Work Ready Kentucky Scholarships: Who Participates?

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Project on Workforce Aligned Education Finance

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INTRODUCTION

Like numerous states, Kentucky has set a statewide postsecondary educational achievement goal, aiming to "accelerate job creation, grow the economy, and expand our tax base."[1] With this goal in mind, the state of Kentucky initiated the Work Ready Kentucky Scholarship (WRKS) for students starting in the 2017-2018 academic year, which provides financial aid for students who enroll in targeted workforce-linked sub-baccalaureate degree programs. WRKS is part of an emerging national trend in workforce-aligned aid programs that are typically designed with a focus on promoting certifiable skills in high demand industry sectors. The aim of these programs is to create career pathways to high-wage and high-demand occupations and to increase the supply of workers who can fill local industry needs. Currently, 22 states have workforce-aligned aid programs, based on our working definition.[2]

In this data brief, we provide the first in a series of analyses that investigate the costs, benefits, adoption, and contexts of workforce-aligned aid programs with a specific focus on WRKS. In the broader project, we will examine whether WRKS enhanced labor market prospects for students and affected educational choices. In this brief, we examine who participates in the aid program, with a focus on geographic variation and demographic characteristics. We also investigate the most popular high-demand fields that WRKS recipients enrolled in and the educational pathways that these students completed.

KEY FINDINGS

1. Given prominent educational attainment challenges in some areas of the state, the state of Kentucky enacted the WRKS program to promote certificate and associate degree attainment in high demand fields.
2. The number of WRKS recipients and the total amount of WRKS money disbursed has grown rapidly since enactment, but the program remains small relative to other more established and broadly targeted state aid programs.
3. WRKS participation generally reflects the geographic distribution of the statewide community college population, where about half of students are from urban areas.
4. The most popular field that WRKS students pursued is healthcare, followed by business services/IT and advanced manufacturing. There are clear differences by gender in some fields: about 67% of women pursued healthcare, compared to 12% of men. Roughly 40% of men studied advanced manufacturing, but only 3% of women.
5. With a narrow window to observe credential completion outcomes, there is early evidence that students who receive WRKS aid are completing credentials, with the most popular credential being certificates.

National Context

It is important to put our analysis in a national context, including the context of postsecondary training through community colleges. Nationally, community college enrollment declined nearly 25% from fall 2010 to fall 2019. The COVID-19 pandemic accelerated this trend as national public two-year institution enrollment fell nearly 13% from fall 2019 to fall 2020.[3] While enrollment fell across all age groups, the largest drop occurred among relatively young students aged 18-24 years old.[4] Some research has documented particularly steep declines among men and in hands-on programs that benefit from in-person instructions.[5]

In contrast to the community college sector, overall enrollment at national public four-year institutions increased by about 15% from fall 2010 to fall 2019 and held relatively flat from fall 2019 to 2020 in the face of the COVID-19 pandemic.[6] There are numerous reasons that explain the differential trends between the public four-year and two-year sectors, including dynamic labor market opportunities, college wage premiums, public financing, program offerings, and student preferences. Yet, regardless of the underlying reasons, the decline in community college enrollment has raised widespread concerns that students may miss out on opportunities to maximize their economic potential if they choose not to attend college. Moreover, this trend may cause a mismatch between the skills demanded by certain jobs and the training of the workforce, which could have long-term implications for the local economy.

Local Context

Kentucky faces a low workforce participation rate, ranking 48th when measured against the rest of the country.[7] Similarly, Kentucky ranked in the bottom five for per capita income in the period directly preceding the COVID-19 pandemic.[8] In addition, Kentucky has a low postsecondary educational attainment rate, ranking in the bottom five states nationally.[9]

Eighty five out of the 120 Kentucky counties are considered rural as highlighted by Figure 1.[10] These 85 counties account for approximately 45% of high school graduates for the state in recent years. Rural students and educational systems face distinct experiences as compared to those in urban areas. For example, rural high school graduates are about 20% less likely than their urban peers to take an AP course and over 40% less likely to pass an AP exam.[11] In some rural high schools, because of lower enrollment density, there are limited opportunities to take a robust, varied set of classes, potentially constraining student pathways.

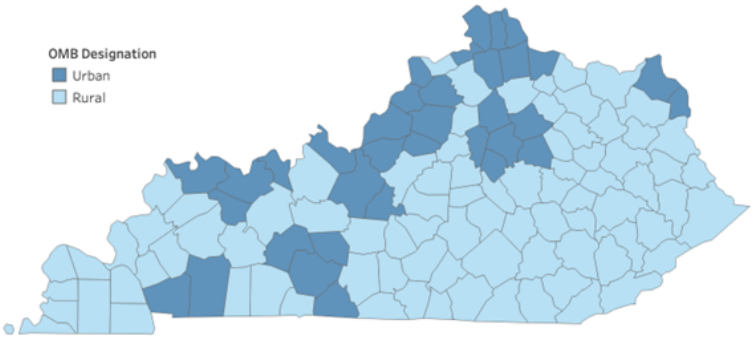

Figure 1: Urban and Rural Counties in Kentucky

Source: Urban and rural definitions based on Office of Management and Budget (OMB) metropolitan and nonmetropolitan categories.

The state's urban-rural educational attainment gap is stark, as shown in Figure 2. Across the state, about 23% of the population aged 25+ in rural areas has an associate degree or higher, as compared to nearly 38% in urban areas. Moreover, the proportion of the population aged 25+ in rural areas who never finished high school is nearly twice as high as that in urban areas.

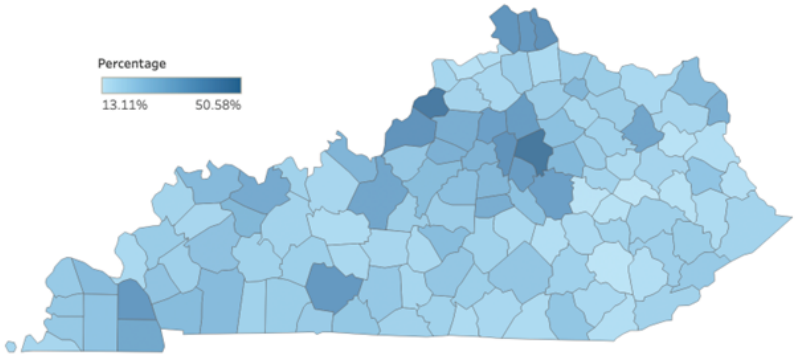

Figure 2: Percentage of Population Aged 25 or Older with an Associate or Higher Degree

Source: U.S. Census Bureau, American Community Survey (ACS), 2014-2018 5 Year Estimates, Table B15001. Notes: This is the percentage of Kentucky residents that have completed at least an associate degree or higher.

In the context of challenging economic conditions and low educational attainment, WRKS was enacted with specific eligibility requirements that make it distinct from other state programs and could affect its popularity among students. WRKS dollars can only be used for selected certificate or associate degree programs in a high-demand workforce sector, where high-demand sectors are routinely reviewed and determined by the state. Current high-demand fields are healthcare, advanced manufacturing, transportation/logistics, business services/IT, and construction. Students are not eligible for the aid if they are already enrolled in a bachelor's degree program or have already earned an associate or higher degree. Because of its focus on certificates and associate degrees, little of the funds would be expected to flow to four-year programs and institutions.

These restrictions are in contrast with the major state aid programs. For instance, the Kentucky Educational Excellence Scholarship (which accounts for about 39% of annual state aid disbursements in the most recent year), the means-tested College Access Program Grant (37%), and the Kentucky Tuition Grant (12%), are available for students enrolled in approved bachelor's and associate degree programs without field restrictions. In the most recent year, WRKS funds accounted for less than 4% of total aid disbursements in the state and was less than 1/10 the size of the two largest aid programs. Therefore, even though WRKS program is expected to grow over time, it is still small relative to other grant programs.

Please see Appendix Table A1 for further information about the landscape of main state aid programs.[12]

What Data Do We Use for the Analysis?

To conduct the analysis, we use administrative postsecondary education system records for the state of Kentucky from the 2017-2018 through 2020-2021 academic years, including information for all students who attended one of 16 community colleges with more than 70 locations across the state. The data provide information on enrollment records, credential attainment, financial aid, institution-related information, and student-level demographics. We construct a student-level data file that consists of all individuals who enrolled in the Kentucky Community and Technical College System between the 2017-2018 and 2020-2021 academic years. The focal group of this report is enrolled students who have received WRKS during the analytical time frame.

How Many Students Participate in WRKS?

As a new aid program available to students for the first time in the 2017-2018 academic year, WRKS started modestly, but has grown rapidly. As we show in Figure 3, participation from public two-year community and technical institutions tripled from just below 1,000 recipients in the first year to over 3,000 recipients four years later in the 2021-2022 academic year. The program disbursements in public two-year institutions also increased significantly during the first three years of administration. They increased from about 2.3 million dollars in the 2017-2018 academic year to nearly 9 million dollars in the 2021-2022 academic year. We also present the WRKS recipients and disbursements for all state institutions over time in Appendix Figure A1.

After a handful of years of decline, enrollment in the Kentucky public two-year community college system was relatively flat between the 2017-2018 and 2019-2020 academic years. However, consistent with national trends, enrollment fell over 10% between the 2019-2020 and 2020-2021 academic years.[13] In comparison, WRKS recipients from public two-year institutions decreased by roughly 1% during this time period.

It is difficult to assess the role of WRKS at this point given the nascency of the program and the pandemic-related trends that depressed community college enrollment in Kentucky and across the country. In future work, we will examine the educational and labor market experiences of WRKS recipients and compare them to similarly situated students who did not receive WRKS funds.

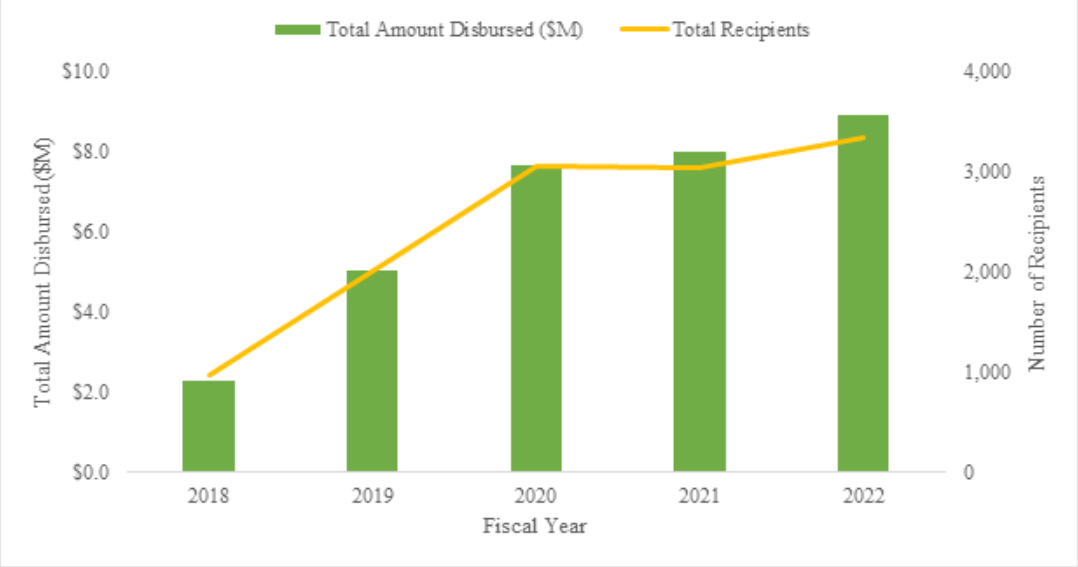

Figure 3: WRKS Recipients and Disbursements (Public Two-Year Institutions)

Source: 2017-2018 to 2021-2022 Work Ready Kentucky Scholarship Annual Reports, Kentucky Higher Education Assistance Authority (KHEAA). Retrieved from https://www.kheaa.com/website/kheaa/reports. Notes: Fiscal years are from July 1 to June 30 (for example, fiscal year 2022 is July 1, 2021 – June 30, 2022). We only include the WRKS data from Kentucky's public two-year community and technical institutions in this figure. The count of WRKS recipients is unduplicated.

What Does Participation Look Like Across Urban and Rural Counties?

From the 2017-2018 through 2020-2021 academic years, more than half of WRKS recipients were located in urban counties at time of entry into an approved program. This rural-urban distinction is relatively consistent with overall public two-year college enrollment for the state, with about 50% of students coming from urban counties.[14]

What is the Demographic Makeup of WRKS Recipients?

During the 2020-2021 academic year, about 93% of WRKS recipients identified as White, 3% identified as Black, and 4% identified as Hispanic or Latino.[15] According to the 2020 U.S. Census, about 87% of Kentucky residents identify as White and 9% identify as Black. In the Kentucky public community college system, about 84% of students enrolling in Kentucky public two-year institutions identified as White, and about 9% identified as Black.

In the 2020-2021 academic year, approximately 62% of the WRKS recipients were below the age of 25. This indicates that that the WRKS recipient population tends to be younger than the broader Kentucky community college system, where about 47% of students belong to the age group of 18-24 years.

When looking at WRKS recipients by gender, we observe that about 58% of the participants identified as male in the 2020-2021 academic year. This percentage exceeds that of male students enrolling in Kentucky's public two-year institutions, which is around 39%. The difference could be partly attributed to the gender sorting into different fields supported by the WRKS program, as we describe in greater detail below.

Which High-Demand Fields Do WRKS Recipients Pursue?

Since the program's inception, students could use WRKS funds to study in the fields of healthcare, advanced manufacturing, transportation/logistics, business services/IT, and construction. We display the share of WRKS recipients' enrolled programs for each of the five high-demand fields in Figure 4.[16]

The most popular field that WRKS recipients pursued was healthcare, accounting for about a third of all enrolled programs by WRKS recipients, while business services/IT and advanced manufacturing each accounted for about a quarter. The remaining students pursued transportation/logistics and construction (about 7% of students each). Field popularity varies substantially by gender. Almost 2/3 of female students studied in healthcare fields, while business services/IT was also popular (28%). However, few female students studied advanced manufacturing (3%), transportation/logistics (1%), or construction (1%). Alternatively, the most popular field among male students was advanced manufacturing (40%), followed by business services/IT (25%). The remaining male students about equally pursued studies in construction, healthcare, and transportation/logistics (10-12% each).

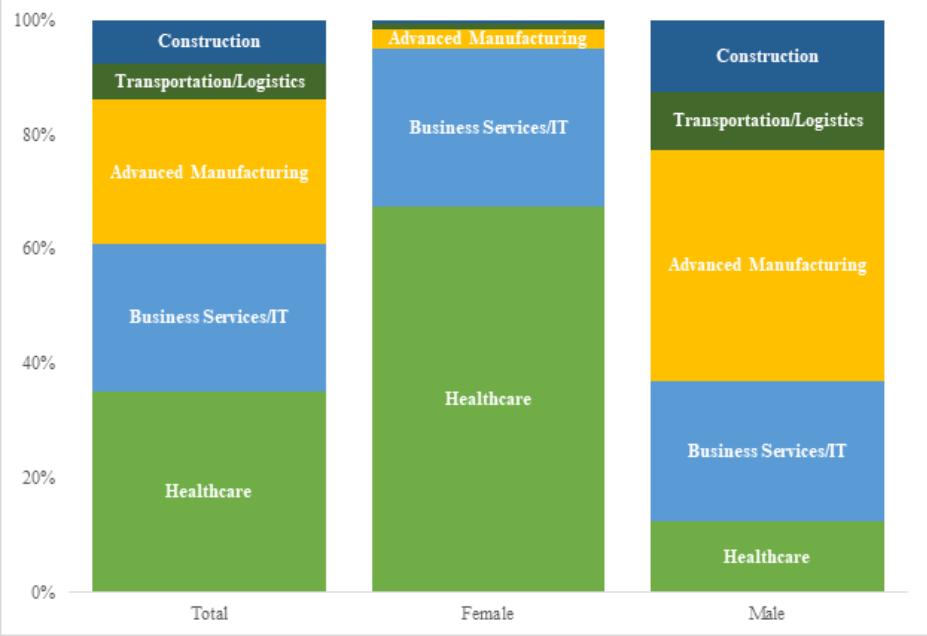

Figure 4: Share of WRKS Recipients' Enrolled Programs in Five High-Demand Fields

Source: Enrollment and financial aid data provided by Kentucky Council on Postsecondary Education. Notes: From the enrollment and financial aid data, we first identify WRKS recipients and programs they enrolled in. Based on the information (such as program names and CIP codes) on enrolled programs of WRKS recipients, we then assign each program's six-digit CIP code to one of the five high-demand fields using the program description from the U.S. Department of Education's National Center for Education Statistics (NCES) CIP codes list and Kentucky Higher Education Assistance Authority (KHEAA) approved WRKS program lists. We count the number of WRKS recipients by enrolled programs' six-digit CIP codes and aggregate the counts from the 2017-2018 through 2020-2021 academic years. The share is calculated by dividing the total number of WRKS recipients enrolling in each high-demand field by the total number of WRKS recipients enrolling in all five high-demand fields. We do this for the full sample of WRKS recipients and by gender.

What are the Credentials Earned by WRKS Recipients?

We examine the educational outcomes of students who received the WRKS for the first time in either the 2017-2018 or 2018-2019 academic year and earned at least one credential by the end of the 2020-2021 academic year. Specifically, we categorize this group of WRKS recipients into three distinct credential outcome categories: those who obtained associate degrees as their highest-attained credential, those who earned two or more certificates, and those who earned a single certificate. We show the distribution in Table 1. We find that out of the sample of WRKS recipients who earned credentials, 487 students obtained at least one associate degree, 402 students earned more than one certificate, and 372 students received a single certificate. Our analysis is limited to a relatively short window of time, and we would expect to observe a larger number of WRKS recipients obtaining associate degrees and certificates with a longer follow-up period.

As expected, Kentucky has a high rate of certificate awards as Kentucky has had among the highest rates in the country of certificates awarded per capita. In recent years, postsecondary institutions granted about three certificates for every associate degree.[17] Also, as consistent with state trends,[18] it appears common for WRKS recipients to stack certificates. While not directly a target of the program, we also observe a handful of WRKS recipients from these cohorts who continued on to earn a bachelor's degree by the end of the 2020-2021 academic year.

Table 1: Credentials Earned by the 2020-2021 AY (2017-2018 and 2018-2019 AY WRKS Cohorts)

CREDENTIALS	COUNTS OF STUDENTS
Associate Degree as the Highest Degree	487
Two or More Certificates	402
One Certificate	372

Source: Enrollment, financial aid, and degree data provided by Kentucky Council on Postsecondary Education. Notes: The pathway of "Associate Degree as the Highest Degree" refers to cases where WRKS recipients earned at least one associate degree as the highest-attained credential, regardless of the number of certificates earned. The pathway of "Two or More Certificates" refers to cases where WRKS recipients obtained two or more certificates, with the highest level of credential being a certificate. The pathway of "One Certificate" refers to cases where WRKS recipients earned one single certificate. The count of students in each pathway is unduplicated.

Summary and Next Steps

In this brief, we examine the geographic distribution and demographic characteristics of students who participated in WRKS program, along with the most popular high-demand fields they pursued and their credential accumulation. Our analysis covers the period from 2017-2018 through 2020-2021 academic years. We find that more than half of WRKS recipients were located in urban counties at the time of their entry into the program. We also document that male students make up a proportion of WRKS recipients that is higher than the overall community college student body. The most popular high-demand fields pursued by WRKS recipients are healthcare for women and advanced manufacturing for men.

Though the WRKS program is relatively new and small, it has the potential to serve a unique role in supporting students that pursue sub-baccalaureate study in certain fields identified by the state. In future analyses we will examine the educational experiences and outcomes of students to better understand how the program might affect the returns to public and private educational investment in the state.

Acknowledgements: This project is supported by generous funding from the Walton Family Foundation.

ENDNOTES

1. 2016-2021 Strategic Agenda for Postsecondary and Adult Education. Kentucky Council on Postsecondary Education.

2. Briefly, we consider an aid program to qualify as a workforce-aligned program if there are regular reviews of high demand fields for the aid program. In a forthcoming report, we describe the rollout of the aid programs across the country and describe the predictors of their adoption.

3. Digest of Education Statistics 2021, Table 303.25. Degree-granting institutions that participate in Title IV federal financial aid programs only.

4. Fink, J. (2023, January 9). What Happened to Community College Enrollment During the First Years of the Pandemic? It Depends on the Students' Age. Community College Research Center. https://ccrc.tc.columbia.edu/easyblog/what-happened-to-community-college-enrollment-depends-students-age.html.

5. Schanzenbach, D. W., & Turner, S. (2022). Limited Supply and Lagging Enrollment: Production Technologies and Enrollment Changes at Community Colleges During the Pandemic. Journal of Public Economics, 212, 104703.

6. Digest of Education Statistics 2021, Table 303.25. Degree-granting institutions that participate in Title IV federal financial aid programs only. Enrollment varied by selectivity of public four-year institutions: at many flagship and selective institutions, enrollment was not harmed dramatically by the pandemic, but was more substantially affected at smaller and less selective institutions (e.g., Seattle Times, 2022).

7. 20 Years in the Making: Kentucky's Workforce Crisis (2021). Kentucky Chamber Foundation.

8. Per data from the Bureau of Economic Analysis (Regional Data: GDP and Personal Income), accessed Aug 2021.

9. Based on population aged 25 years old and over. Source: Digest of Education Statistics 2021, Table 104.80.

10. For ease of discussion in this paragraph, we use 2015 OMB definitions of just rural and urban areas. However, we recognize that urban-rural demarcations are more accurately reflected as a continuum, and we will use and explore more detailed geographic definitions and various definitions as we proceed with the research project.

11. Source: Internal calculations of state administrative data.

12. There are also two programs that support dual credit course taking among high school students, including one linked with the Work Ready program. In this report, we do not include dual credit programs but will examine them in future analyses.

13. Source: Student fall enrollment data, Kentucky Council on Postsecondary Education's Data and Advanced Analytics Team (http://cpe.ky.gov/data/). Accessed 3/14/2023.

14. Source: Student fall enrollment data, Kentucky Council on Postsecondary Education's Data and Advanced Analytics Team (http://cpe.ky.gov/data/). Accessed 3/14/2023.

15. In this report, race is categorized into three groups: Black, white, and other. Ethnicity is categorized into two groups: Hispanic and non-Hispanic. Race and ethnicity are not mutually exclusive.

16. For this graph, we use listed major programs in the enrollment data. However, it is important to note that students' program intent may change as they progress through their educational programs. We restrict data to only WRKS recipients' enrollment and assign each enrolled program's six-digit CIP code to one of the five high-demand fields. We present the high-demand fields to CIP codes crosswalk in Appendix Table A2.

17. Source: U.S. Department of Education, National Center for Education Statistics, IPEDS. Title IV postsecondary institutions only.

18. Darolia, R., Guo, C., & Kim, Y. (2022). The Earnings & Employment of Certificate Earners in Kentucky. http://cpe.ky.gov/data/reports/certificateearnersreport.pdf.

APPENDIX

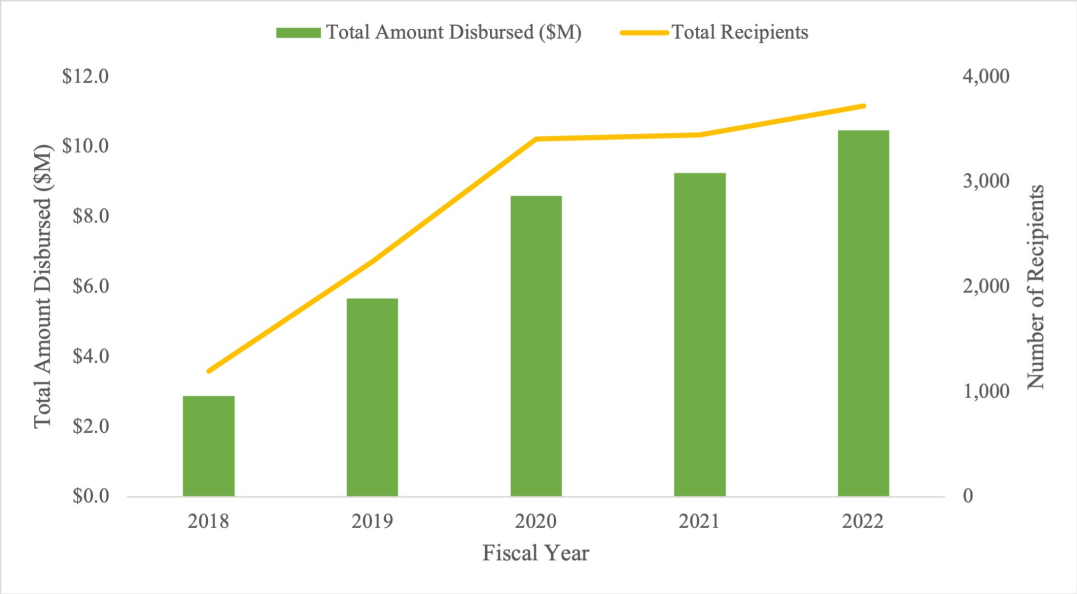

Figure A1: WRKS Recipients and Disbursements (All Institutions)

Source: 2017-2018 to 2021-2022 Annual Reports, Kentucky Higher Education Assistance Authority. Retrieved from https://www.kheaa.com/website/kheaa/reports. Notes: Fiscal years are from July 1 to June 30 (for example, fiscal year 2022 is July 1, 2021 – June 30, 2022). We include the WRKS data from Kentucky's all institutions (including public four-year, public two-year, private four-year, proprietary four-year, and proprietary two-year institutions) in this figure. The count of WRKS recipients is unduplicated.

Table A1: State Grants and Scholarships

	FY2018		FY2019		FY2020		FY2021		FY2022	
	Recipients	$ Disbursed	Recipients	$ Disbursed	Recipients	$ Disbursed	Recipients	$ Disbursed	Recipients	$ Disbursed
KEES	70,400	$115,277,200	70,900	$117,944,100	70,630	$118,849,000	70,570	$118,922,900	66,800	$114,131,500
CAP Grant	47,650	$73,413,000	55,080	$83,186,700	59,200	$91,628,000	56,700	$89,855,650	53,960	$106,605,000
Kentucky Tuition Grant	11,600	$29,700,500	12,840	$33,555,800	14,100	$35,730,000	14,450	$35,542,900	13,740	$33,867,700
WRKS	1,200	$2,885,000	2,250	$5,663,600	3,650	$8,620,000	3,450	$9,319,400	3,730	$10,485,000

Source: 2017-2018 to 2021-2022 Annual Reports, Kentucky Higher Education Assistance Authority. Retrieved from https://www.kheaa.com/website/kheaa/reports. Notes: Fiscal years are from July 1 to June 30 (for example, fiscal year 2022 is July 1, 2021 – June 30, 2022).

Table A2: High-Demand Fields to CIP Codes Crosswalk

High-Demand Field	2-Digit CIP Code	Major Fields
Healthcare	41	Science Technologies/Technicians
	51	Health Professions and Related Programs
Advanced Manufacturing	15	Engineering/Engineering-Related Technologies/Technicians
	43	Homeland Security, Law Enforcement, Firefighting and Related Protective Services
	47	Mechanic and Repair Technologies/Technicians (excludes 47.06)
	48	Precision Production
Transportation/Logistics	47.06	Vehicle Maintenance and Repair Technologies
	49	Transportation and Materials Moving
Business Services/IT	11	Computer and Information Sciences and Support Services
	52	Business, Management, Marketing, and Related Support Services
Construction	46	Construction Trades

Notes: Based on the enrolled programs of WRKS recipients that we observe in the enrollment data, we group these programs into each of the five high-demand fields by matching the enrolled program's 6-digit CIP codes with the U.S. Department of Education's National Center for Education Statistics (NCES) CIP codes list and Kentucky Higher Education Assistance Authority (KHEAA) approved WRKS program lists.