CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

HOW DID THE EXPANSION OF VOCATIONAL REHABILITATION SERVICES AFFECT YOUTH RECEIVING SSI?

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Abstract

This study examines how transition-aged youth with disabilities receiving Supplemental Security Income (SSI) may have been affected by the Workforce Innovation and Opportunity Act (WIOA) and access to pre-employment transition services (pre-ETS). Using data from the Social Security Administration (SSA) and the Rehabilitation Services Administration for 2010 to 2021, we show that after WIOA's passage, more youth applied to vocational rehabilitation agencies, signed individualized plans for employment, and had higher annual earnings. In states where students had more access to pre-ETS, youth receiving SSI had higher rates for each of the three outcomes (signed individualized plans for employment, had any earnings, and use of Section 301) than in states where students had less access. The passage of WIOA and access to pre-ETS likely contributed to a higher involvement with VR and may be associated with better employment outcomes.

The paper found that:

- After WIOA's passage, more youth with disabilities receiving SSI applied to vocational rehabilitation (VR) agencies, signed an individualized plan for employment (IPE) that would allow them to access services beyond pre-ETS, and had higher annual earnings.
- Youth receiving SSI in states offering greater access to pre-ETS had higher annual earnings rates and earnings, as well as higher rates of Student Earned Income Exclusion (SEIE) use after WIOA's passage.
- From 2017 to 2021, having greater availability of pre-ETS within a state (as evidenced by the pre-ETS access ratio) was associated with higher rates of signed IPEs, earnings, and use of Section 301.

The policy implications of the findings are:

- States have the potential to improve the experience of youth receiving SSI in terms of access to pre-ETS and application to (VR). The engagement of this population with VR services varies widely across states; if all states had VR application rates similar to the highest-ranked states, an additional 22,000 youth would have applied for VR services.
- Increased pre-ETS access might encourage youth with disabilities to enter the labor market directly, as reflected in the increased earnings of youth receiving SSI after WIOA.

However, more evidence is needed to show that the findings are related to WIOA and not due to the stronger economic environment after 2010.

- Improved access to work incentives counseling may be useful for the population of youth receiving SSI, especially those who are working or have contact with VR agencies through pre-ETS or usual VR services. This implication reflects the mixed evidence of how the use of work incentives changed with the passage of WIOA and access to pre-ETS.

Introduction

The Workforce Innovation and Opportunity Act of 2014 (WIOA) represented a significant shift in how state vocational rehabilitation (VR) agencies offered services to youth with disabilities, particularly students. One WIOA requirement was that state VR agencies reserve at least 15 percent of their federal program funds to offer pre-employment transition services (pre-ETS) to students with disabilities (Employment & Training Administration 2014). This study measures the relationship between WIOA and pre-ETS access for a population of youth with disabilities receiving Supplemental Security Income (SSI). Understanding whether WIOA and pre-ETS help students transition from high school to better postsecondary education and employment opportunities is critical because a successful transition can improve their future employment prospects and earnings, health-related quality of life, and well-being. Moreover, evidence is limited on the effectiveness of programs for this population (Urdapilleta et al. 2020).

The influence of WIOA on VR agency applicants and participants has been previously documented. When transition-age youth are exposed to services similar to pre-ETS, they are more likely to sign an individualized plan for employment (IPE) and use VR services (Luecking et al. 2018). Increased involvement with VR may lead to better employment and earnings (Dean et al. 2019; Yin et al. 2023), including for youth receiving SSI (Hoffman et al. 2018). Although youth comprised a larger proportion of VR applicants after WIOA than before (U.S. Department of Education 2020), to our knowledge, no quantitative evidence exists showing how the employment outcomes of transition-age youth changed after WIOA implementation and the availability of pre-ETS.

The purpose of this paper is to measure how VR involvement, employment, and use of SSI work incentives changed for youth ages 14 to 24 receiving SSI after WIOA was passed and pre-ETS became available. Using rich administrative data from the Social Security Administration (SSA) and the Rehabilitation Services Administration (RSA), we construct two models and measure how youth outcomes changed from 2010 to 2021. In the first model, we adjust for state and individual characteristics to estimate the post-WIOA changes on applications to VR, signing of IPEs, having any annual earnings, the amount of annual earnings, and the use of two SSA work incentives (the Student Earned Income Exclusion [SEIE] and Section 301). In the second model, we explore variation in pre-ETS access by state and year; investments in pre-

ETS for students varied at the state level and changed over the years following the passage of WIOA. We then estimate the association between state-level pre-ETS access and changes in the outcomes of youth receiving SSI.

This report documents the influence of WIOA on youth with disabilities who had substantive employment barriers. After WIOA's passage, more of these youth applied to VR agencies, signed an IPE that would allow them to access services beyond pre-ETS, and had higher annual earnings. Moreover, those in states offering greater access to pre-ETS also had higher annual earnings rates and earnings, as well as higher rates of SEIE use after WIOA's passage. From 2017 to 2021, we observe positive correlations between state-level pre-ETS access and signed IPEs, earnings, and use of Section 301.

Background

WIOA and Pre-ETS

WIOA instituted new requirements for state VR agencies related to services for students with disabilities. The Act requires state VR agencies to reserve at least 15 percent of their federal Title I program funds to offer pre-ETS to students with disabilities (Employment & Training Administration 2014). State VR agencies must make these services available to all students with disabilities, regardless of whether they apply for services at the agency. In addition to preparing a student for employment, pre-ETS could lead some students to apply for additional VR services. A student with a disability is defined as "an individual who is in an educational program, meets certain age requirements, and is eligible for and receiving special education or related services under the Individuals with Disabilities Education Act or is an individual with a disability for purposes of Section 504 of the Rehabilitation Act (Section 7(37) of the Rehabilitation Act and 34 C.F.R. § 361.5(51)" (U.S. Department of Education 2020). Students can be enrolled in high school, a recognized educational setting, or postsecondary education institutions. They are typically between ages 16 and 21, although the specific age range varies with the state's age requirements for IDEA-mandated transition services and the agreed upon minimum age by the state VR agency (Carlson et al. 2020).

Pre-ETS are often provided at schools with the collaboration of pre-ETS providers and educators (Fabian et al. 2018). The school setting is especially suitable because WIOA allows VR agency staff to work with students in groups rather than individually. WIOA defines specific

services that agencies must offer to students with disabilities. The five required services include: (1) job exploration counseling (such as career counseling or vocational interest inventories), (2) work-based learning experiences (WBLEs; examples include job shadowing or internships), (3) counseling on opportunities for enrollment in comprehensive transition or postsecondary educational programs at institutions of higher education, (4) workplace readiness training (such as life skills and financial literacy), and (5) instruction in self-advocacy (such as self-determination training or peer mentoring).

The successful implementation of pre-ETS depends on factors involving students, their families, VR providers, educators, and local characteristics. Students and their families may not be adequately informed about the purpose of VR services and the availability of services in their areas (Schutz et al. 2022; Awsumb et al. 2019). Students may also lack the resources and support required for their VR engagement due to their needs and disabilities (Fabian et al. 2018; Bromley et al. 2022). VR counselors report challenges related to the increased caseload and paperwork related to serving eligible and potentially eligible students after WIOA, in addition to insufficient time and financial resources to implement pre-ETS (Fabian et al. 2018; Awsumb et al. 2020). Despite the overall collaborative relationships between VR counselors and local schools, some educators struggle to connect with students who could benefit from pre-ETS or are unfamiliar with the services (Carter et al. 2021). Finally, successfully implementing some services relies on local factors or characteristics, such as the availability of employers interested in offering community-based WBLEs to students (Bromley et al. 2022).

VR agencies have varied in their implementation of pre-ETS to date, which could lead to differences in the outcomes of students with disabilities across states. In program year 2021, the percentage of students with disabilities receiving VR services who used pre-ETS ranged from 100 percent in Illinois to 14 percent in Puerto Rico. Further, in that same year, the percentage of VR participants who were ages 18 or younger when they signed their IPE ranged from 63 percent in Illinois to 7 percent in Oregon (US Department of Education 2022). The student populations VR agencies serve also differ: in Illinois, 94 percent of students with disabilities who used pre-ETS had applied for VR services, and the remainder were potentially eligible; in Oregon, the percentage of students with disabilities who used pre-ETS and had applied for VR services was only 1 percent.

Youth Receiving SSI Benefits

This study focuses on youth receiving SSI benefits. SSI is a means-tested cash benefit for individuals with significant disabilities.[1] Due to their incomes, assets, and health situations, these youth may benefit even more from pre-ETS than other youth with disabilities in terms of improving their post-school employment prospects.

Youth with disabilities, in general, might not be adequately prepared for employment because of a lack of career development, learning, and training opportunities. Despite the potential availability of public programs that offer these services, youth with disabilities might face challenges in using them due to complex eligibility rules, fragmented transition systems, and other barriers (Livermore et al. 2019).

Such challenges in achieving employment are likely even more significant for SSI recipients due to their low household resources and significant health conditions. Based on the 2021 ACS data, the median household income for youth receiving SSI at age 17 was $51,600 and $60,500 for those age 18. The household income for youth with disabilities not receiving SSI was $78,300 and $93,300, respectively (Flood et al. 2023). The employment rates of youth with a disability are 19 percent for those ages 16 to 19 and 39 percent for those ages 20 to 24. In contrast, youth with no disability have employment rates of 33 percent and 66 percent, respectively (Bureau of Labor Statistics 2021). Moreover, youth receiving SSI benefits are less likely to use VR services after applying for VR and are less likely to close a case with employment compared to youth with disabilities not receiving SSI benefits (Honeycutt et al. 2017).

Because of these issues, young people with disabilities receiving SSI can potentially benefit from pre-ETS and other VR services to help them transition from high school to better postsecondary education and employment opportunities. A successful transition can lead to upward mobility by improving future employment prospects and earnings, health-related quality of life, and well-being (Hartman et al. 2019).

[1] For youth under age 18, the SSI program has specific disability-related eligibility criteria related to marked and severe functional limitations. Once a child SSI recipient reaches age 18, their eligibility for SSI undergoes a redetermination process using adult disability-related eligibility criteria based on the person's ability to perform work at a substantial gainful activity level (Hemmeter et al. 2009; Social Security Administration 2022). The rules for parental income deeming also change at age 18; as a result, youth with severe disabilities who were not eligible for SSI before age 18 because of income and asset restrictions may become eligible at age 18 (Hemmeter 2015).

Pre-ETS, VR Services, and Outcomes of Youth Receiving SSI

Although we are unaware of any evidence to date on the effects of pre-ETS specifically on the employment outcomes of transition-age youth, the literature documents the outcomes of youth who use services similar to pre-ETS. VR services have the potential to improve employment outcomes for transition-age youth, though the findings are mixed. Correlational evidence shows that youth who use VR services, including those receiving SSI, have better long-term employment outcomes than those who do not use such services (Hoffman et al. 2018). Another study showed that an immersive experience (Project SEARCH) was correlated with a higher probability of a successful VR closure (Osmani et al. 2022). There is causal evidence that VR services increased youth's employment rates and earnings for up to two years after their VR case was closed, with the effects larger for youth ages 14 to 18 than for those ages 19 to 24 (Yin et al. 2023). Dean et al. (2019) found that youth with disabilities participating in a transition program had increased employment and earnings outcomes for more than two years after the end of the program. A series of recent studies measured the impact of offering WBLEs to high school students with disabilities in Maine, Maryland, Massachusetts, and Vermont. Despite the successful implementation of these programs, increased WBLEs were not consistently associated with improved employment outcomes up to 24 months after enrollment, though youth in the Massachusetts program had higher mean hourly wages (Foley et al. 2022; Mann et al. 2021; Sevak et al. 2021; Siwach et al. 2021). Finally, two demonstrations—the Youth Transition Demonstration (YTD) and the Promoting Readiness of Minors in SSI (PROMISE) demonstration—offered employment and other services to youth receiving SSI. In YTD, six independent programs tested a variety of service models, but all generally focused on employment services to youth ages 14 to 25. Although the programs led to positive short-term impacts on service receipt and other outcomes, the results on employment were not sustained (Fraker et al. 2014). PROMISE offered employment and other services to youth receiving SSI beginning when they were ages 14 to 16 through six programs. These programs used different service models, but all focused on state and local partnerships, case management, and employment, including connecting youth with VR agencies. Within 18 months of enrollment, all programs had impacts on youth's service use and employment, which likely reflects that the youth actively used the services (Mamun et al. 2019). By five years after enrollment, only two

PROMISE programs had positive impacts on youth employment (Patnaik et al. 2022; Mamun et al. 2019).

Improvements in employment associated with use of pre-ETS and VR services may lead to more SSI recipients using SSA work incentives. Although the SSI program has several work incentive provisions, we focus on two that are especially relevant to transition-age youth: Section 301 and SEIE. Section 301 (also known as continued payments under VR or similar program work incentive) allows SSA to continue paying monthly SSI payments even if the recipient no longer meets SSA's definition of disability as long as they participate in a VR or similar program, including as a student with an individualized education plan (IEP). The SEIE allows SSA to exclude a portion of an SSI recipient's earnings in computing eligibility and payments if the recipient is under age 22 and regularly attending school, college, or university, or a course of vocational or technical training. In 2023, the maximum individual amount of the income exclusion was $2,220 per month and the total annual amount was $8,950 (Social Security Administration 2020, 2023a).

The use of SEIE and Section 301 has been historically low. Between 2012 and 2015, less than 1.5 percent of all youth ages 14 to 17 used SEIE (GAO 2017). Possible reasons for the low take-up of SEIE include youth and their families being unaware of them, a fear that using them could negatively affect their benefits, or administrative error (U.S. Government Accountability Office 2021). The use of Section 301 has also been low—in 2015, about 1,200 individuals ages 18 to 19 used this incentive. Potential reasons for this low use could include the limited number of individuals under age 18 who used VR services and restricted eligibility through an IEP for those ages 18 to 21 (U.S. Government Accountability Office 2017). Additionally, Section 301 is only available if an individual has not requested continued payments while appealing a negative determination; since appealing and requesting payments is very common, even those otherwise eligible for Section 301 payments may not receive them.

Data

We used data from four sources: SSA's Disability Analysis File (DAF) and Supplemental Security Record, RSA's Case Service Report (RSA-911), and the U.S. Department of Education's IDEA Section 618 Part B. The main data source for the study is the 2021 DAF maintained by SSA. The file includes information on our study population—youth ages 14 to 22

who received SSI benefits at any time from 2010 to 2021. The DAF combines administrative data from several sources: the Supplemental Security Record (SSA's primary system for tracking SSI benefits), the RSA-911 Case Service Report, and the Earnings Recording and Self-Employment Income System (the Master Earnings File). From the Supplemental Security Record, we also obtained additional information on Section 301 use not available in the DAF. We used the variables in these data to identify our analytical sample and define most of the outcomes we analyzed.

Although the information from the DAF and the Supplemental Security Record is complete (meaning the information related SSI is accurate), the information from the other two sources is incomplete. The records from the Master Earnings File include earnings reported to the Internal Revenue Service, so they exclude informal earnings. The RSA-911 Case Service Report includes pre-ETS use beginning in 2017, when RSA began to require state VR agencies to report pre-ETS. In addition to having no information before 2017, we cannot identify pre-ETS measures for every person that used them from 2017 onward. Because RSA must offer pre-ETS for youth regardless of their VR application status, a Social Security Number (SSN) is not required to access the services. Therefore, we cannot identify whether a youth receiving SSI used pre-ETS if they did so before they applied for VR services. Moreover, even among youth who applied to VR, not all records from the RSA-911 Case Service Report contain identifiers that allow a match to SSA data. Between 88 and 91 percent of RSA-911 records from program years 2019, 2020, and 2021, for example, matched to SSA data (Social Security Administration 2023b), and record matching may vary by state. Our estimates of VR involvement therefore represent a lower bound.

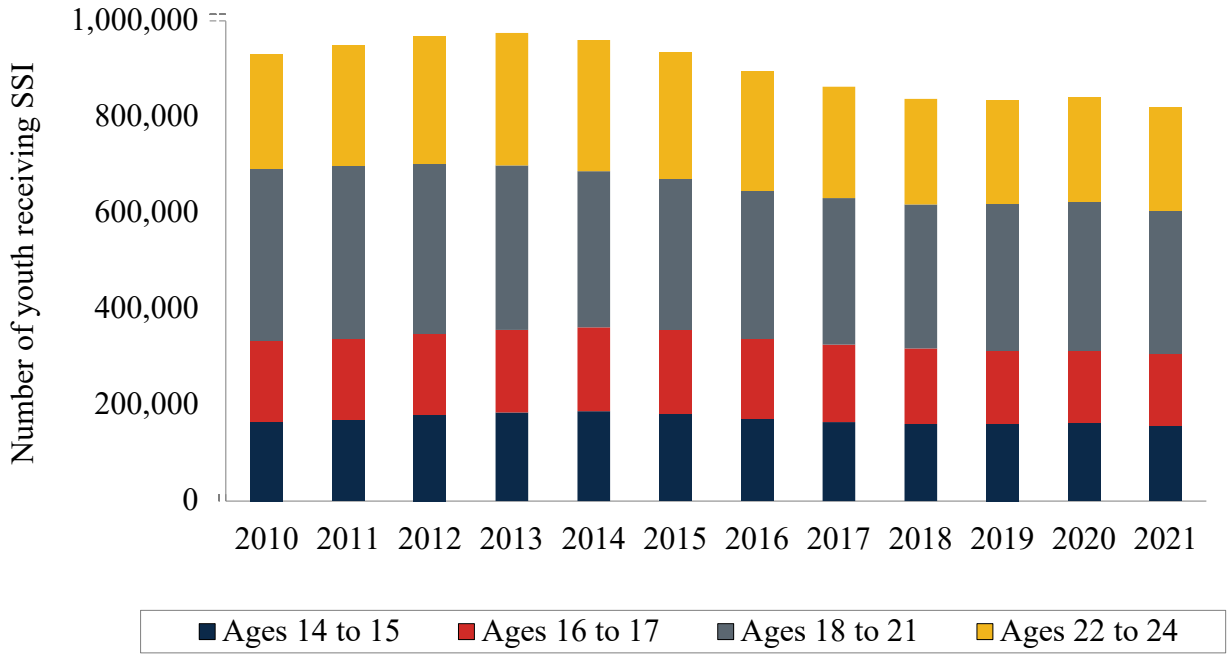
Due to the above limitations on individual-level pre-ETS information in the combined RSA-911 and DAF data, we used other sources to create state-level pre-ETS statistics. RSA staff provided the number of unique students from program years 2017 through 2021 who used pre-ETS, by state and year, which they calculated from the RSA-911 Case Service Report. We complemented this state-level information with data from the IDEA Section 618 Part B Child Count and Educational Environments files. These data provided the total number of students with disabilities ages 14 to 21 who had an IEP to use special education services each year from 2017 to 2021 (Dragoo 2019). When these data were missing for a state for a particular year, we imputed the missing value using data for that state from the previous year adjusted by the

average national percentage change in the number of students in that year. The number of states missing data was 3 in 2017 and 1 each in 2018, 2019, and 2020, and Wisconsin had missing data for three of these years. An important difference between these data sources is that, while the state-level pre-ETS data and the IDEA data are reported at the program year (July through June), data from the DAF are reported at the calendar year.

Sample

The study sample is the universe of youth ages 14 to 24 eligible to receive SSI payments in December of each year. Youth may appear repeatedly across years in the sample; we treat the sample as annual cross-sections of youth from 2010 to 2021. The age distribution of the sample remains relatively unchanged over the years, although the total number of youth receiving SSI ages 14 to 24 in the sample decreased from 929,547 in 2010 to 820,650 in 2021 (Figure 1 and Table A.1), reflecting the general trend for SSI as a whole.

Figure 1. *Age Distribution of Youth Receiving SSI, 2010 to 2021*



Note: This figure shows the number of youth receiving SSI by age from 2010 to 2021.

Empirical Strategy

To conduct our empirical analysis, we use two individual-level regression models. The

intent is to estimate how WIOA's passage and access to pre-ETS over time nationally, and across states and years, affects our outcomes of interest. We estimate the marginal effects using linear models to avoid making assumptions about the true functional form of our models and distribution of data. In all estimations, we cluster standard errors at the state level.

In the first model, we estimate how outcomes for youth ages 14 to 24 receiving SSI changed nationally after WIOA's passage in 2014:

$$Y_{ist} = \alpha_1 + \beta_1 AfterWIOA_t + S_s + X_i'\gamma + \epsilon_{ist} \quad (1)$$

Y_{ist} represents each of the six outcomes for individual *i* living in state *s* at year *t*. $AfterWIOA_t$ is a binary variable equal to zero from 2010 to 2013 and equal to one during and after 2014. S_s represents state-fixed effects, and X_i includes individual-level covariates (sex, age, age at last SSI application, and impairment).

We extend Model 1 by allowing the estimate of changes after WIOA to vary by age group. We also allow the estimates to vary by age group for each year after 2014, which captures trends in the implementation of WIOA if, for example, pre-ETS use improves over time.

In the second model, we allow the access to pre-ETS to vary by state and year. Instead of using a binary variable to capture the passage of WIOA, we use a state- and year-specific pre-ETS access ratio. Although we expect the offer of pre-ETS to have increased directly after WIOA's passage in 2014, data on such services exist only beginning in 2017. Therefore, this model estimates how outcomes for youth receiving SSI change with an increase in access to pre-ETS from 2017 through 2021.

$$Y_{ist} = \alpha_3 + \beta_1 PreETSRatio_{st} + Z_t + X_i'\gamma + \varepsilon_{ist} \quad (2)$$

$PreETSRatio_{st}$ is defined as the number of students using pre-ETS divided by the number of students receiving special education in state *s* and year *t*. Z_t represents year-fixed effects. The year fixed-effects capture variations across time common to all states—for example, improvements in data management systems that reflected a more accurate report of the number of students using pre-ETS. The other variables follow the definition of Model 1. We also extend Model 2 to allow estimates to vary by age group.

To validate the findings, we conduct four sensitivity analyses:

- Excluding states with extremely high or low pre-ETS access ratios in 2017 (the pre-ETS access ratio for Iowa was 53 percent, whereas the next highest ratio was 39

percent; the ratios for California, New Jersey, and New York were all below 1 percent),

- Excluding the period during the COVID-19 pandemic (2020 and 2021) from the sample,
- Adding the state annual unemployment rate—calculated from the monthly rates extracted from the Local Area Unemployment Statistics—as a control in Models 1 and 2,
- Testing if the estimates differ between states that implemented the PROMISE demonstration (Arkansas, California, Maryland, New York, Wisconsin, and states in the ASPIRE consortium—Arizona, Colorado, Montana, North Dakota, South Dakota, and Utah) and all other states,[2] and
- Using binary indicators of pre-ETS access ratios instead of the continuous pre-ETS access ratio in Model 2.

Independent Variables

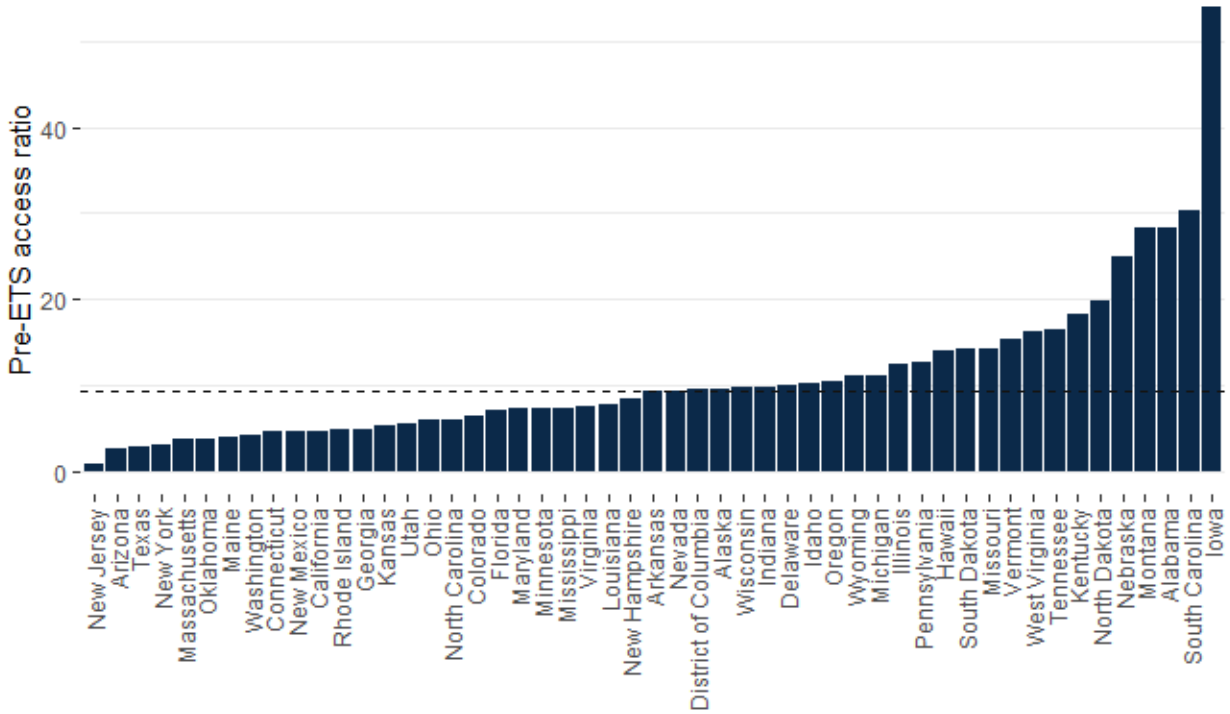
Three independent variables reflect the implementation of WIOA and pre-ETS: an indicator for the passage of WIOA in 2014, an indicator for each year from 2014 to 2021, and a state- and year-specific ratio that we use as a proxy for pre-ETS access. The pre-ETS access ratio captures youth's access to and potential use of pre-ETS services from 2017 to 2021.

Figure 2 shows the five-year average ratio for each state. This measure is a proxy of the sample's access to pre-ETS, which is necessary because though we can examine pre-ETS for many youth receiving SSI, we are not able to identify *any* pre-ETS use among those youth receiving SSI who used pre-ETS as potentially eligible students (that is, before they applied for VR services). The numerator consists of the number of unique students who used pre-ETS in a state and year. In most states, youth must be students between ages 16 and 21 to use these services. The denominator is the number of students ages 14 to 21 using special education services under the IDEA—this population is more restrictive than the population in the numerator, as students using pre-ETS may also use Section 504 services or be enrolled in

[2] The PROMISE demonstration, implemented from 2014 to 2019, offered services to youth receiving SSI, including connecting them to VR agencies. The demonstration may have given the opportunity to VR agencies in the participating states to enhance their offer of pre-ETS. Since the implementation period overlaps with our study period, we test for this hypothesis by comparing states that participated in PROMISE to all other states.

postsecondary education. The pre-ETS access ratio varies by state and year (Table A.2). In addition to using this ratio directly, we rely on this measure to split the sample into states with consistently low or high ratios, thus identifying states where students with disabilities had broader or more restrictive access. The 15 states in the low group had pre-ETS access ratios below the median every year from 2017 to 2021, while the 14 states in the high group had ratios above it for all years.

Figure 2. *Five-Year Average Pre-ETS Access Ratio for Each State*



Notes: This figure shows the average pre-ETS access ratio by state from 2017 to 2021. The dashed line shows the median of the five-year average ratio (9.2 percent). The following states have consistently low pre-ETS access ratios (below the median ratio in every sample year): Arizona, California, Colorado, Connecticut, Kansas, Maine, Massachusetts, New Jersey, New Mexico, New York, Ohio, Oklahoma, Rhode Island, Texas, and Washington. The following states have consistently high pre-ETS access ratios (above the median ratio in every sample year): Alabama, Hawaii, Indiana, Iowa, Kentucky, Michigan, Montana, Nebraska, North Dakota, South Carolina, Vermont, West Virginia, Wisconsin, and Wyoming.

Each model includes four additional covariates that control for individual characteristics: sex, age (as of December in each year), age at last SSI application, and impairment.

Outcome Variables

We explore six outcomes of interest, grouped into three domains, which could potentially be affected by WIOA. The first domain consists of two binary variables that capture youth's involvement with VR: applied to a VR agency for services and signed an IPE. While the first variable captures a person's initial interest in VR services, the latter variable indicates that the VR agency found the applicant eligible for services and developed a plan with the person to identify an employment goal and services needed to achieve that goal. The second domain includes employment outcomes—a binary variable indicating whether the youth reported any earnings in that year and a continuous variable with total annual earnings. We adjust earnings to 2021 dollars and cap them at the state's 99th percentile. The average 99th percentile is $12,849.11, and truncating the top one percent of earnings in each state eliminates high values that could be a result of problems in the underlying data.[3] With the third domain, use of SSA's work incentives, we consider two specific work incentives—Section 301 and the SEIE—both of which are binary variables. We identify all outcomes within a calendar year. Table 1 presents outcomes averages by age and year.

[3] Our results and conclusions remain unchanged when we consider the original earnings values, although point estimates vary. This robustness check confirms that our results are not driven by the one percent top earning values in the sample.

Table 1. *Average of VR Involvement, Employment, and Work-Incentive Use by Age and Year (Percentages, Unless Otherwise Specified)*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All ages												
VR involvement												
Applied to VR	0.127	0.188	0.274	0.419	0.728	1.367	2.554	3.581	3.693	3.665	2.255	2.510
Signed IPE	0.055	0.077	0.125	0.196	0.356	0.754	1.727	3.288	3.509	3.337	2.099	1.912
Employment												
Any earnings	16.580	16.154	16.500	17.027	17.885	19.141	20.075	19.949	20.054	20.299	17.893	20.090
Annual earnings ($)	443.228	428.762	452.185	481.292	528.107	607.079	655.702	660.630	680.009	715.995	664.111	847.087
Work incentive use												
SEIE	2.148	1.912	1.847	1.776	1.806	1.965	2.209	2.307	2.324	2.286	1.691	1.163
Section 301	0.226	0.218	0.176	0.175	0.166	0.192	0.194	0.154	0.132	0.106	0.076	0.061
Ages 14 to 16												
VR involvement												
Applied to VR	0.040	0.008	0.012	0.018	0.032	0.058	0.060	0.057	0.057	0.069	0.041	0.047
Signed IPE	0.010	0.002	0.004	0.006	0.008	0.018	0.033	0.031	0.030	0.035	0.027	0.030
Employment												
Any earnings	1.895	0.256	0.265	0.283	0.312	0.350	0.378	0.367	0.373	0.376	0.228	0.470
Annual earnings ($)	19.855	13.207	13.390	13.540	15.765	19.122	21.969	23.299	24.150	25.917	20.082	39.978
Work incentive use												
SEIE	0.286	0.239	0.217	0.218	0.234	0.274	0.324	0.321	0.294	0.256	0.136	0.111
Section 301	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ages 17 to 18												
VR involvement												
Applied to VR	0.130	0.207	0.314	0.469	0.879	1.517	2.391	2.759	2.607	2.625	1.442	1.594
Signed IPE	0.040	0.048	0.067	0.107	0.242	0.531	1.122	1.633	1.594	1.698	1.170	1.017
Employment												
Any earnings	9.495	8.407	8.873	9.428	10.570	12.332	13.444	13.711	14.522	14.970	12.095	16.731
Annual earnings ($)	135.383	118.785	127.923	142.052	170.578	220.025	260.199	267.775	297.866	325.388	302.026	452.421
Work incentive use												
SEIE	2.335	2.016	2.071	2.158	2.328	2.681	2.992	3.085	3.075	2.963	1.890	0.952
Section 301	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ages 19 to 21												
VR involvement												
Applied to VR	0.211	0.308	0.447	0.704	1.225	2.363	4.446	6.092	6.276	6.115	3.751	4.177
Signed IPE	0.099	0.146	0.233	0.374	0.672	1.382	3.087	5.724	6.085	5.784	3.665	3.261
Employment												
Any earnings	22.670	22.127	22.560	23.394	24.580	26.313	27.386	27.245	27.514	27.948	24.929	27.854
Annual earnings ($)	573.457	540.087	564.477	597.071	656.810	758.264	828.570	849.844	889.372	946.646	927.186	1192.511
Work incentive use												

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SEIE	3.941	3.586	3.503	3.389	3.463	3.727	4.111	4.223	4.256	4.156	3.142	2.325
Section 301	0.551	0.513	0.408	0.444	0.448	0.536	0.524	0.409	0.344	0.275	0.183	0.142
Ages 22 to 24												
VR involvement												
Applied to VR	0.041	0.070	0.120	0.201	0.360	0.696	1.493	2.428	2.513	2.399	1.539	1.789
Signed IPE	0.020	0.030	0.066	0.113	0.228	0.513	1.216	2.640	2.793	2.389	1.372	1.396
Employment												
Any earnings	15.185	16.019	17.617	19.509	21.673	22.787	22.433	20.967	19.850	19.003	16.972	17.677
Annual earnings ($)	758.941	757.804	805.369	863.056	953.049	1090.609	1142.113	1136.317	1145.456	1180.004	1019.299	1230.032
Work incentive use												
SEIE	0.625	0.594	0.599	0.572	0.579	0.571	0.619	0.659	0.641	0.669	0.632	0.465
Section 301	0.039	0.062	0.074	0.055	0.041	0.030	0.029	0.017	0.017	0.012	0.022	0.024

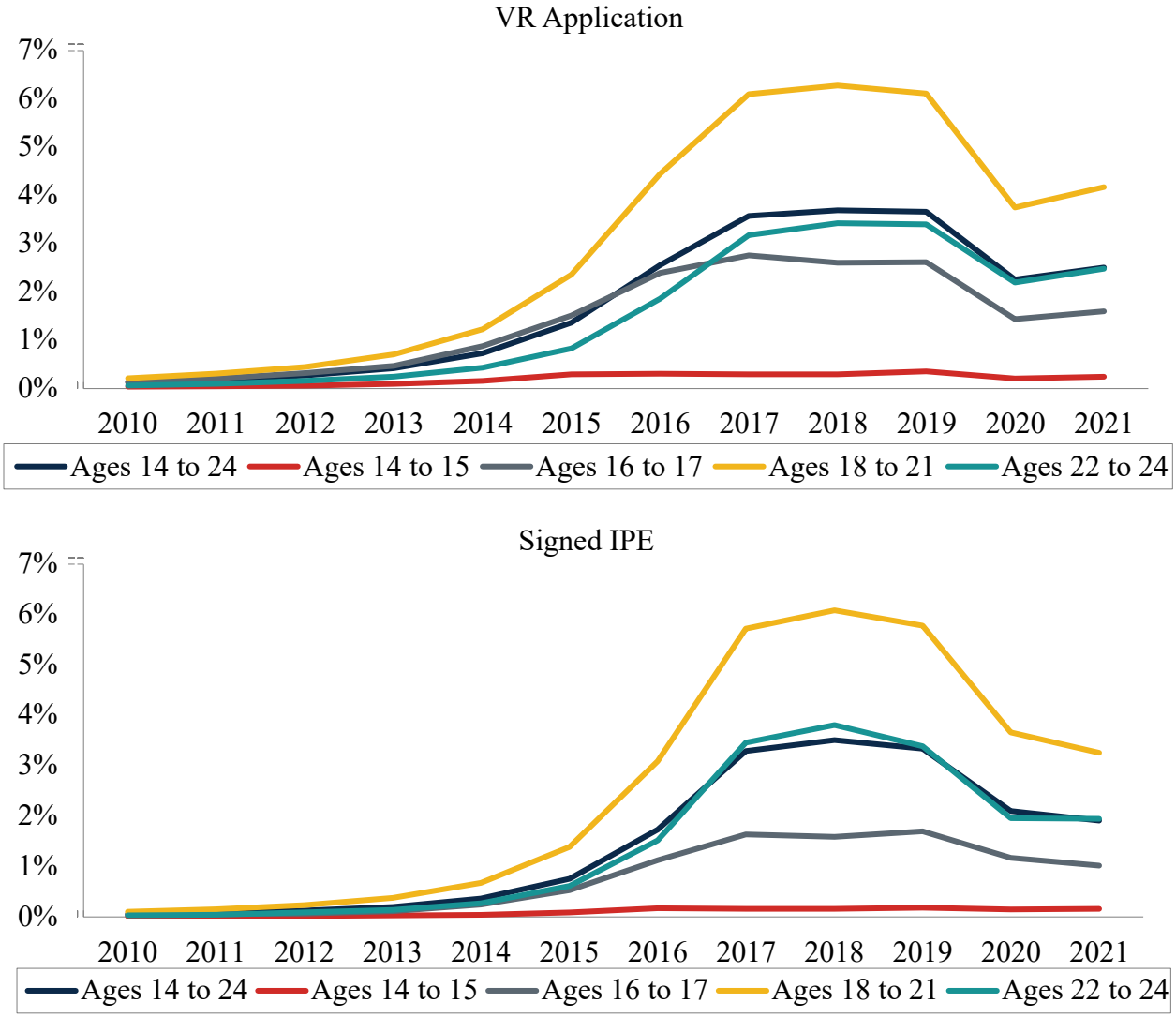
Notes: All numbers are percentages unless otherwise specified. Dollar values are in 2021 dollars.
n.a. = not available due to confidentiality concerns with small numbers.

Results

VR Involvement

Descriptive statistics on the share of youth receiving SSI involved with VR services show a rapid increase after WIOA's passage (Figure 3 and Table A.3). The increase becomes more apparent during and after 2014, suggesting a break in the trend of the VR involvement. The path of VR involvement across the years is similar for all ages, but youth ages 18 to 21 and 22 to 24 were more likely to apply to VR and sign IPEs.

Figure 3. *Share of Youth Receiving SSI with VR Involvement by Age and Year*



Note: This figure shows the share of youth receiving SSI that applied for VR (top plot) or signed an IPE (bottom plot) from 2010 to 2021.

Table 2 shows the results of the model estimating changes before and after WIOA (Model 1) and confirms the patterns observed in the descriptive statistics (Table 1). This model estimates the differences in the rates of VR applications and signed IPEs in 2014 and afterward, adjusting for individual characteristics and state-fixed effects. VR involvement increased over this period by 2.5 percentage points, as shown in the estimate of the adjusted difference post-WIOA. The share of youth receiving SSI who applied to VR agencies during or after 2014 is obtained by adding the mean pre-WIOA to the adjusted difference post-WIOA. About 2.8 percent of youth receiving SSI applied to VR agencies from 2014 onwards—an average nearly eight times higher than before 2014 (0.3 percent). The share of youth with a signed IPE increased even more relative to before WIOA, by 2.2 percentage points. On average, 2.4 percent of youth signed an IPE during and after WIOA, from an average of 0.15 percent before WIOA.

Table 2. *Changes in VR Involvement After the Passage of WIOA in 2014, Overall and by Age (Measured in Percentage Points)*

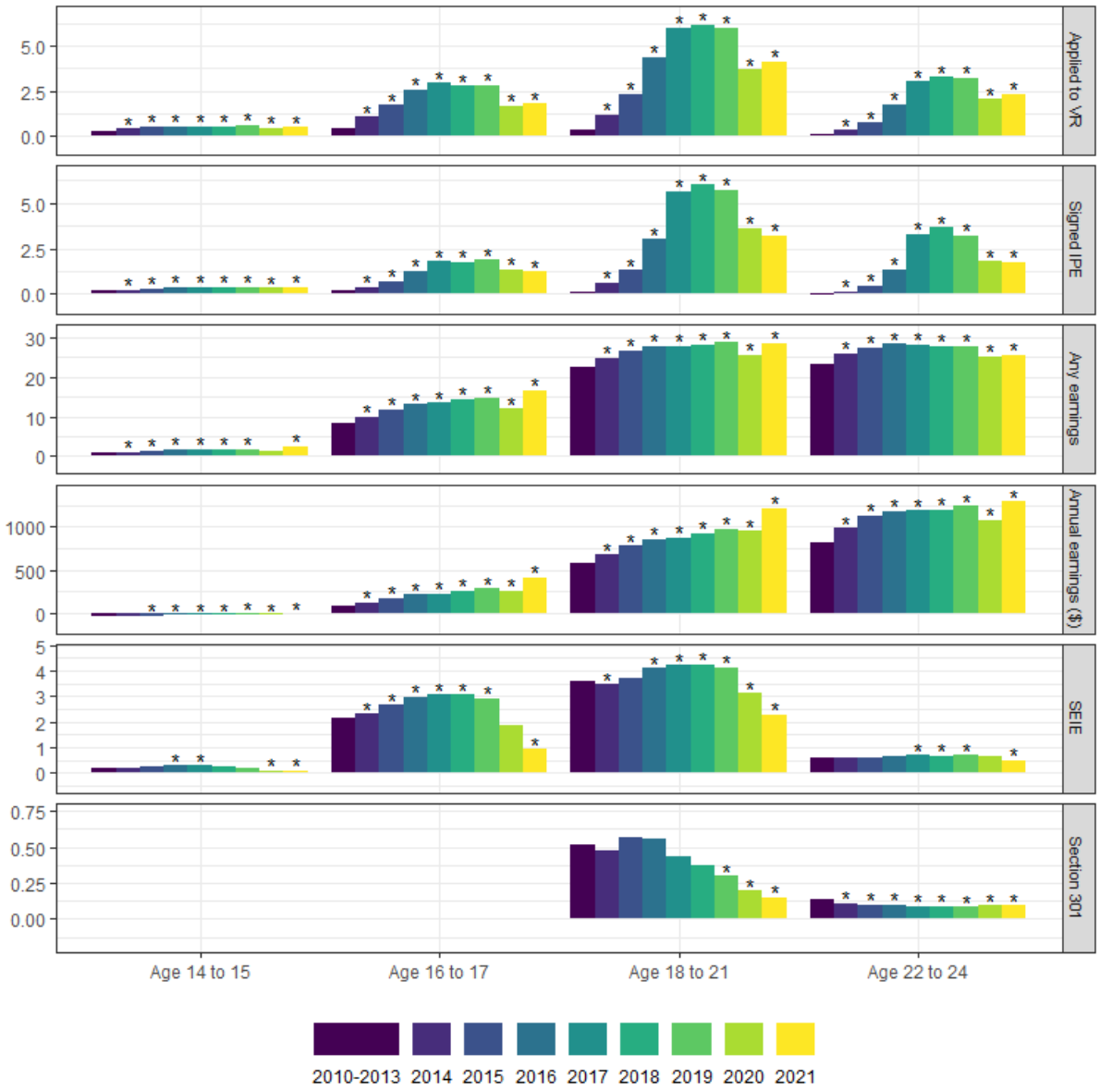
	Mean pre WIOA (2010 2013)	Mean post WIOA (2014 2021)	Difference	Standard error	*p* value
Applied to VR					
All ages	0.340	2.789	2.449	0.190	0.000
Age 14 to 15	0.257	0.477	0.220	0.052	0.000
Age 16 to 17	0.553	2.303	1.750	0.241	0.000
Age 18 to 21	0.500	4.650	4.150	0.318	0.000
Age 22 to 24	0.094	2.273	2.179	0.149	0.000
Signed IPE					
All ages	0.150	2.358	2.208	0.183	0.000
Age 14 to 15	0.187	0.339	0.152	0.033	0.000
Age 16 to 17	0.237	1.409	1.172	0.182	0.000
Age 18 to 21	0.230	4.049	3.819	0.307	0.000
Age 22 to 24	0.008	2.178	2.170	0.167	0.000

Notes: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

Allowing the estimates to vary by age reveals that the increase in VR applications and signed IPEs was largest for youth ages 18 to 21, followed by those ages 22 to 24, 16 to 17, and 14 to 15 (Table 2). Although the population that applied for VR services and signed an IPE in each year is not necessarily the same, the estimates suggest that youth ages 18 and older experienced a larger increase in the likelihood of applying to VR and signing an IPE after WIOA implementation than youth in other age groups.

These results suggest that VR application rates and the development of IPEs increased after the passage of WIOA among youth receiving SSI. Letting the estimates vary by age for each year from 2014 on shows that the regression adjusted differences in VR application rates increased in all years for all age groups relative to the mean before WIOA's passage until the COVID-19 public health emergency in 2020 (Figure 4 and Tables A.6a and A.6b). The increase in VR application rates was sharpest for youth ages 18 to 21, followed by those ages 22 to 24 and ages 16 to 17; the rate increased slightly over this period for the youngest age group (ages 14 to 15). For example, all else equal, an 18-year-old in 2019 was about 16 times more likely to apply to a VR agency than a person of the same age before 2014 (6 percent compared with 0.3 percent). Although changes in other factors may have affected the likelihood of applying to VR, the increase in 2019 is potentially due to a combination of (1) five years of implementation by VR agencies in responding to WIOA, offering pre-ETS, and adjusting their service models toward youth with disabilities and (2) five years of a young person's potential access to pre-ETS and other changes related to WIOA. We observe similar patterns for the likelihood of signing an IPE.

Figure 4. *Adjusted Means of VR Involvement, Employment, and Work-Incentive Use by age in Each Year After the Passage of WIOA in 2014 (Measured in Percentage Points, Unless Otherwise Specified)*



Notes: This figure shows six plots with the adjusted means estimated in six separate regressions. All values in the figure are regression-adjusted. All models include state-fixed effects and controls for individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541. Adjusted means for Section 301 is omitted for the youngest age groups due to the small number of youth under age 18 used Section 301.

*Significantly different from zero at the .10 level, two-tailed test.

Change in VR involvement plateaus for all ages from 2017 to 2019 (Figure 4). The stability in the rates of VR applications and signed IPEs starting in 2017 could reflect a three-

year lag to implement WIOA policies or an improvement in their implementation once reporting of pre-ETS activities became mandatory in 2017.

The changes in VR involvement after the passage of WIOA were similar for the 14 states with consistently high pre-ETS access ratios and the 15 states with consistently low ratios (Table 3). This lack of a statistically significant difference between the groups of states with consistently high and low pre-ETS access ratios suggests that VR involvement for youth receiving SSI increased across all states after WIOA, regardless of their access to pre-ETS.

Table 3. *Changes in VR Involvement After the Passage of WIOA in 2014 for States with High and Low Pre-ETS Access Ratios (Measured in Percentage Points)*

	Mean pre WIOA (2010 2013) across all states	Adjusted difference post WIOA (2014 2021)		
		States with low pre ETS access ratios	States with high pre ETS access ratios	*p* value of the difference across groups
Applied to VR	0.330	2.269	2.985	0.141
Signed IPE	0.153	1.989	2.696	0.166

Notes: This table shows the results of two separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

In Model 2, we further examine the relationship between VR involvement and access to pre-ETS by estimating the association between changes in the pre-ETS access ratio and changes in VR involvement between 2017 and 2021. As noted previously, the ratio is a proxy for youth's potential access to pre-ETS and VR agencies' experience with offering pre-ETS, which varies by state and year.

Pre-ETS access ratios have large, positive associations with VR involvement after controlling for individual characteristics and state-fixed effects (Table 4). For each 10 percentage-point increase in the pre-ETS access ratio, the likelihood that a young person signed an IPE increased by 0.34 percentage points (p-value = 0.08). This finding implies a 14 percent increase from a baseline scenario with no use of pre-ETS, where 2.5 percent of youth signed an IPE. We observe a similar large, positive association between pre-ETS access ratios and VR applications, but that association is not statistically significant (p-value = 0.10).

Table 4. *Changes in VR Involvement from 2017 to 2021 by Year- and State-Specific Pre-ETS Access Ratios, Overall and by Age (Measured in Percentage Points)*

	Mean with no availability of pre ETS	Adjusted difference of a 10 percentage point increase in the pre ETS access ratio	Standard error	*p* value
Applied to VR				
All ages	2.944	0.241	0.144	0.101
Age 14 to 15	0.421	0.239	0.074	0.002
Age 16 to 17	1.778	0.870	0.276	0.003
Age 18 to 21	5.020	0.184	0.214	0.392
Age 22 to 24	2.715	-0.079	0.126	0.534
Signed IPE				
All ages	2.549	0.342	0.189	0.077
Age 14 to 15	0.407	0.168	0.076	0.031
Age 16 to 17	1.172	0.698	0.209	0.002
Age 18 to 21	4.350	0.510	0.297	0.092
Age 22 to 24	2.586	0.002	0.210	0.992

Note: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include year-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 4,197,947.

The association between pre-ETS access ratios and VR involvement from 2017 and 2021 was statistically significant and positive for the youngest age groups (Table 4). An increase in access to VR of 10 percentage points correlated with significant increases in VR applications among youth ages 14 to 15 and ages 16 to 17 of 0.2 and 0.9 percentage points, respectively. These changes correspond to a nearly 50 percent increase from a baseline scenario where no youth used pre-ETS. Increases in the state's pre-ETS access ratios had no statistically significant associations with any changes in VR involvement among youth ages 18 to 21 and ages 22 to 24 years old. Changes in signed IPEs follow a similar pattern—the main difference is that youth ages 18 to 21 were also more likely to sign IPEs following increases in access to pre-ETS (*p*-value = 0.09).

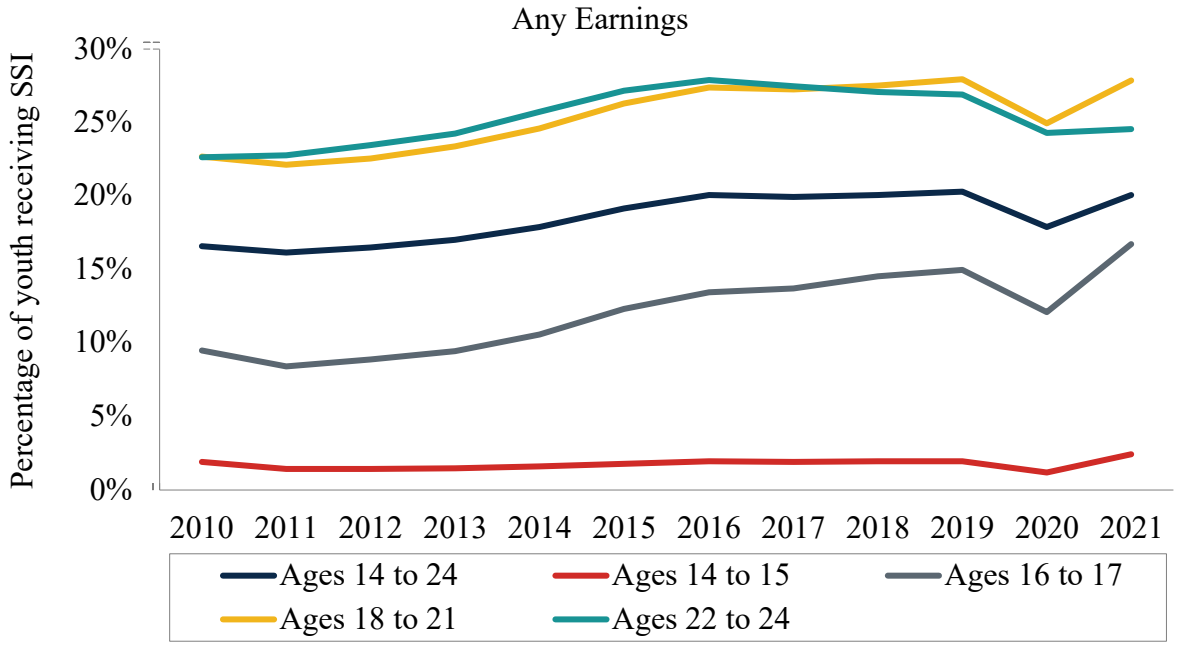
Employment and Earnings

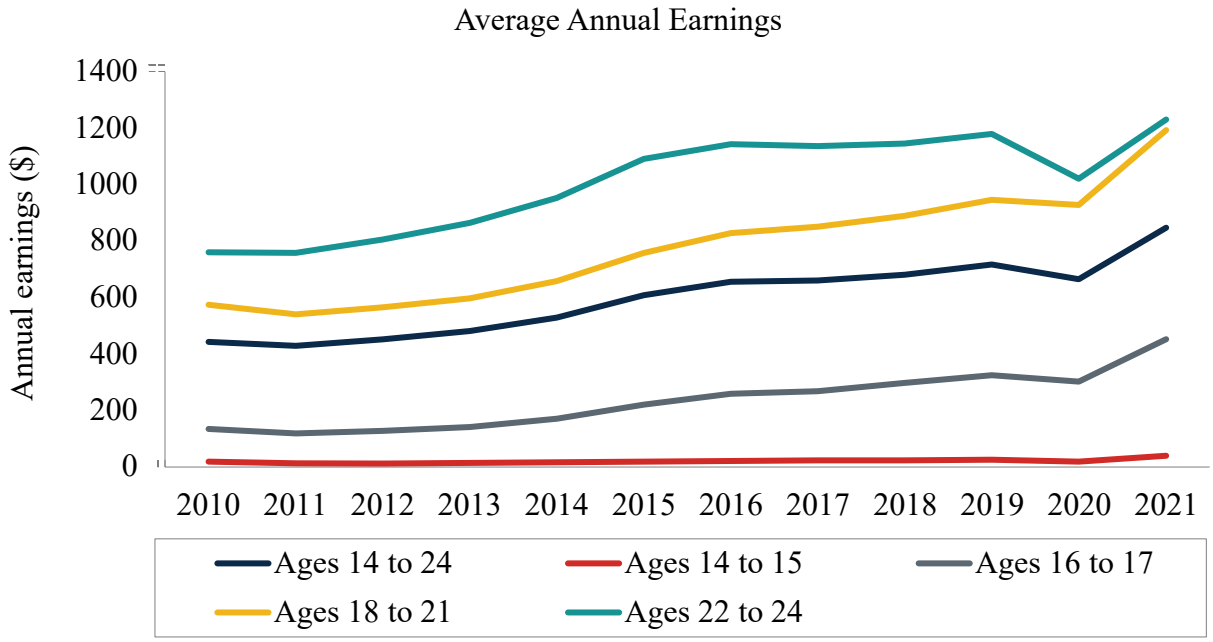
In this section, we evaluate how the changes due to WIOA, including increased use of pre-ETS, corresponded to the employment of youth receiving SSI. WIOA changes may affect employment indirectly because youth engage in pre-ETS activities that help them transition to the labor force (and perhaps divert them from applying to VR for services) or through their

increased use of VR services. The previous section showed the associations for WIOA's passage and state-level pre-ETS access ratios with increased use of VR services. The existing evidence in the literature, as noted, also suggests VR service use improves employment outcomes.

The share of youth receiving SSI with any earnings increased during our analysis period (Figure 5 and Table A.4). However, the increases were modest after the passage of WIOA in 2014. The findings of Model 1, which adjusts for individual characteristics and state-fixed effects, suggest that employment outcomes improved during the years after the passage of WIOA in 2014 (Table 5). The likelihood that youth receiving SSI had any paid earnings increased from 16 percent between 2010 and 2013 to 20 percent between 2014 and 2021. This change represents a 22 percent increase in the likelihood of any paid earnings after WIOA. Average annual earnings increased nearly 50 percent during this period—from $457 to $696.

Figure 5. *Share of Youth Receiving SSI with Any Earnings and Average Earnings by Age and Year*





Notes: This figure shows t the share of youth receiving SSI that have any earnings (top plot) and the average earnings (bottom plot) from 2010 to 2021. Dollar values are in 2021 dollars.

When the estimates in Model 1 vary by age, the increase in the share of youth with any earnings is lowest for youth ages 14 and 15, and the average change in annual earnings increases with age (Table 5). This pattern is not surprising, as participation in the labor market tends to be low for youth ages 14 and 15, and average earnings are expected to increase with age in our sample. Splitting the analysis by age group and year after 2014, the earnings rate rose in relation to the baseline period (2010 to 2013) in each year after WIOA's until 2019 (Figure 4). Changes in the likelihood of having any earnings and in annual earnings increased each year after 2014 for all age groups until the COVID-19 public health emergency in 2020. Employment outcomes for all age groups worsened when the pandemic first hit in 2020 and then started to recover in 2021.

Table 5. *Changes in Employment After the Passage of WIOA in 2014, Overall and by Age (Measured in Percentage Points and Dollars)*

	Mean pre WIOA	Mean post WIOA		Standard	
Any earnings (p.p.)					
All ages	16.392	19.986	3.594	0.399	0.000
Age 14 to 15	0.879	1.679	0.800	0.126	0.000
Age 16 to 17	8.529	13.615	5.086	0.546	0.000
Age 18 to 21	22.964	27.541	4.577	0.517	0.000
Age 22 to 24	23.735	27.159	3.424	0.434	0.000
Annual earnings ($)					
All ages	456.803	695.872	239.069	14.895	0.000
Age 14 to 15	-41.392	-27.776	13.616	2.991	0.000
Age 16 to 17	87.270	252.031	164.761	12.204	0.000
Age 18 to 21	599.782	937.641	337.859	21.116	0.000
Age 22 to 24	862.836	1186.934	324.098	23.071	0.000

Notes: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

After WIOA's passage, youth receiving SSI had a greater likelihood of having any earnings and higher annual earnings. These changes are even larger for states with consistently high pre-ETS access ratios (Table 6). However, because no differences across these states were observed concerning VR outcomes, the difference in earnings outcomes might be due to other features of WIOA or state policy and economic environments that do not directly affect VR use.

Table 6. *Changes in Employment After the Passage of WIOA in 2014 for States with High and Low Pre-ETS Access Ratios (Measured in Percentage Points and Dollars)*

	Mean pre WIOA (2010 2013) across all states	Adjusted difference post WIOA (2014 2021)		
		States with low pre ETS access ratios	States with high pre ETS access ratios	*p* value of the difference across groups
Any earnings (p.p.)	17.160	2.406	4.690	0.007
Annual earnings ($)	457.883	209.175	272.168	0.095

Notes: This table shows the results of two separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

To examine the role of pre-ETS access with these changes, we estimate Model 2, exploring how employment outcomes varied by the pre-ETS access ratios between 2017 and 2021 (Table 7). We find a positive association between pre-ETS access ratios and the likelihood of having any earnings after controlling for individual characteristics and state-fixed effects. In a baseline scenario with no use of pre-ETS, about 18.9 percent of youth had any earnings. The

model estimates that, for each 10 percentage points increase in the pre-ETS access ratio, the likelihood that youth had any earnings increased by 0.92 percentage points (p-value = 0.05), or a nearly 5 percent increase from the baseline estimate. We observe a positive and large but not statistically significant association between pre-ETS access ratios and total annual earnings.

Increases in access to pre-ETS and changes in earnings outcomes by age show a similar pattern to changes after WIOA (Table 7). Youth ages 16 to 17 and 18 to 21 had significant correlations between earnings and pre-ETS access, while earnings of the oldest (22 to 24) and youngest (14 to 15) individuals had no such correlations. The association between annual earnings and pre-ETS access ratios is positive and significant only for youth ages 16 to 17.

Table 7. *Changes in Employment from 2017 to 2021 by Year- and State-Specific Pre-ETS Access Ratios (Measured in Percentage Points and Dollars)*

	Mean with no availability of pre ETS	Adjusted difference of a 10 percentage point increase in the pre ETS access ratio	Standard error	*p* value
Any earnings (pp)				
All ages	18.885	0.922	0.463	0.052
Age 14 to 15	0.521	0.272	0.314	0.391
Age 16 to 17	12.138	1.211	0.455	0.010
Age 18 to 21	26.789	1.042	0.527	0.053
Age 22 to 24	26.141	1.005	0.713	0.165
Annual earnings ($)				
All ages	691.953	24.784	20.144	0.224
Age 14 to 15	-63.599	-5.954	7.538	0.433
Age 16 to 17	221.105	23.906	11.106	0.036
Age 18 to 21	962.585	39.009	25.558	0.133
Age 22 to 24	1201.435	26.357	35.350	0.459

Notes: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include year-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 4,197,947.

These results partially support the hypothesis of a positive association for WIOA and pre-ETS access with better employment outcomes. The association is stronger in the extensive margin—increasing the likelihood that youth receiving SSI had any earnings—than in the intensive margin—with less robust associations with total earnings.

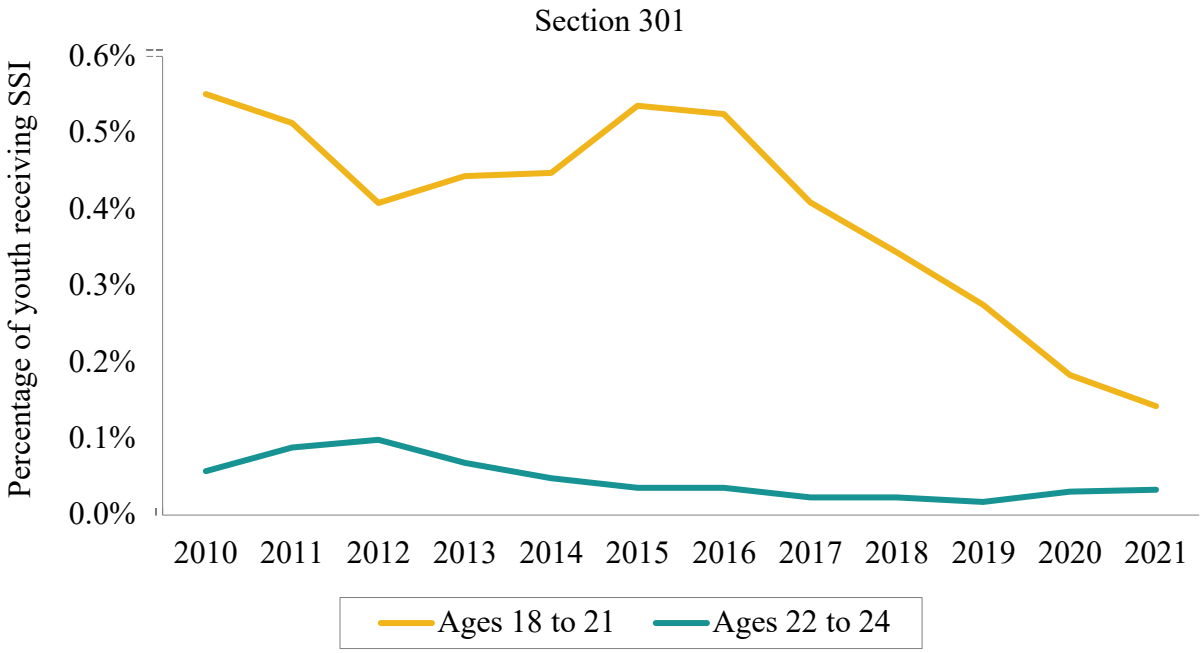
Use of SEIE and Section 301

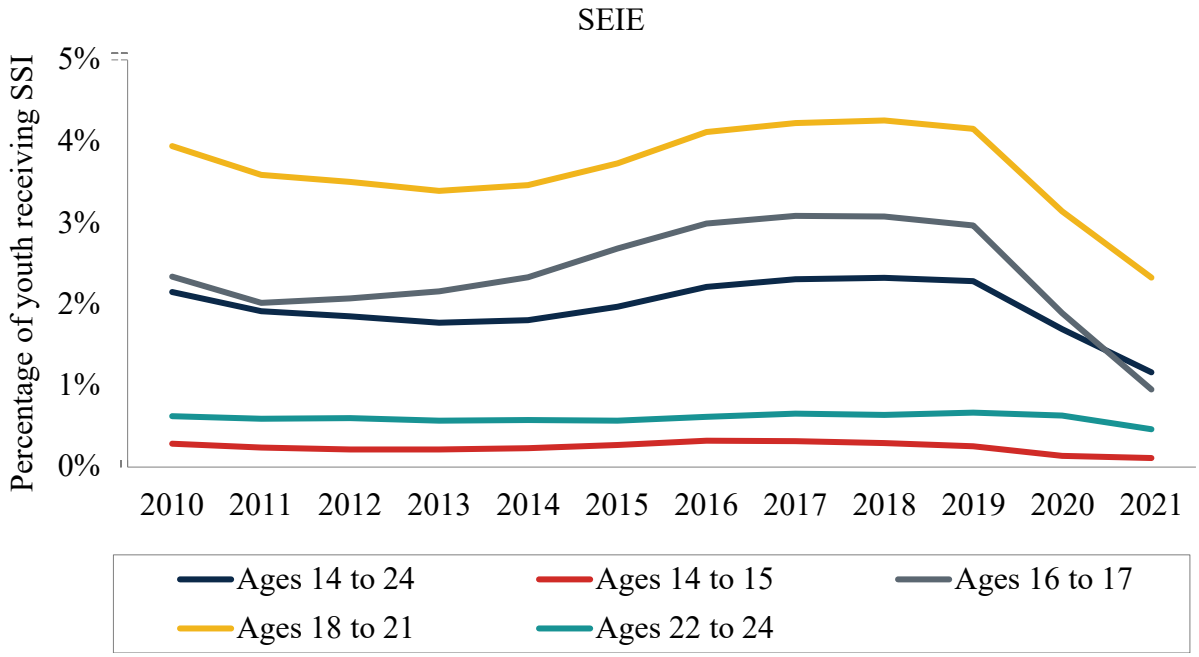
Having shown the associations for WIOA and pre-ETS access with VR involvement and employment, we next consider their association with use of the two SSA work incentives. Two potential pathways could lead to an increase in work incentive use after the passage of WIOA.

First, greater VR use (as evidenced by increased signed IPEs) could result in more youth meeting the requirements for continued SSI payments through Section 301. Second, the increased use of pre-ETS and other VR services after WIOA may have contributed to the increased use of SEIE if the positive association of youth's earnings outcomes after WIOA's passage occurred for those attending school.

Our descriptive statistics show that the association between WIOA and work incentives is weak. The share of youth receiving SSI and using SEIE remained relatively stable from 2010 to 2019 and declined during the pandemic years, whereas the share using Section 301 declined over time (Figure 6 and Table A.5.).

Figure 6. *Share of Youth Receiving SSI Who Use SEIE or Section 301 by Age and Year*





Note: This figure shows the share of youth receiving SSI that used Section 301 (top plot) or SEIE (bottom plot) from 2010 to 2021.

Adjusting for individual characteristics and state-fixed effects, Model 1 shows that the likelihood of using Section 301 decreased from 0.2 percent before WIOA's passage to 0.1 percent afterward (Table 8) and SEIE use did not change. These estimates, however, include all youth receiving SSI, not only those youth who are most likely to use the specific work incentives.

Changes in work incentive use by age group before and after WIOA's passage differed by work incentive type. The decline in the use of Section 301 was driven primarily by individuals ages 18 to 21—which is the group most likely to use Section 301 (Table 8).[4] The point estimates by age also show that youth ages 16 to 17 were more likely to use SEIE, which increased from an average of 2.2 percent from 2010 to 2013 to 2.5 percent from 2014 to 2021. Youth ages 22 to 24 had an increase of less than 0.1 percent in the likelihood of using SEIE from 0.6 percent in 2010 to 2013. Although the increase and the share using this work incentive are

[4] We kept all youth in the sample when estimating linear probability models to explain the use of work incentives. We obtained negative estimates of the adjusted means of use of Section 301 for youth under age 18. Because the policy focuses on youth ages 18 and older, the number of younger people using Section 301 is small and these estimates do not have a meaningful interpretation.

small, this difference is precisely estimated.

Table 8. *Changes in Work-Incentive Use After the Passage of WIOA in 2014, Overall and by Age (Measured in Percentage Points)*

	Mean pre WIOA (2010 2013)	Mean post WIOA (2014 2021)	Difference	Standard error	*p* value
SEIE					
All ages	1.884	2.008	0.124	0.075	0.107
Age 14 to 15	0.230	0.235	0.004	0.027	0.866
Age 16 to 17	2.185	2.541	0.356	0.131	0.009
Age 18 to 21	3.572	3.699	0.127	0.130	0.333
Age 22 to 24	0.605	0.634	0.028	0.019	0.012
Section 301					
All ages	0.193	0.132	-0.061	0.028	0.035
Age 14 to 15	n.a.	n.a.	n.a.	n.a.	n.a.
Age 16 to 17	n.a.	n.a.	n.a.	n.a.	n.a.
Age 18 to 21	0.503	0.368	-0.135	0.069	0.055
Age 22 to 24	0.132	0.091	-0.041	0.019	0.040

Notes: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.
n.a. = not applicable due to the small number of youth under age 18 using Section 301.

Patterns in the use of the two work incentives also differed when we split the analysis in Model 1 by age group and year after 2014. The likelihood of using Section 301 in relation to the baseline period (2010 to 2013) fell in each year after WIOA's passage for all age groups for which this policy is relevant (ages 18 and older). The decline continued until the pandemic, especially for individuals ages 18 to 21 and 22 to 24 (the groups most likely to use Section 301) (Figure 4 and Tables A.6a and A.6b). However, the use of SEIE increased for youth ages 16 to 17 and 18 to 21 after 2014, a trend interrupted by the pandemic years. The use of both types of work incentives dropped for all age groups in 2020 and 2021. Though SEIE use might be expected to decline because of the corresponding decline in employment during the pandemic, the decrease in Section 301 use is unexpected (because Section 301 is tied to education and training).

The increase in the use of SEIE after WIOA is concentrated in states with consistently high pre-ETS access ratios (Table 9). This pattern corresponds with youth receiving SSI in these states having (1) a higher likelihood of receiving any earnings and (2) higher annual earnings (Table 6).

Table 9. *Changes in Work-Incentive Use After the Passage of WIOA in 2014 for States with High and Low Pre-ETS Access Ratios (Measured in Percentage Points, Unless Otherwise Specified)*

	Mean pre WIOA (2010 2013) across all states	Adjusted difference post WIOA (2014 2021)		
		States with low pre ETS access ratios	States with high pre ETS access ratios	*p* value of the difference across groups
SEIE	2.023	-0.071	0.468	0.019
Section 301	0.133	-0.024	-0.086	0.324

Notes: This table shows the results of six separate regressions. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

When we consider access to pre-ETS from 2017 to 2021 in Model 2, we find a large, positive association between pre-ETS access ratios and the likelihood of using Section 301 but not SEIE after controlling for individual characteristics and state-fixed effects (Table 10). For each 10 percentage points increase in the pre-ETS access ratio, youth's use of Section 301 increased by 0.05 percentage points (p-value = 0.06). This finding implies nearly a fifty percent increase from a baseline scenario with no use of pre-ETS, where 0.1 percent of youth used Section 301.

Letting the association between pre-ETS and the work incentive use vary by age in Model 2 reveals important heterogeneities, as expected, as work incentives are more relevant for certain ages than for others (Table 10). All age groups had an association between higher pre-ETS access ratios and increased Section 301 use. The point estimate is largest for ages 18 to 21, for which an increase of 10 percentage points in access to VR was associated with significant increases of 0.1 percentage points in the use of Section 301—corresponding to a nearly 60 percent increase from a baseline scenario where no youth used pre-ETS.

Table 10. *Changes in Work-Incentive Use from 2017 to 2021 by Year- and State-Specific Pre-ETS Access Ratios (Measured in Percentage Points)*

	Mean with no availability of pre ETS	Adjusted difference of a 10 percentage point increase in the pre ETS access ratio	Standard error	*p* value
SEIE				
All ages	1.880	0.095	0.137	0.490
Age 14 to 15	0.040	0.098	0.066	0.148
Age 16 to 17	2.130	0.220	0.226	0.335
Age 18 to 21	3.590	0.083	0.236	0.726
Age 22 to 24	0.686	0.028	0.065	0.662
Section 301				
All ages	0.061	0.054	0.028	0.058
Age 14 to 15	n.a.	n.a.	n.a.	n.a.
Age 16 to 17	n.a.	n.a.	n.a.	n.a.
Age 18 to 21	0.190	0.119	0.068	0.086
Age 22 to 24	0.063	0.017	0.008	0.032

Notes: This table shows the results of ten separate regressions. All values in the table are regression-adjusted. All models include year-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 4,197,947.
n.a. = not applicable due to the small number of youth under age 18 using Section 301.

Sensitivity Analyses

Our main results remained largely unaffected under alternative specifications. First, because 2017 is the first year states reported statistics regarding pre-ETS, we removed outliers from the analysis (that is, states with extremely high [Iowa] or low [California, New Jersey, New York] ratios in 2017). These outliers could reflect relevant differences in pre-ETS in these states, but could also reflect data report issues as states started to report these numbers to RSA. To avoid capturing spurious correlations or hiding important patterns in the data due to measurement errors, we re-estimated our models dropping outlier states from the sample. Second, to test the sensitivity of the estimates to the COVID-19 pandemic years, we estimated the main models omitting 2020 and 2021. In these two tests, all estimates of the changes in outcomes due to WIOA and the associations with pre-ETS access ratios still point in the same direction. Several estimates lose some statistical significance, which is not surprising due to the reduced sample size. As expected, the association of pre-ETS access ratios and outcomes is attenuated for all outcomes when outlier states with pre-ETS access ratios with very high or low ratios are removed from the sample. Third, to control for fluctuations in economic conditions, we added the state annual unemployment rate as a covariate in Models 1 and 2. The point estimates vary, but the coefficients point in the same direction and their significance remain largely unchanged from our main analyses. This result strengthens the confidence that our

findings are not exclusively driven by the stronger economic environment after 2010.

We also tested how our estimates varied in the 11 states that participated in the PROMISE demonstration. This demonstration involved youth receiving SSI who were exposed to a variety of services, including being connected to VR agencies. Because the PROMISE implementation period (2016 to 2020) overlaps with our analysis period, the demonstration may have affected the dynamics of WIOA and pre-ETS in these states. After WIOA, outcomes in PROMISE states changed in similar ways to those in other states (Table A.7). The only difference is the increase in earnings rates after WIOA's passage, which was smaller in PROMISE states. Since most youth receiving SSI in a state were not part of PROMISE, this similarity of changes in outcomes after WIOA is not surprising. However, the associations between access to pre-ETS during 2017 and 2021 and VR involvement and employment were statistically larger in PROMISE states. These differences suggest that investments in pre-ETS by VR agencies may have had a cumulative effect in these states. Because enrollment in PROMISE began in 2014 and services began in 2016, the period of this latter analysis—2017 to 2021—likely captures the additional experience these states had offering services connected to pre-ETS.

Our final sensitivity analysis estimates alternative versions of Model 2 using binary indicators of pre-ETS access ratios to indicate states above the median and the 75th percentile (instead of the continuous pre-ETS access ratio). The estimates have the same sign as our main model but are mostly not statistically significant. This finding supports the notion that associations between pre-ETS access and changes in outcomes were proportional to increases in the pre-ETS access, as opposed to the availability of these services above a certain threshold. The results of the sensitivity analyses are available upon request.

Conclusion

Workforce Innovation and Opportunity Act's (WIOA) passage in 2014 represented a significant shift in how vocational rehabilitation (VR) agencies offered services to youth with disabilities. Rehabilitation Services Administration (RSA) has previously documented the patterns in VR agency applicants and participants after WIOA, who were disproportionately younger after WIOA than before (U.S. Department of Education 2020). This study is the first to measure the quantitative patterns in the outcomes for a population of youth with disabilities before and after WIOA's passage. Tracking the experiences of youth receiving Supplemental

Security Income (SSI) during this period using Social Security Administration (SSA) and RSA administrative records offers a unique opportunity to describe changes correlated with WIOA. After WIOA's passage, youth receiving SSI applied for VR services and signed an IPE at higher rates than before WIOA. The average VR application rate increased from 0.3 percent before WIOA to 2.8 percent afterward. Though the post-WIOA rate may seem small, it is not insubstantial: the number of such youth who applied for VR services in 2010 was 1,181; in 2019, that number was 30,569. For added context, the number of youth receiving SSI who applied to VR in 2019 represents almost 7 percent of the 446,919 people of all ages who applied to VR in that year (U.S. Department of Education 2020). This number represents an opportunity to offset these participants' service costs for VR agencies, which can be reimbursed for their costs by SSA when adult SSI recipients have nine continuous months of substantial earnings (Social Security Administration 2023c). When we examine state-level rates, the story is similarly striking. In 2010, the highest state VR application rate for youth receiving SSI was 0.4 percent. In 2019, the lowest such rate was 0.5 percent, or higher than the state with the best rate nine years earlier. When we look at the state with the highest rate in 2019, 7.9 percent (or about 1 of every 13 youth receiving SSI in that state) applied for VR services.

Changes due to WIOA, including offering pre-ETS to students with disabilities, were associated with increased applications for VR services. Though this finding is not unexpected, it does quantitatively document the potential associations that correspond to a specific federal policy change. VR agencies offer pre-ETS to all students with a disability, without any requirement to apply for further services, and must spend 15 percent of their federal funding on these services. Between 2017 and 2021, higher state-level pre-ETS access ratios were associated with larger increases in signed individualized plan for employment (but not VR application rates) among youth receiving SSI. The associations we observe during the later years could be due to a combination of two levers. First, by 2021, VR agencies had up to seven years of experience in responding to WIOA's requirements, offering pre-ETS to students with disabilities, and developing partnerships with state and local education agencies and other workforce partners. Hence, they could provide better-quality pre-ETS in later years than in the years just after WIOA's passage. Second, youth with disabilities in later years could have benefited from increased access to pre-ETS and other changes due to WIOA. For instance, a 21-year-old in

2021 (who was 14 in 2014) could have used pre-ETS for up to five years. Potentially, this long-term access could better prepare them for educational and employment opportunities.

One puzzling finding relates to this pattern: in states with the highest pre-ETS access ratios between 2017 and 2021, youth receiving SSI had greater VR involvement, employment, and use of work incentives before 2017 (as well as before WIOA's passage) than similar youth in states with the lowest pre-ETS access ratios. State-level policy environments oriented to the success of youth with disabilities in general and youth receiving SSI specifically may have influenced both WIOA implementation and other youth services and outcomes.

Though earnings for youth receiving SSI increased after WIOA, and though it would be consistent with a view that increased pre-ETS access could encourage youth with disabilities to enter the labor market directly, the observed change may not relate exclusively to WIOA but also to the stronger economic environment after 2010. Earnings for all age groups increased after WIOA's passage. However, the change in earnings was strongest for those ages 15 and 16, and the association with pre-ETS access ratios was positive for any earnings (though not statistically significant for annual earnings) among all youth in the sample from 2017 to 2021, suggesting some potential influence of WIOA policies on earnings.

We expected increased use of SSA work incentives among youth receiving SSI, given increased VR involvement and earnings, but the evidence is mixed. About 20 percent of this population had any earnings annually after WIOA; however, SEIE rates were around 2 percent. Only students can use the Student Earned Income Exclusion (SEIE); while not all youth receiving SSI were students, we can assume that a good portion were. We have noted the lack of association between the pre-ETS access ratios and SEIE for the broader population. In 2019, almost 23,000 of 16- and 17-year-olds receiving SSI had earnings; comparatively, just over 4,500 of them used the SEIE work incentive. Similarly, despite the growth in VR applications, youth ages 18 to 21 (those more likely to use Section 301) experienced a decline in their use of that work incentive relative to pre-WIOA use in aggregate, though youth in states with higher pre-ETS access ratios during 2017 to 2021 were more likely to use Section 301. Youth may use Section 301 to remain on SSI if they cease to receive SSI benefits as a result of the age-18 redetermination if they use VR or other similar services. One set of explanations is that the number of age-18 cessations has decreased and youth who cease to receive benefits could be appealing their decisions. In the latter case, these youth would not use Section 301 and instead

use other forms of continued payment during an appeal. Improved access to work incentives counseling may be useful for this population, especially those who are working or have contact with VR agencies through pre-ETS or usual VR services.

A final point to consider is that states varied widely toward the latter part of our observation period in terms of their pre-ETS access ratios and rates of application to VR, SEIE, and earnings. We have noted the differences in the pre-ETS access ratios, which could reflect data differences. Applications to VR agencies among youth receiving SSI in 2019, for example, ranged across states from a low of 0.5 percent (New Hampshire) to a high of 7.9 percent (North Dakota). In 2019, if all states had VR application rates similar to the state at the 90th percentile, an additional 22,000 youth receiving SSI would have applied for VR services. In other words, VR agencies would have received 72 percent more applications from this group (and additional potential for SSA to reimburse VR agencies for their associated costs).

A question remains related to WIOA: does improved access to VR services – through pre-ETS, use of VR services, or both – lead to better employment outcomes? Our descriptive findings cannot answer that question but hint at a positive relationship. First, increases in pre-ETS access ratios (that is, more access to pre-ETS) was associated with higher rates of any earnings (though not average annual earnings). Second, changes in the rate of any earnings, along with the amount of annual earnings, had larger percentage-point increases for youth ages 16 to 17 than for other age groups. Third, after WIOA, the increases in any earnings, annual earnings, and SEIE use were larger among states with high pre-ETS access ratios than in states with low pre-ETS access ratios.

Our findings should be interpreted in light of three limitations. First, our analyses are descriptive. We cannot attribute a causal connection between WIOA's passage or pre-ETS access ratios and the outcomes for the study population.

Second, we cannot directly observe student use of pre- employment transition services (pre-ETS). The RSA-911 Case Service Report includes pre-ETS use beginning in 2017, with linkable records only for those who applied for VR services. Our pre-ETS access ratio, which compares the number of students using pre-ETS with the number of high school students receiving special education services, approximates a young person's potential access to services. Both numbers have potential biases. VR agencies may have underreported the number of students using pre-ETS, particularly in the first reporting years (2017 and 2018) as they adjusted

their data management systems to accommodate changes in their reporting to RSA; during this time, a bias may have been more prominent for some agencies than others. High school students receiving special education services represent a subset of the population affected by WIOA, excluding college students with disabilities as well as students with disabilities who do not use special education services or who have Section 504 plans. The latter group is important for this study, as around 1 in 4 youth receiving SSI do not use special education services (Rupp et al. 2005; Wittenburg and Loprest 2007).

Third, COVID-19 confounded the final two years of our observation period. In addition to its broad effects on public health and economic outcomes, the pandemic suppressed VR use, earnings, and SSA work incentive use for our sample in 2020 and 2021.

This study is the first to document the potential influence of WIOA on a group of youth with disabilities who have substantive employment barriers. After WIOA's passage, more of these youth applied to VR agencies, signed an IPE that would allow broader access to services beyond pre-ETS, and had annual earnings. Having greater availability of pre-ETS within a state (as evidenced by the pre-ETS access ratio) was associated with higher rates of signed IPEs, earnings, and Section 301 use. These outcomes are expected, given the law and its intended effects. Two research avenues using these data could explore other aspects of WIOA's influence. First, the data could be used to identify the specific connections between youth receiving SSI, pre-ETS and VR use, and employment outcomes, to understand the effectiveness of pre-ETS and whether pre-ETS use results in decreased reliance on SSI. Second, analyses could consider differential access to VR services and outcomes by youth's characteristics, particularly disability and race and ethnicity, and the influence of social determinants of health on these relationships.

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Appendix

Table A.1. *Number of Youth Receiving SSI by State and Year*

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Alabama	21,652	22,011	22,421	22,289	21,520	20,090	18,613	17,235	16,202	15,562	15,494	14,993
Alaska	1,431	1,510	1,505	1,427	1,367	1,397	1,330	1,351	1,345	1,339	1,359	1,313
Arizona	14,626	14,816	15,227	15,472	15,533	15,224	14,560	14,057	13,830	13,963	14,156	13,780
Arkansas	14,525	15,209	15,801	15,804	15,476	14,802	14,207	13,735	13,279	12,958	13,269	12,931
California	91,563	94,246	95,627	96,459	94,437	90,762	85,937	81,885	79,169	78,796	77,894	74,926
Colorado	7,527	7,907	8,106	8,195	8,203	8,006	7,796	7,665	7,642	7,688	7,799	7,539
Connecticut	7,435	7,554	7,868	8,006	8,129	7,958	7,816	7,714	7,602	7,555	7,665	7,490
Delaware	2,671	2,742	2,813	2,796	2,746	2,676	2,634	2,544	2,490	2,461	2,516	2,447
District of Columbia	3,934	4,066	4,110	3,991	3,724	3,586	3,350	3,133	2,783	2,576	2,456	2,300
Florida	59,374	60,519	62,317	63,544	63,838	62,209	58,818	56,565	55,425	56,140	57,884	57,706
Georgia	29,319	30,373	31,004	31,230	31,230	30,585	29,599	27,983	26,999	27,138	27,932	28,294
Hawaii	1,743	1,825	1,811	1,784	1,712	1,638	1,474	1,395	1,329	1,295	1,292	1,241
Idaho	4,361	4,495	4,782	4,999	4,895	4,884	4,806	4,867	4,856	4,859	4,907	4,653
Illinois	37,308	36,976	36,744	36,280	35,011	34,035	32,327	31,276	30,203	29,619	29,498	28,406
Indiana	18,825	19,204	19,463	19,357	18,927	18,744	17,927	17,393	16,848	16,787	16,763	16,186
Iowa	7,636	7,846	8,074	8,105	8,026	7,849	7,465	7,196	6,980	7,135	7,181	6,913
Kansas	6,859	7,201	7,450	7,536	7,451	7,316	7,162	6,938	6,906	6,921	7,016	6,965
Kentucky	21,841	21,668	21,803	21,267	20,750	19,728	18,654	18,024	17,389	17,082	16,999	16,489
Louisiana	23,202	23,606	23,973	23,715	23,330	22,522	21,488	20,884	20,527	20,646	20,769	20,343
Maine	4,412	4,453	4,482	4,478	4,438	4,339	4,245	4,078	4,028	4,057	4,020	3,861
Maryland	15,373	15,867	16,284	16,430	16,231	16,245	15,734	15,334	14,916	15,022	15,224	15,135
Massachusetts	20,983	21,599	21,947	21,936	21,564	20,912	19,674	19,030	18,207	18,096	17,917	17,156
Michigan	36,267	37,368	37,714	37,513	36,118	34,266	32,098	30,449	29,219	28,556	28,234	26,777
Minnesota	12,257	12,383	12,759	12,865	12,562	12,243	11,627	11,281	11,164	11,154	11,352	10,627
Mississippi	15,189	14,991	14,839	14,761	14,428	13,669	12,939	12,316	11,870	11,571	11,992	12,008
Missouri	18,048	18,375	18,771	18,867	18,515	17,399	16,490	15,966	15,699	15,848	15,829	15,567
Montana	2,234	2,298	2,291	2,282	2,140	2,133	2,123	2,079	2,012	1,978	1,976	1,925
Nebraska	3,783	3,890	3,908	3,902	3,832	3,695	3,559	3,643	3,684	3,771	3,851	3,839
Nevada	5,332	5,616	5,837	6,159	6,293	6,571	6,732	6,445	6,325	6,356	6,449	6,174
New Hampshire	3,316	3,363	3,434	3,417	3,332	3,230	2,922	2,774	2,643	2,625	2,516	2,448
New Jersey	19,831	20,244	20,690	20,687	20,430	20,074	19,351	18,482	17,986	17,849	17,965	17,600
New Mexico	6,469	6,585	6,805	6,867	6,864	6,830	6,551	6,293	6,035	5,940	6,051	5,821
New York	58,909	59,691	61,041	61,097	60,063	58,433	56,616	54,503	52,756	51,952	52,379	51,640
North Carolina	30,420	30,654	31,545	31,560	31,160	30,419	28,918	27,474	26,099	25,771	26,141	25,772
North Dakota	1,104	1,124	1,166	1,124	1,084	1,071	1,071	1,068	1,050	1,060	1,062	1,059
Ohio	38,136	38,531	39,577	40,398	40,140	38,769	36,641	34,957	33,901	33,689	33,929	32,818
Oklahoma	12,946	13,220	13,337	13,372	12,968	12,764	12,377	12,333	12,133	12,402	12,671	12,353

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Oregon	9,306	9,656	10,008	10,255	10,388	10,311	10,278	10,094	9,849	9,890	9,779	9,474
Pennsylvania	51,305	51,833	52,487	51,714	49,589	47,220	44,613	42,641	41,149	40,731	41,231	39,625
Rhode Island	3,886	4,044	4,024	4,103	4,058	3,962	3,771	3,565	3,478	3,442	3,360	3,152
South Carolina	13,737	14,037	14,053	13,924	13,523	12,930	12,506	12,053	11,645	11,541	11,721	11,395
South Dakota	1,898	1,933	2,004	2,001	1,993	1,983	1,900	1,899	1,820	1,850	1,901	1,841
Tennessee	19,104	19,487	19,662	19,592	19,249	18,418	17,536	16,972	16,475	16,345	16,576	16,439
Texas	79,936	84,367	88,825	91,742	93,190	93,831	92,061	90,380	88,715	88,822	91,156	89,071
Utah	4,631	4,886	5,131	5,253	5,269	5,277	5,270	5,254	5,140	5,284	5,312	5,157
Vermont	2,204	2,188	2,232	2,174	2,086	1,976	1,899	1,792	1,736	1,725	1,655	1,587
Virginia	21,038	20,966	20,959	20,827	20,955	20,769	20,027	19,563	18,948	18,882	18,996	18,615
Washington	15,395	15,748	16,306	16,362	16,032	15,670	15,103	14,904	14,624	14,473	14,594	13,981
West Virginia	7,918	7,704	7,517	7,340	7,025	6,768	6,514	6,303	6,067	5,867	5,773	5,693
Wisconsin	17,157	17,436	17,816	18,148	18,051	17,832	17,284	16,621	16,105	16,080	16,466	15,978
Wyoming	964	1,000	1,029	1,058	989	947	920	908	943	946	955	951
Total	**929,320**	**949,311**	**969,379**	**974,464**	**960,864**	**934,967**	**895,313**	**863,294**	**838,225**	**834,095**	**841,882**	**820,454**
Median state	**13,737**	**14,037**	**14,053**	**13,924**	**13,523**	**12,930**	**12,506**	**12,316**	**11,870**	**11,571**	**11,992**	**12,008**
Minimum state	**964**	**1,000**	**1,029**	**1,058**	**989**	**947**	**920**	**908**	**943**	**946**	**955**	**951**
Maximum state	**91,563**	**94,246**	**95,627**	**96,459**	**94,437**	**93,831**	**92,061**	**90,380**	**88,715**	**88,822**	**91,156**	**89,071**

Table A.2. *Number of Students Using Pre-ETS, in Special Education, and Pre-ETS Access Ratios by State and Year*

	2017			2018			2019			2020			2021		
State	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios
Alabama	9,180	27,751	0.33	9,414	28,113	0.33	7,896	28,521	0.28	5,670	29,372	0.19	8,497	30,108	0.28
Alaska	507	5,636	0.09	452	5,627	0.08	155	5,508	0.03	524	5,433	0.10	1,041	5,609	0.19
Arizona	870	41,354	0.02	1,493	42,133	0.04	1,257	43,405	0.03	904	43,851	0.02	1,183	45,035	0.03
Arkansas	1,707	19,265	0.09	2,525	19,893	0.13	2,034	20,613	0.10	1,496	21,378	0.07	1,711	21,989	0.08
California	1,920	248,061	0.01	12,746	254,483	0.05	12,707	253,386	0.05	16,201	265,514	0.06	18,499	272,453	0.07
Colorado	1,384	29,256	0.05	1,579	30,080	0.05	1,727	30,989	0.06	2,433	32,161	0.08	2,916	33,107	0.09
Connecticut	957	27,629	0.03	1,483	28,009	0.05	1,353	28,784	0.05	1,304	29,768	0.04	1,560	30,788	0.05
Delaware	212	7,327	0.03	541	7,551	0.07	1,039	7,995	0.13	994	7,961	0.12	1,211	8,622	0.14
District of Columbia	56	4,196	0.01	57	4,301	0.01	637	4,269	0.15	498	4,443	0.11	809	4,375	0.18
Florida	8,612	124,619	0.07	9,927	127,504	0.08	11,014	131,072	0.08	7,689	133,657	0.06	9,660	138,659	0.07
Georgia	4,907	67,841	0.07	3,599	70,987	0.05	941	73,482	0.01	2,925	77,045	0.04	5,899	79,511	0.07
Hawaii	947	6,339	0.15	522	6,252	0.08	808	6,339	0.13	1,104	6,327	0.17	1,034	6,339	0.16
Idaho	667	9,422	0.07	707	9,809	0.07	538	10,215	0.05	1,367	10,571	0.13	2,052	10,933	0.19
Illinois	4,471	94,636	0.05	2,293	94,917	0.02	741	95,938	0.01	23,913	96,300	0.25	28,112	96,471	0.29
Indiana	5,584	57,578	0.10	4,827	58,318	0.08	3,779	58,924	0.06	6,934	60,049	0.12	7,992	60,184	0.13
Iowa	10,338	19,633	0.53	14,854	19,631	0.76	16,735	19,835	0.84	4,664	20,522	0.23	7,259	21,083	0.34

	2017			2018			2019			2020			2021		
State	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios	Students using pre-ETS	Students ages 14 to 21 in special education	Pre-ETS ratios
Kansas	507	20,361	0.02	1,107	20,480	0.05	1,154	20,709	0.06	1,031	21,016	0.05	1,704	21,370	0.08
Kentucky	3,383	25,052	0.14	6,565	25,103	0.26	6,906	25,312	0.27	3,444	26,675	0.13	2,943	26,887	0.11
Louisiana	2,767	24,501	0.11	2,105	24,659	0.09	1,538	25,189	0.06	1,453	25,764	0.06	1,850	26,332	0.07
Maine	485	10,379	0.05	444	10,445	0.04	298	10,526	0.03	337	10,740	0.03	508	10,945	0.05
Maryland	1,780	33,562	0.05	2,624	33,728	0.08	2,696	34,205	0.08	2,454	34,478	0.07	2,862	34,773	0.08
Massachusetts	1,588	58,542	0.03	1,733	58,400	0.03	1,343	58,827	0.02	3,162	60,409	0.05	3,535	61,412	0.06
Michigan	9,294	65,802	0.14	8,085	64,974	0.12	5,174	64,324	0.08	6,240	63,847	0.10	7,403	63,670	0.12
Minnesota	2,648	42,893	0.06	2,645	44,015	0.06	3,584	44,527	0.08	3,446	45,511	0.08	4,025	46,408	0.09
Mississippi	309	18,934	0.02	1,093	19,211	0.06	2,296	19,484	0.12	1,457	20,183	0.07	2,200	20,616	0.11
Missouri	6,447	37,788	0.17	5,321	38,398	0.14	2,228	38,907	0.06	6,279	39,636	0.16	7,579	39,830	0.19
Montana	2,149	5,493	0.39	1,167	5,619	0.21	1,583	5,660	0.28	1,227	6,021	0.20	2,050	6,158	0.33
Nebraska	2,936	14,048	0.21	3,285	14,442	0.23	3,176	14,600	0.22	4,419	14,779	0.30	4,449	14,916	0.30
Nevada	2,564	16,611	0.15	2,531	16,731	0.15	948	18,001	0.05	719	18,681	0.04	1,291	19,255	0.07
New Hampshire	580	9,266	0.06	833	9,321	0.09	788	9,308	0.08	719	9,271	0.08	1,028	9,741	0.11
New Jersey	492	79,496	0.01	734	79,615	0.01	825	80,451	0.01	760	80,776	0.01	830	80,700	0.01
New Mexico	281	15,787	0.02	357	16,259	0.02	601	16,414	0.04	1,245	17,525	0.07	1,556	18,331	0.08
New York	165	156,680	0.00	2,752	157,688	0.02	4,656	158,625	0.03	8,346	167,258	0.05	10,020	165,522	0.06
North Carolina	2,815	64,933	0.04	3,703	64,716	0.06	4,124	64,430	0.06	4,121	65,649	0.06	5,092	65,798	0.08
North Dakota	849	4,404	0.19	823	4,494	0.18	652	4,516	0.14	1,072	4,692	0.23	1,148	4,784	0.24
Ohio	4,813	95,660	0.05	4,511	95,343	0.05	4,508	95,369	0.05	7,445	96,223	0.08	7,464	96,872	0.08
Oklahoma	735	36,408	0.02	985	37,389	0.03	899	37,609	0.02	1,874	38,050	0.05	2,769	38,616	0.07
Oregon	2,505	27,046	0.09	2,148	27,006	0.08	1,275	27,268	0.05	3,730	27,727	0.13	4,658	27,617	0.17
Pennsylvania	14,464	108,244	0.13	20,680	109,228	0.19	14,236	112,999	0.13	10,841	117,815	0.09	11,341	121,498	0.09
Rhode Island	158	7,662	0.02	246	7,831	0.03	331	7,902	0.04	550	7,944	0.07	640	8,074	0.08
South Carolina	5,345	32,201	0.17	9,844	32,208	0.31	13,896	32,430	0.43	9,955	33,383	0.30	10,775	34,481	0.31
South Dakota	271	5,187	0.05	763	5,336	0.14	771	5,452	0.14	974	5,602	0.17	1,147	5,662	0.20
Tennessee	611	41,342	0.01	5,837	40,773	0.14	9,192	40,005	0.23	7,687	38,854	0.20	9,161	38,681	0.24
Texas	1,992	161,509	0.01	1,147	167,387	0.01	863	175,716	0.00	10,147	184,724	0.05	12,897	191,255	0.07
Utah	831	23,090	0.04	1,016	23,646	0.04	1,163	23,936	0.05	1,903	24,511	0.08	1,893	24,804	0.08
Vermont	562	4,599	0.12	854	4,546	0.19	687	4,741	0.14	642	4,785	0.13	891	4,930	0.18
Virginia	2,957	58,089	0.05	4,752	58,711	0.08	2,882	59,544	0.05	5,725	59,997	0.10	6,377	60,081	0.11
Washington	803	43,901	0.02	1,726	44,661	0.04	888	45,266	0.02	1,996	46,198	0.04	4,003	46,950	0.09
West Virginia	2,228	13,427	0.17	2,547	13,555	0.19	2,237	13,712	0.16	1,851	14,230	0.13	2,372	14,651	0.16
Wisconsin	2,915	39,893	0.07	4,017	40,440	0.10	3,173	41,069	0.08	4,300	37,593	0.11	4,590	38,017	0.12
Wyoming	531	3,651	0.15	363	3,697	0.10	295	3,810	0.08	379	3,769	0.10	501	3,874	0.13
Median state	**1,707**	**27,629**	**0.06**	**2,105**	**28,009**	**0.08**	**1,353**	**28,521**	**0.06**	**1,996**	**29,372**	**0.08**	**2,862**	**30,108**	**0.11**
Minimum state	**56**	**3,651**	**0.00**	**57**	**3,697**	**0.01**	**155**	**3,810**	**0.00**	**337**	**3,769**	**0.01**	**501**	**3,874**	**0.01**
Maximum state	**14,464**	**248,061**	**0.53**	**20,680**	**254,483**	**0.76**	**16,735**	**253,386**	**0.84**	**23,913**	**265,514**	**0.30**	**28,112**	**272,453**	**0.34**

Note: Data for the following states and years were imputed: Louisiana (2020), Maine (2017), Vermont (2017), and Wisconsin (2017, 2018, 2019).

Table A.3. *Percentage of Youth Receiving SSI Who Applied for VR Services, by State and Year*

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Alabama	0.2	0.2	0.3	0.6	0.7	1.7	3.3	4.1	5.1	5.6	2.3	4.0
Alaska	n.a.	0.0	n.a.	n.a.	n.a.	1.9	2.5	3.8	3.6	4.8	3.1	3.2
Arizona	0.1	0.2	0.2	0.5	0.7	1.0	2.7	3.6	4.2	3.6	2.3	2.5
Arkansas	0.1	0.2	0.3	0.4	0.7	1.2	2.0	2.5	2.6	2.6	1.6	1.9
California	0.1	0.2	0.2	0.3	0.6	0.9	1.8	3.1	2.2	2.0	1.0	1.2
Colorado	n.a.	0.1	0.2	0.3	0.3	0.9	2.9	3.9	4.2	3.9	3.1	3.3
Connecticut	n.a.	n.a.	n.a.	n.a.	0.1	0.2	0.5	0.5	0.6	2.4	2.5	2.2
Delaware	n.a.	n.a.	n.a.	0.5	0.5	1.1	2.1	5.1	6.8	5.4	3.5	4.2
District of Columbia	0.3	0.5	0.7	2.3	1.3	2.9	3.7	4.6	5.9	6.1	5.3	3.6
Florida	0.2	0.2	0.3	0.4	0.8	1.5	2.7	3.6	4.1	3.9	2.6	2.7
Georgia	0.1	0.3	0.3	0.4	0.7	1.5	2.9	3.8	3.7	3.3	1.7	1.4
Hawaii	n.a.	1.3	1.2	1.3	1.6	2.9	3.5	5.0	0.8	1.3	2.2	1.5
Idaho	n.a.	n.a.	0.2	0.4	0.7	2.2	5.2	6.8	4.7	4.0	3.4	3.5
Illinois	0.1	0.2	0.3	0.6	1.2	2.0	3.1	4.6	4.4	4.1	2.8	2.6
Indiana	0.1	0.1	0.1	0.3	0.6	1.4	3.0	4.7	3.6	3.3	2.8	2.4
Iowa	0.2	0.3	0.6	0.9	2.0	3.3	6.0	7.2	5.2	4.9	4.3	4.6
Kansas	0.2	0.2	0.4	0.5	0.6	1.2	2.6	3.7	5.2	5.6	3.8	2.9
Kentucky	0.1	0.1	0.2	0.3	0.5	0.9	1.7	1.6	2.5	2.7	1.3	2.5
Louisiana	0.1	0.1	0.1	0.2	0.4	0.9	0.8	1.1	2.3	2.5	1.2	1.0
Maine	n.a.	n.a.	0.4	0.7	1.4	2.6	4.6	5.8	4.3	5.8	3.4	5.2
Maryland	0.3	0.5	0.7	1.0	1.3	2.2	3.5	3.6	3.7	4.4	3.0	3.2
Massachusetts	0.4	0.5	0.6	0.9	1.1	1.8	3.4	4.1	3.3	2.9	2.1	2.1
Michigan	n.a.	0.1	0.1	0.1	0.2	0.2	1.0	3.1	3.4	3.6	1.9	2.5
Minnesota	0.1	0.2	0.3	0.4	0.8	1.9	4.7	7.3	5.7	5.5	3.7	3.9
Mississippi	n.a.	0.1	n.a.	0.2	0.3	0.5	1.4	2.1	2.9	3.5	2.4	2.5
Missouri	0.1	0.1	0.2	0.1	0.4	1.0	2.7	4.9	6.7	5.2	2.8	3.0
Montana	n.a.	n.a.	0.6	0.6	1.4	3.9	11.2	8.7	4.8	6.5	4.0	3.9
Nebraska	n.a.	n.a.	0.4	0.8	1.0	2.2	3.3	5.1	3.7	3.7	2.2	1.3
Nevada	n.a.	n.a.	n.a.	n.a.	0.2	0.8	2.4	4.8	4.2	3.7	2.0	1.6
New Hampshire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.3	0.5	0.5	n.a.	0.5
New Jersey	0.2	0.2	0.4	0.5	0.7	1.4	2.6	4.0	4.1	4.3	2.1	3.0
New Mexico	0.	0.3	0.5	0.4	0.8	1.3	2.8	3.8	4.0	4.2	2.2	2.6
New York	0.1	0.1	0.2	0.3	0.5	1.1	2.2	3.4	3.5	3.4	2.2	3.2
North Carolina	0.4	0.5	0.7	1.0	1.3	1.9	3.3	4.5	5.4	5.5	3.1	2.5
North Dakota	n.a.	0.0	n.a.	n.a.	n.a.	2.5	4.8	7.9	7.3	7.9	5.8	6.8
Ohio	0.0	0.1	0.1	0.3	0.5	1.5	3.6	5.1	5.5	6.3	4.3	3.1
Oklahoma	0.3	0.3	0.4	0.7	1.2	2.1	2.8	3.1	3.0	3.8	2.1	2.7
Oregon	n.a.	n.a.	0.1	0.4	1.1	1.9	4.2	6.0	6.3	5.8	3.0	3.9
Pennsylvania	0.0	0.0	n.a.	n.a.	n.a.	n.a.	n.a.	0.9	1.1	1.5	0.6	0.8

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Rhode Island	n.a.	0.3	0.5	1.4	1.6	2.1	3.8	5.4	2.2	2.8	1.9	3.4
South Carolina	0.2	0.3	0.4	0.8	1.2	2.1	4.0	5.3	6.1	5.5	2.4	2.5
South Dakota	n.a.	n.a.	n.a.	n.a.	1.7	3.4	6.6	7.6	7.5	6.9	4.4	5.2
Tennessee	0.0	0.0	0.0	n.a.	n.a.	n.a.	n.a.	0.8	3.4	3.1	2.3	3.1
Texas	0.2	0.2	0.3	0.4	0.8	1.2	2.1	2.1	2.7	2.5	1.6	2.0
Utah	0.4	0.6	0.8	1.3	2.3	4.8	6.2	7.5	6.9	6.8	4.0	5.8
Vermont	n.a.	n.a.	n.a.	0.7	1.2	5.2	8.1	7.1	5.9	5.9	2.4	3.9
Virginia	0.2	0.3	0.5	0.8	1.5	2.3	3.7	4.3	3.3	4.0	2.9	3.4
Washington	n.a.	0.1	0.1	0.2	0.5	1.3	3.9	6.1	6.8	6.0	3.1	3.9
West Virginia	n.a.	n.a.	n.a.	0.2	0.4	1.3	3.1	4.6	3.0	1.8	1.7	4.1
Wisconsin	0.1	0.3	0.3	0.5	2.0	4.8	5.7	6.3	6.2	6.3	3.9	4.7
Wyoming	n.a.	n.a.	n.a.	n.a.	n.a.	2.9	3.8	4.7	5.6	4.9	4.8	4.8
US average	**0.2**	**0.2**	**0.4**	**0.6**	**0.9**	**1.9**	**3.5**	**4.4**	**4.2**	**4.2**	**2.8**	**3.1**
Median state value	**0.1**	**0.2**	**0.3**	**0.5**	**0.8**	**1.7**	**3.2**	**4.5**	**4.1**	**4.0**	**2.5**	**3.0**
Minimum state value	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.2**	**0.5**	**0.5**	**0.5**	**0.5**	**0.6**	**0.5**
Maximum state value	**0.4**	**1.3**	**1.2**	**2.3**	**2.3**	**5.2**	**11.2**	**8.7**	**7.5**	**7.9**	**5.8**	**6.8**

Note: All numbers are percentages.
n.a. = not available due to confidentiality concerns with small numbers.

Table A.4. *Percentage of Youth Receiving SSI with Any Earnings, by State and Year*

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Alabama	11.8	11.8	11.7	12.3	13.0	14.1	15.5	16.2	17.4	18.0	18.1	20.8
Alaska	29.3	29.2	29.6	29.5	31.2	28.8	30.0	29.3	25.6	22.9	19.6	23.3
Arizona	12.7	12.9	13.4	13.6	14.0	15.3	16.4	14.6	13.8	13.4	12.5	14.4
Arkansas	13.6	13.4	13.2	13.5	14.5	17.0	17.6	17.0	17.8	16.5	16.1	18.7
California	17.7	17.1	17.1	17.5	17.9	18.4	19.2	18.8	18.7	18.9	15.3	13.5
Colorado	17.8	16.4	16.6	17.0	18.1	19.8	20.7	20.7	21.0	20.7	18.1	19.3
Connecticut	28.3	27.8	27.6	29.0	27.8	29.3	30.6	28.6	28.6	30.0	25.2	27.6
Delaware	22.5	21.3	19.0	20.8	21.2	24.7	25.3	25.5	26.1	26.3	26.3	28.3
District of Columbia	46.8	34.1	36.9	37.4	38.2	41.1	44.4	42.4	43.9	43.1	33.2	38.9
Florid	9.7	9.4	9.7	10.6	11.7	13.0	14.2	14.4	15.3	16.2	15.8	19.5
Georgia	11.1	10.1	9.4	9.6	10.9	12.0	13.8	14.9	14.9	15.6	15.1	18.0
Hawaii	15.4	12.7	11.7	14.1	14.3	16.0	17.4	17.8	15.9	14.4	11.1	13.6
Idaho	16.7	16.0	16.8	16.7	18.8	22.0	25.4	26.2	25.6	24.6	21.8	25.2
Illinois	18.3	17.5	17.4	18.3	19.6	21.2	22.7	22.2	22.4	23.3	20.3	21.7
Indiana	14.7	14.6	15.6	16.4	17.3	19.6	20.5	20.4	21.0	20.3	18.9	21.5
Iowa	30.7	31.4	32.8	33.8	34.8	35.3	33.9	31.5	30.8	31.1	28.3	30.3
Kansas	22.4	21.7	22.5	23.1	24.3	25.5	25.9	25.5	26.3	27.6	25.2	28.4
Kentucky	11.3	11.4	12.8	13.0	14.2	15.7	16.6	16.9	16.4	16.3	14.8	15.9

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Louisiana	13.6	13.4	13.6	13.4	13.9	14.9	15.4	14.9	15.5	17.0	17.2	20.1
Maine	20.0	19.6	18.6	19.4	20.8	20.8	21.8	22.4	21.5	22.0	19.0	20.5
Maryland	23.2	22.3	23.4	22.9	23.0	25.3	26.4	25.1	23.5	23.3	20.1	23.0
Massachusetts	23.6	23.9	23.9	24.4	25.2	26.7	28.1	27.9	27.8	28.2	23.1	25.5
Michigan	13.3	14.0	14.9	15.8	16.8	18.3	19.5	19.6	20.5	20.5	18.1	20.5
Minnesota	34.2	33.2	34.7	35.4	36.9	36.6	36.2	34.7	33.9	33.0	28.3	29.3
Mississippi	11.8	11.0	10.9	11.3	11.6	12.3	13.4	12.7	13.3	14.2	14.7	17.7
Missouri	18.4	18.1	18.6	18.5	19.9	22.6	23.9	23.2	22.7	23.0	20.2	22.7
Montana	27.8	27.6	28.5	27.8	28.9	29.1	32.3	32.6	32.0	30.9	27.3	30.7
Nebraska	26.3	26.0	27.9	29.0	29.3	29.4	28.6	27.6	27.1	27.2	22.3	24.9
Nevada	13.9	13.1	13.8	13.6	13.0	14.2	16.0	15.9	17.0	17.3	16.2	19.1
New Hampshire	23.8	23.6	23.9	25.8	27.3	30.4	31.8	31.2	29.0	30.1	25.6	26.6
New Jersey	20.3	19.5	19.5	19.4	19.	20.6	21.1	20.3	20.0	20.1	16.0	17.0
New Mexico	15.4	14.7	14.5	14.2	14.3	15.6	15.4	15.1	16.1	17.3	14.4	16.7
New York	16.0	16.0	16.2	16.4	17.2	17.9	18.5	18.4	17.9	16.7	11.9	16.5
North Carolina	11.8	11.5	11.4	12.2	12.7	13.9	15.6	16.0	16.5	17.8	16.8	18.5
North Dakota	39.4	38.9	38.6	38.3	39.7	40.0	38.8	39.4	36.8	35.8	31.9	34.3
Ohio	22.3	21.8	23.4	24.5	25.5	26.7	28.6	27.9	28.1	28.3	25.5	27.9
Oklahoma	20.0	20.2	20.4	20.2	20.9	20.6	19.1	18.1	18.4	19.4	18.0	21.1
Oregon	17.5	17.4	17.1	16.2	17.4	18.8	20.1	19.6	20.2	20.7	16.1	17.8
Pennsylvania	18.7	17.7	17.3	17.5	18.4	20.6	21.6	21.6	22.1	23.1	20.2	22.5
Rhode Island	18.8	17.7	17.4	16.7	19.2	21.1	23.4	24.4	23.9	23.2	19.5	22.9
South Carolina	12.7	12.2	13.0	13.7	14.9	17.0	18.4	20.4	20.7	20.5	18.3	19.5
South Dakota	41.0	38.1	39.8	37.9	38.5	38.9	37.3	37.2	35.7	33.2	28.4	31.7
Tennessee	11.1	11.5	11.8	12.6	13.9	15.8	16.6	16.5	16.4	16.3	15.6	17.5
Texas	13.5	13.0	13.9	14.8	15.9	16.5	16.4	16.8	16.8	17.1	15.8	19.0
Utah	19.3	18.8	20.0	21.0	22.8	23.6	25.2	25.4	25.1	25.4	22.0	21.8
Vermont	25.9	24.6	26.3	27.4	27.9	28.9	30.0	30.2	30.8	30.2	23.9	26.6
Virginia	16.5	16.1	15.7	16.2	16.9	18.5	19.9	20.1	20.5	21.0	18.4	20.1
Washington	13.7	13.3	14.0	14.8	16.3	18.2	19.5	18.9	18.8	18.8	15.3	17.6
West Virginia	11.7	12.8	12.0	11.5	11.8	12.2	11.8	11.4	11.8	12.5	11.1	12.9
Wisconsin	24.4	24.9	25.8	27.2	28.9	31.5	34.1	34.3	34.9	34.7	29.8	32.8
Wyoming	31.0	28.5	29.3	30.6	32.3	32.9	30.3	32.3	28.0	29.2	24.2	29.2
US average	**20.0**	**19.3**	**19.7**	**20.1**	**21.0**	**22.3**	**23.2**	**23.0**	**22.8**	**22.9**	**20.0**	**22.4**
Median state value	**18.3**	**17.5**	**17.3**	**17.5**	**18.8**	**20.6**	**21.1**	**20.7**	**21.0**	**21.0**	**18.9**	**21.1**
Minimum state value	**9.7**	**9.4**	**9.4**	**9.6**	**10.9**	**12.0**	**11.8**	**11.4**	**11.8**	**12.5**	**11.1**	**12.9**
Maximum state value	**46.8**	**38.9**	**39.8**	**38.3**	**39.7**	**41.1**	**44.4**	**42.4**	**43.9**	**43.1**	**33.2**	**38.9**

Table A.5. *Percentage of Youth Receiving SSI with SEIE, by State and Year*

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Alabama	0.9	0.9	0.7	0.6	0.8	0.8	1.1	1.2	1.2	1.1	0.9	0.6
Alaska	2.2	1.9	2.3	1.6	1.5	0.9	1.0	1.1	0.7	0.7	0.7	n.a.
Arizona	1.0	0.9	0.9	0.6	0.7	0.8	0.8	0.7	0.7	0.6	0.5	0.3
Arkansas	1.0	0.8	0.8	0.7	0.8	1.7	2.1	2.1	3.0	3.3	2.7	1.9
California	1.3	1.1	1.1	1.0	1.0	1.0	1.1	1.2	1.2	1.2	0.8	0.3
Colorado	1.7	1.5	1.4	1.3	1.3	1.5	1.5	1.3	1.3	1.0	0.6	0.5
Connecticut	5.0	4.8	4.5	4.8	4.3	4.5	4.8	4.8	4.6	4.6	3.5	2.2
Delaware	1.9	2.1	1.8	1.9	1.9	2.7	3.0	3.4	3.4	3.3	2.7	1.4
District of Columbia	2.9	1.9	1.7	1.5	1.7	2.0	2.5	3.0	3.0	2.5	1.4	0.5
Florida	0.7	0.6	0.5	0.6	0.6	0.7	0.9	1.0	1.2	1.3	1.1	0.7
Georgia	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.5	0.4
Hawaii	0.9	1.0	0.9	0.7	0.5	0.7	0.7	0.7	0.8	0.5	0.4	0.2
Idaho	1.1	1.0	0.9	0.7	0.9	1.0	1.9	2.3	2.5	2.6	1.8	1.5
Illinois	3.3	3.0	3.1	3.1	3.0	3.2	3.7	3.9	3.9	4.0	2.9	1.8
Indiana	2.0	1.8	1.6	1.4	1.3	1.6	1.9	2.3	2.5	2.2	1.8	1.3
Iowa	4.2	4.2	3.8	3.8	3.2	3.8	3.5	3.3	3.3	3.3	3.0	2.4
Kansas	2.8	2.5	2.5	2.4	2.2	2.3	2.4	2.4	2.4	2.3	2.1	1.7
Kentucky	0.9	1.0	1.1	0.9	1.0	1.3	1.7	2.0	1.9	1.8	1.5	1.0
Louisiana	0.9	0.7	0.8	0.7	0.9	1.1	1.2	1.1	1.0	0.9	0.6	0.4
Maine	2.2	1.6	1.6	1.3	1.6	1.5	2.0	1.9	1.9	1.8	1.4	1.3
Maryland	2.5	2.2	2.3	1.8	1.5	1.7	2.0	2.2	2.0	2.2	1.3	0.7
Massachusetts	4.1	4.2	4.2	4.2	4.2	4.3	5.0	5.1	4.7	4.5	3.3	2.3
Michigan	1.3	1.2	1.1	1.2	1.2	1.5	1.8	2.1	2.3	2.1	1.4	1.0
Minnesota	8.7	7.5	7.3	7.3	7.5	7.4	7.6	7.5	6.9	6.6	5.0	3.4
Mississippi	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6
Missouri	2.2	2.2	2.0	1.9	2.1	2.3	2.5	2.3	2.5	2.4	1.6	1.2
Montana	2.1	1.8	2.1	2.1	1.5	2.0	3.2	3.9	3.3	2.8	2.3	1.7
Nebraska	5.3	5.2	4.9	4.3	4.1	4.8	5.3	5.3	6.5	6.2	4.0	3.4
Nevada	0.5	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.2
New Hampshire	4.4	4.0	3.3	3.0	2.8	3.0	3.8	4.3	4.3	4.2	3.5	2.7
New Jersey	3.2	2.9	2.6	2.6	2.4	2.4	2.4	2.3	2.3	2.3	1.4	0.8
New Mexico	2.5	2.0	1.7	1.6	1.6	1.7	1.9	1.9	2.1	2.0	1.8	1.2
New York	3.0	2.8	2.6	2.4	2.5	2.5	2.7	2.9	2.8	2.6	1.4	1.0
North Carolina	1.5	1.2	1.2	1.1	1.1	1.1	1.3	1.4	1.4	1.5	1.2	0.9
North Dakota	9.1	8.1	7.2	6.3	6.4	6.0	6.1	6.9	5.5	4.7	4.2	2.9
Ohio	3.6	3.1	3.2	3.4	3.5	3.8	4.2	4.3	4.4	4.6	3.5	2.3
Oklahoma	3.8	3.6	3.1	2.8	2.6	2.1	2.2	2.0	1.8	1.8	1.2	0.8
Oregon	1.4	1.1	0.9	0.9	1.0	0.9	1.2	1.1	1.1	1.0	0.6	0.5
Pennsylvania	3.3	2.8	2.8	2.8	2.8	3.1	3.5	3.6	3.7	3.7	2.9	2.0

State	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Rhode Island	1.5	1.4	1.2	1.1	1.6	1.7	2.1	2.0	1.8	1.9	1.3	1.1
South Carolina	0.8	0.6	0.5	0.4	0.5	0.6	0.7	0.8	0.9	0.8	0.8	0.5
South Dakota	11.3	9.6	9.8	9.0	8.5	9.1	10.0	9.3	9.5	9.0	6.8	6.5
Tennessee	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.6
Texas	1.6	1.4	1.4	1.4	1.5	1.7	1.9	1.9	1.9	1.9	1.5	1.0
Utah	2.0	2.0	1.6	1.4	1.5	1.6	2.4	2.5	2.5	2.1	1.6	0.9
Vermont	4.0	3.2	3.4	3.4	3.5	2.6	2.8	3.1	2.3	2.3	1.7	1.4
Virginia	2.3	1.7	1.7	1.5	1.4	1.5	1.6	1.4	1.4	1.6	1.4	0.9
Washington	1.6	1.5	1.4	1.2	1.3	1.5	1.8	1.7	1.6	1.6	0.8	0.7
West Virginia	1.1	0.9	0.7	0.5	0.5	0.7	0.7	0.7	0.8	0.9	0.4	0.3
Wisconsin	6.0	5.8	5.4	5.5	6.2	7.1	8.3	8.5	9.1	8.5	6.5	5.0
Wyoming	7.5	5.4	4.4	3.9	3.3	4.3	3.6	3.9	3.3	3.0	2.1	2.0
US average	**2.8**	**2.4**	**2.3**	**2.2**	**2.1**	**2.3**	**2.6**	**2.7**	**2.7**	**2.5**	**1.9**	**1.4**
Median state value	**2.1**	**1.8**	**1.7**	**1.5**	**1.5**	**1.7**	**2.0**	**2.1**	**2.3**	**2.1**	**1.4**	**1.0**
Minimum state value	**0.4**	**0.4**	**0.3**	**0.4**	**0.3**	**0.2**	**0.3**	**0.3**	**0.4**	**0.3**	**0.3**	**0.2**
Maximum state value	**11.3**	**9.6**	**9.8**	**9.0**	**8.5**	**9.1**	**10.0**	**9.3**	**9.5**	**9.0**	**6.8**	**6.5**

Note: All numbers are percentages.
n.a. = not available due to confidentiality concerns with small numbers.

Table A.6a. *Differences in VR Involvement, Employment, and Work-Incentive Use Annually from 2014 to 2017 by Age for Youth Receiving SSI (Measured in Percentage Points, Unless Otherwise Specified)*

	Mean pre WIOA (2010 2013)	2014			2015			2016			2017		
		Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value
VR involvement													
Applied to VR													
Age 14 to 15	0.233	0.122	0.054	0.030	0.249	0.143	0.089	0.268	0.079	0.001	0.265	0.044	0.000
Age 16 to 17	0.422	0.623	0.116	0.000	1.261	0.208	0.000	2.132	0.303	0.000	2.500	0.347	0.000
Age 18 to 21	0.343	0.809	0.087	0.000	1.944	0.198	0.000	4.026	0.360	0.000	5.666	0.412	0.000
Age 22 to 24	0.025	0.275	0.035	0.000	0.668	0.068	0.000	1.684	0.143	0.000	2.999	0.231	0.000
Signed IPE													
Age 14 to 15	0.179	0.047	0.010	0.000	0.100	0.035	0.006	0.181	0.058	0.003	0.183	0.031	0.000
Age 16 to 17	0.192	0.207	0.044	0.000	0.500	0.088	0.000	1.092	0.170	0.000	1.606	0.276	0.000
Age 18 to 21	0.136	0.463	0.063	0.000	1.172	0.127	0.000	2.878	0.269	0.000	5.511	0.464	0.000
Age 22 to 24	-0.046	0.191	0.029	0.000	0.525	0.065	0.000	1.417	0.130	0.000	3.355	0.305	0.000
Earnings													
Any earnings													
Age 14 to 15	0.837	0.239	0.054	0.000	0.560	0.103	0.000	0.886	0.102	0.000	0.885	0.138	0.000
Age 16 to 17	8.182	1.704	0.287	0.000	3.579	0.410	0.000	4.876	0.421	0.000	5.242	0.453	0.000
Age 18 to 21	22.549	2.165	0.244	0.000	4.020	0.322	0.000	5.220	0.371	0.000	5.207	0.427	0.000
Age 22 to 24	23.171	2.602	0.212	0.000	4.187	0.268	0.000	5.097	0.362	0.000	4.834	0.425	0.000
Annual earnings ($)													
Age 14 to 15	-39.745	0.576	1.379	0.678	7.371	2.675	0.008	13.923	3.236	0.000	15.172	3.316	0.000
Age 16 to 17	80.235	37.093	5.984	0.000	88.464	8.660	0.000	134.873	11.021	0.000	145.448	11.992	0.000
Age 18 to 21	580.187	94.492	11.144	0.000	198.572	16.689	0.000	271.770	17.251	0.000	296.938	19.151	0.000
Age 22 to 24	825.336	160.228	13.233	0.000	302.785	17.140	0.000	360.524	21.914	0.000	360.754	25.888	0.000
Work incentive use													
SEIE													
Age 14 to 15	0.223	-0.011	0.015	0.476	0.029	0.027	0.283	0.076	0.038	0.049	0.066	0.036	0.069
Age 16 to 17	2.144	0.181	0.085	0.038	0.530	0.132	0.000	0.847	0.161	0.000	0.932	0.172	0.000
Age 18 to 21	3.607	-0.144	0.060	0.020	0.120	0.094	0.209	0.507	0.136	0.000	0.616	0.142	0.000
Age 22 to 24	0.623	-0.006	0.015	0.682	-0.015	0.021	0.490	0.034	0.021	0.104	0.074	0.027	0.008
Section 301													
Age 14 to 15	-0.070	-0.006	0.002	0.026	-0.001	0.003	0.694	0.000	0.004	0.916	-0.007	0.005	0.137
Age 16 to 17	-0.054	-0.006	0.003	0.036	0.000	0.004	0.992	0.009	0.006	0.132	0.009	0.007	0.162
Age 18 to 21	0.511	-0.035	0.055	0.529	0.052	0.061	0.396	0.041	0.048	0.401	-0.074	0.059	0.218
Age 22 to 24	0.142	-0.032	0.016	0.058	-0.044	0.021	0.046	-0.042	0.022	0.063	-0.053	0.022	0.018

Notes: This figure shows a subset of the results of six separate regressions. Table A.6b shows the remaining coefficients. All values in the table are regression-adjusted. All models include state-fixed effects and controls for individual characteristics. Adjusted means for Section 301 is negative for the youngest age groups because they were calculated using a linear probability model, and a small number of youth under age 18 used Section 301. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

Table A.7b. *Differences in VR Involvement, Employment, and Work-Incentive Use Annually from 2018 to 2021 by Age for Youth Receiving SSI (Measured in Percentage Points, Unless Otherwise Specified)*

	Mean pre WIOA (2010 2013)	2018			2019			2020			2021		
		Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value	Adjusted difference	Std. error	*p* value
VR involvement													
Applied to VR													
Age 14 to 15	0.233	0.269	0.065	0.000	0.329	0.085	0.000	0.185	0.047	0.000	0.213	0.051	0.000
Age 16 to 17	0.422	2.357	0.350	0.000	2.385	0.400	0.000	1.210	0.223	0.000	1.362	0.212	0.000
Age 18 to 21	0.343	5.845	0.457	0.000	5.683	0.449	0.000	3.340	0.309	0.000	3.775	0.320	0.000
Age 22 to 24	0.025	3.236	0.214	0.000	3.199	0.209	0.000	2.002	0.159	0.000	2.284	0.176	0.000
Signed IPE													
Age 14 to 15	0.179	0.185	0.038	0.000	0.213	0.050	0.000	0.173	0.038	0.000	0.184	0.043	0.000
Age 16 to 17	0.192	1.577	0.257	0.000	1.692	0.307	0.000	1.172	0.244	0.000	1.020	0.165	0.000
Age 18 to 21	0.136	5.869	0.539	0.000	5.568	0.491	0.000	3.469	0.336	0.000	3.074	0.265	0.000
Age 22 to 24	-0.046	3.698	0.329	0.000	3.266	0.244	0.000	1.844	0.148	0.000	1.818	0.144	0.000
Earnings													
Any earnings													
Age 14 to 15	0.837	0.911	0.134	0.000	0.979	0.239	0.000	0.278	0.247	0.266	1.598	0.288	0.000
Age 16 to 17	8.182	6.136	0.582	0.000	6.595	0.682	0.000	3.693	0.958	0.000	8.422	1.058	0.000
Age 18 to 21	22.549	5.597	0.463	0.000	6.068	0.519	0.000	2.983	0.856	0.001	5.949	1.255	0.000
Age 22 to 24	23.171	4.588	0.500	0.000	4.549	0.509	0.000	1.973	0.601	0.002	2.340	0.945	0.017
Annual earnings ($)													
Age 14 to 15	-39.745	14.866	3.791	0.000	17.647	4.497	0.000	12.978	4.139	0.003	33.761	4.568	0.000
Age 16 to 17	80.235	175.879	13.101	0.000	201.504	15.566	0.000	174.660	18.015	0.000	326.949	23.274	0.000
Age 18 to 21	580.187	340.770	22.307	0.000	398.619	23.041	0.000	372.453	29.458	0.000	636.498	44.681	0.000
Age 22 to 24	825.336	375.739	27.507	0.000	413.587	28.893	0.000	252.338	29.407	0.000	464.724	40.978	0.000
Work incentive use													
SEIE													
Age 14 to 15	0.223	0.029	0.042	0.488	-0.004	0.041	0.918	-0.123	0.049	0.016	-0.144	0.053	0.009
Age 16 to 17	2.144	0.914	0.203	0.000	0.794	0.203	0.000	-0.288	0.188	0.132	-1.218	0.211	0.000
Age 18 to 21	3.607	0.647	0.166	0.000	0.535	0.155	0.001	-0.493	0.199	0.017	-1.311	0.235	0.000
Age 22 to 24	0.623	0.057	0.023	0.015	0.083	0.029	0.006	0.039	0.030	0.194	-0.135	0.050	0.009
Section 301													
Age 14 to 15	-0.070	-0.016	0.007	0.021	-0.020	0.008	0.016	-0.024	0.009	0.014	-0.028	0.011	0.012
Age 16 to 17	-0.054	0.002	0.005	0.649	-0.013	0.006	0.038	-0.023	0.008	0.008	-0.030	0.010	0.006
Age 18 to 21	0.511	-0.140	0.086	0.112	-0.213	0.101	0.041	-0.316	0.119	0.011	-0.364	0.126	0.006
Age 22 to 24	0.142	-0.052	0.023	0.031	-0.059	0.026	0.026	-0.048	0.025	0.063	-0.049	0.025	0.051

Note: This figure shows a subset of the results of six separate regressions. Table A.6b shows the remaining coefficients. All values in the table are regression-adjusted. All models include state-fixed effects and controls for individual characteristics. Standard errors are clustered at the state level. The number of observations in all models is 10,811,541.

Table A.7. *Differences in VR Involvement, Employment, and Work-Incentive Use in States that Participated in the PROMISE Demonstration (Measured in Percentage Points, Unless Otherwise Specified)*

	Adjusted difference post WIOA (2014 2021)			Adjusted difference of a 10 percentage point increase in the pre ETS access ratio		
	Non PROMISE states	PROMISE states	p value of the difference across groups	Non PROMISE states	PROMISE states	*p* value of the difference across groups
VR involvement						
Applied to VR	0.025	0.023	0.767	0.002	0.013	0.038
Signed IPE	0.023	0.021	0.696	0.003	0.014	0.062
Earnings						
Any earnings	0.041	0.021	0.011	0.006	0.066	0.024
Annual earnings ($)	253.680	194.710	0.100	3.132	216.302	0.023
Work incentive use						
SEIE	0.141	0.072	0.755	0.016	0.019	0.116
Section 301	0.001	0.001	0.545	0.001	0.001	0.236

Notes: This table shows the results of 12 separate regressions. Columns 2 to 4 show the results of a model with an interaction between an indicator of after WIOA's passage in 2014 and an indicator that the state participated in the PROMISE implementation. All values in the table are regression-adjusted. All models include state-fixed effects and individual characteristics. The number of observations in these models is 10,811,541. Columns 5 to 7 show the results of a model with an interaction between pre-ETS access ratios and an indicator that the state participated in the PROMISE implementation. All models include year-fixed effects and individual characteristics. Standard errors are clustered at the state level. The number of observations in these models is 4,197,947. The PROMISE demonstration was implemented in 11 states: Arkansas, California, Maryland, New York, Wisconsin, and states in the ASPIRE consortium—Arizona, Colorado, Montana, North Dakota, South Dakota, and Utah.

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