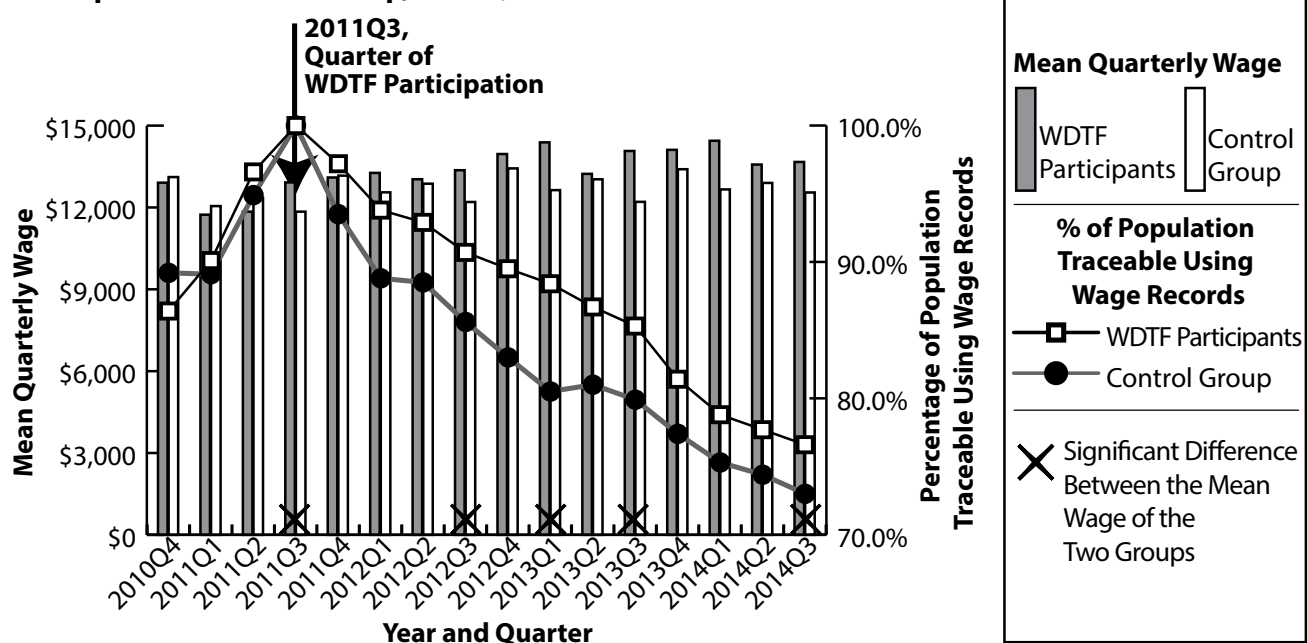
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 89: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2011Q3) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q3 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	351	\$739	\$2,753	5,799	\$87	\$7,874	Yes	3.63	771.01	0.0003
8	351	\$1,090	\$3,337	5,843	\$37	\$6,888	Yes	5.28	549.95	<.0001
12	351	\$1,117	\$3,185	5,857	\$27	\$5,750	Yes	5.86	498.93	<.0001

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 21: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2011Q3 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

2011Q4 Cohort**Table 90: Characteristics of WDTF Participants (N = 406) and Control Group (Non-WDTF Participants; N = 10,962), 2011Q4 Cohort****Table 90a: Age and Gender**

WDTF Participants			Control Group		
Age Group	%	N	Age Group	%	N
Female			Female		
<=19	0.2%	1	<=19	0.2%	27
20-24	4.7%	19	20-24	4.7%	513
25-34	17.5%	71	25-34	17.5%	1,917
35-44	12.3%	50	35-44	12.3%	1,350
45-54	10.3%	42	45-54	10.3%	1,134
55-64	8.1%	33	55-64	8.1%	891
65+	0.0%	0	65+	0.0%	0
Total	53.2%	216	Total	53.2%	5,832
Male			Male		
<=19	0.2%	1	<=19	0.2%	27
20-24	4.7%	19	20-24	4.7%	513
25-34	16.7%	68	25-34	16.7%	1,836
35-44	11.8%	48	35-44	11.8%	1,296
45-54	7.9%	32	45-54	7.9%	864
55-64	5.2%	21	55-64	5.2%	567
65+	0.2%	1	65+	0.2%	27
Total	46.8%	190	Total	46.8%	5,130

Table 90b: Working During the Base Period (Year/Quarter of Participation and the 3 Quarters Prior)

WDTF Participants			Control Group		
Year/Quarter	%	N	Quarters Prior	%	N
2011Q1	1.2%	5	2011Q1	1.2%	135
2011Q2	5.9%	24	2011Q2	5.9%	648
2011Q3	4.7%	19	2011Q3	4.7%	513
2011Q4	88.2%	358	2011Q4	88.2%	9,666

Table 90c: Mean Quarterly Wage Group

WDTF Participants			Control Group		
Wage Group	%	N	Wage Group	%	N
<\$400	0.2%	1	<\$400	0.2%	27
\$400 to \$3,499	2.5%	10	\$400 to \$3,499	2.5%	270
\$3,500 to \$7,199	16.7%	68	\$3,500 to \$7,199	16.7%	1,836
\$7,200 to \$12,499	22.2%	90	\$7,200 to \$12,499	22.2%	2,430
\$12,500 to \$28,999	52.5%	213	\$12,500 to \$28,999	52.5%	5,751
>\$29,000	5.9%	24	>\$29,000	5.9%	648

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 91: Number of Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group Found in Wage Records, Mean Quarterly Wage, the Standard Deviation in Wages, the Wage Difference, and a Determination of Whether the Difference was Statistically Significant for the Quarter of Program Entry (2011Q4), the Three Quarters Prior to and 12 Quarters After Program Entry, 2011Q4 Cohort

Year and Quarter	WDTF Participants			Control Group			T-test Results					
	N	Mean Wage	Standard Deviation Wage	N	Mean Wage	Standard Deviation Wage	Wage Difference	Significant Difference α=0.05	t-Value	d.f.	Pr > t	
2011Q1	363	\$15,975	\$17,140	9,802	\$14,851	\$17,471	\$1,124	No	1.23	390.37	0.221	
2011Q2	375	\$15,954	\$18,851	10,150	\$15,349	\$14,797	\$604	No	0.61	391.21	0.5397	
2011Q3	398	\$17,105	\$18,433	10,720	\$15,076	\$13,125	\$2,029	Yes	2.18	412.08	0.0302	
2011Q4	406	\$17,299	\$19,152	10,962	\$15,836	\$14,551	\$1,464	No	1.52	422.50	0.1283	
2012Q1	396	\$16,551	\$15,664	10,366	\$15,229	\$14,626	\$1,321	No	1.65	421.73	0.0994	
2012Q2	385	\$16,379	\$17,797	10,177	\$15,185	\$12,316	\$1,194	No	1.30	398.04	0.1928	
2012Q3	369	\$17,582	\$26,554	9,839	\$14,742	\$13,012	\$2,840	Yes	2.05	374.66	0.0415	
2012Q4	355	\$17,607	\$24,876	9,609	\$16,171	\$17,164	\$1,436	No	1.08	366.56	0.2817	
2013Q1	350	\$16,648	\$18,353	9,381	\$15,303	\$14,091	\$1,346	No	1.36	364.51	0.1756	
2013Q2	345	\$16,331	\$20,549	9,268	\$15,444	\$11,709	\$887	No	0.80	352.36	0.4258	
2013Q3	335	\$17,227	\$18,687	9,066	\$14,851	\$12,065	\$2,375	Yes	2.31	344.37	0.0215	
2013Q4	328	\$17,868	\$21,201	8,916	\$16,315	\$19,784	\$1,553	No	1.31	348.27	0.1924	
2014Q1	316	\$16,705	\$15,888	8,702	\$15,610	\$15,423	\$1,095	No	1.20	336.91	0.2293	
2014Q2	315	\$17,146	\$20,344	8,524	\$15,860	\$17,664	\$1,286	No	1.11	331.73	0.2693	
2014Q3	303	\$17,624	\$17,161	8,422	\$15,364	\$14,645	\$2,260	Yes	2.26	318.03	0.0243	
2014Q4	296	\$19,202	\$22,352	8,285	\$16,968	\$19,424	\$2,234	No	1.70	311.13	0.0907	

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

2011Q4 Cohort

Table 92: T-test of Mean Quarterly Wages During Base Period Between Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q4 Cohort

Start Year and Quarter	WDTF Participants			Control Group (Non-Participants)			T-test Results			
	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	N	Mean Wages in Start Quarter and 3 Quarters Prior	Standard Deviation	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
2011Q4	406	\$16,339	\$17,629	10,962	\$15,054	\$12,752	No	1.45	420.84	0.1466

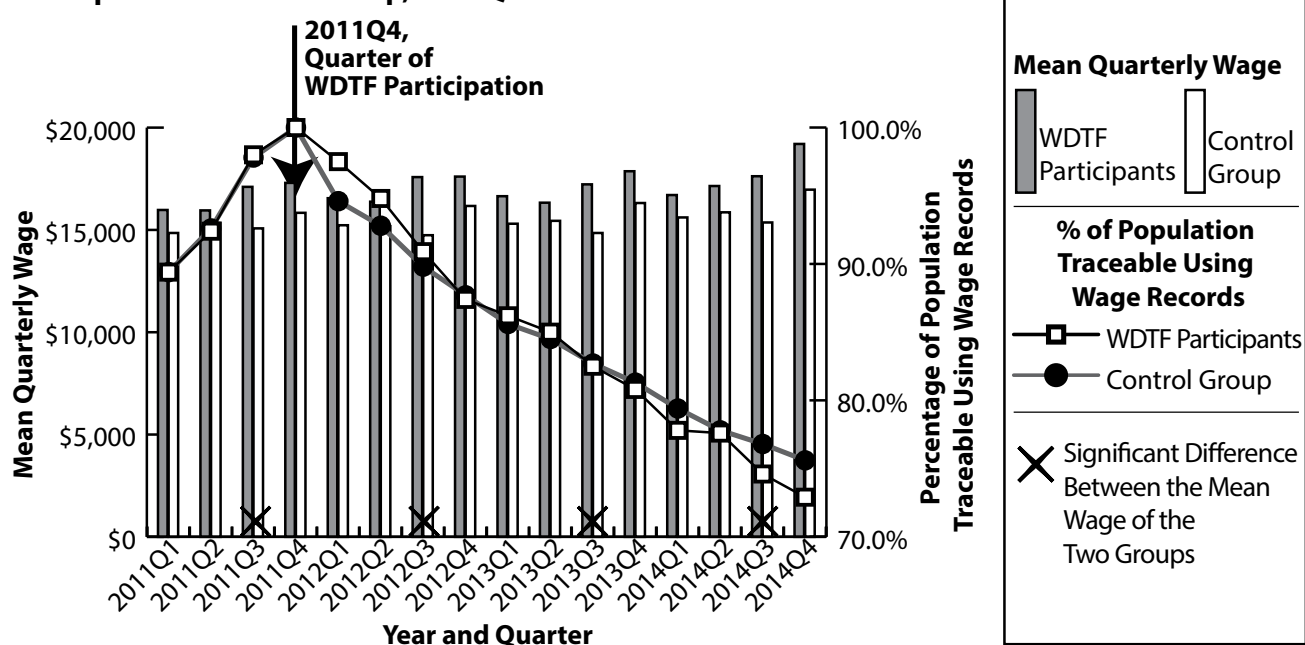
Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Table 93: Difference in Mean Quarterly Wages Since the Start Year and Quarter (2011Q4) for Wyoming Workforce Development Training Fund (WDTF) Participants and Control Group, 2011Q4 Cohort

Number of Quarters After Start Year & Quarter	WDTF Participants			Control Group			T-test Results			
	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	N	Difference in Mean Quarterly Wages since Start Year and Quarter	Standard Deviation Wage	Significant Difference $\alpha=0.05$	t-Value	d.f.	Pr > t
4	400	\$321	\$5,500	10,663	-\$140	\$5,952	No	1.64	434.79	0.1019
8	401	\$121	\$6,725	10,705	-\$161	\$6,375	No	0.83	427.37	0.4094
12	402	\$198	\$6,711	10,724	-\$92	\$6,296	No	0.85	427.88	0.3939

Source: Custom extract from Wyoming Workforce Development Training Fund files and Wyoming Wage Records.

Figure 22: Comparing the Percent of Traceable Records and Mean Quarterly Wage of WDTF Participants to Control Group, 2011Q4 Cohort



Source: Research & Planning Wage Records database and Wyoming Department of Workforce Services Workforce Development Training Fund (WDTF) database.

**Wyoming Department of Workforce
Services, Research & Planning
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