

Wright State University

CORE Scholar

---

Student Papers in Local and Global Regional  
Economies

Economics Student Papers

---

Summer 2019

## Socioeconomic Class and Race in Higher Education Paths and Outcomes: The Case of Ohio

James Harlow

*Wright State University - Main Campus*

Follow this and additional works at: [https://corescholar.libraries.wright.edu/econ\\_student\\_papers\\_economies](https://corescholar.libraries.wright.edu/econ_student_papers_economies)



Part of the [Education Commons](#), and the [Regional Economics Commons](#)

---

### Repository Citation

Harlow, J. (2019). Socioeconomic Class and Race in Higher Education Paths and Outcomes: The Case of Ohio. .

[https://corescholar.libraries.wright.edu/econ\\_student\\_papers\\_economies/4](https://corescholar.libraries.wright.edu/econ_student_papers_economies/4)

This Article is brought to you for free and open access by the Economics Student Papers at CORE Scholar. It has been accepted for inclusion in Student Papers in Local and Global Regional Economies by an authorized administrator of CORE Scholar. For more information, please contact [library-corescholar@wright.edu](mailto:library-corescholar@wright.edu).

James Harlow, M.S. Social and Applied Economics

EC 7810 Research in Economics, Summer 2019

Professor Zdravka Todorova

Department of Economics, Wright State University

## **Socioeconomic Class and Race in Higher Education Paths and Outcomes:**

### **The Case of Ohio**

#### Abstract

The paper reviews literature that examines how race, class and incomes influence students entering college, focusing on the entire U.S. and on Ohio. The paper investigates the following. 1) Does racial demography and household income predict the type of public college or university Ohio seniors choose to attend? 2) Is there a relationship between household income and public college (both two and four-year schools) enrollment immediately after high school? The paper discusses how the provided analysis fit within the broader literature, and help in understanding the problem and in formulating solutions. The goal of this research is to examine some of the potential factors that are leading to unequal outcomes in higher education rather than identifying a single causal mechanism.

## Introduction

Many believe that the United States public educational system ought to be that of a “great equalizer”: where all children have access to a similar education no matter their parents’ income and class status. If a student works hard and follows the rules, they will be given every opportunity to succeed. The Brookings Institute released a report arguing that: America’s educational system has been a meritocratic success for many, however some students are not given the adequate resources needed to thrive, “resulting in a society where opportunities are not equally shared and the full potential of the labor force is not realized” (Greenstone et. al, 2012, pp.10).<sup>1</sup> Reports such as the aforementioned, are becoming more common, with researchers finding that success in school is strongly predicted by both an individual’s race and parent’s socioeconomic status. In contrast to that of a “great equalizer”: the educational system in the U.S. could be a part of structures that perpetuate intergenerational poverty and stagnation of class mobility. This paper will conduct a limited literature review and examine the effects of socioeconomic status and racial inequality on students entering postsecondary education in Ohio, primarily using descriptive statistics. This paper expands upon the available literature by focusing on Ohio, which few prior studies have done.

First the paper reviews literature that examines how race, class and incomes influence students entering college, focusing on the entire U.S. and on Ohio. The following research questions emerge out of this literature review: 1) does racial demography and household income predict the type of public college or university Ohio seniors choose to attend; 2) is there a relationship between household income and public college (both two and four-year schools)

---

<sup>1</sup> The Brookings Institution is a nonprofit public policy organization based in Washington, DC. They describe themselves as independent and non-partisan (About Us, 2019).

enrollment immediately after high school? The paper discusses how the provided analysis fit within the broader literature, and help to better understand the problem and formulate solutions. The goal of this research is to examine some of the potential factors that are leading to unequal outcomes in higher education rather than identifying a single causal mechanism.

### The Impact of Socioeconomic Class and Race on Students Entering the US System of Higher Education

Recent literature illustrates how economic and social factors play a role in how effectively a student manages to navigate the challenges of postsecondary education. A recent longitudinal study conducted by the U.S. Department of Education, which followed randomly selected first-year college students throughout the U.S. for six years, starting from the 2011/2012 academic school year, finds that after the six-year period, race was highly determinative of whether a subject had completed a degree in that time-span. For example, Whites, Blacks and Hispanics, had received a bachelor's degree within six years 43.4%, 22.7%, and 23.6% of the time, respectively (Chen et al., 2019). The subjects' parental educational background also appears to predict whether that student received a bachelor's degree within that six years: for instance, if either parents' highest educational attainment was a high school diploma or less, then a student only graduated with a bachelor's degree 19 percent of the time within that time span. By comparison, students with a parent who had some postsecondary education, graduated 29.1 percent of the time, and those who had a parent with at least a bachelor's degree, graduated 58.7 percent of the time (Chen et al., 2019). These findings cast doubt on the popular conception of the US educational system as a meritocracy: as student's race and/or parental educational

attainment (both of which are predictive of class) may impede a student's pursuit of postsecondary education.

The reason for such a disparity in outcomes, is certainly related to socio-economic barriers that exist for racial minorities and those in the lowest economic strata (Hamilton and Darity, 2017; Lareau, 2015). According to Hamilton and Darity citing Bruenig (2013), Blacks and Latinos collectively make up about 30 percent of the U.S. population, and yet only own approximately 7 percent of the nation's private wealth. Furthermore, a Pew Research Poll, finds that in 2016, the median annual incomes for Whites, Blacks, Hispanics, and Asians in the U.S. were \$47,958, \$31,082, \$30,400, and \$51,288, respectively (Kochhar and Cilluffo, 2018). Having less income and wealth, often means Blacks and Hispanic college students incur more debt than their white counterparts. For instance, in 2012, the percent of students in their fourth year or higher, aged 24 and under, who had received at least one student loan was 90 percent for Blacks, 72 percent for Hispanics, and 66 percent for Whites (Cahalan et. al., 2018). Not only did Blacks and Hispanics borrow more frequently, but the amount borrowed for Blacks was higher on average, as well: with Blacks borrowing about \$31,300, compared to only \$26,600 for Whites (in 2016 U.S. dollars) (Cahalan et. al., 2018). Furthermore, during the 2003/2004 school year, 29 percent of Blacks and 35 percent of Latinos cited lack of financial support as the primary reason for leaving college in their first year (Ross et al., 2012).<sup>2</sup> Due to the considerable wealth and income gaps for these groups, these students often cannot access the supportive parental income that is often needed to remain in school. Consequently, many racial minorities often leave school without obtaining a degree, intimidated by their growing financial debt burden.

---

<sup>2</sup> It should be noted that the two studies: (Kochhar and Cilluffo, 2018) and (Ross et al., 2012), categorize those of Hispanic descent as "Hispanics" or "Latinos", respectively. For this paper, those terms can be used interchangeably.

In addition to the economic barriers for certain racial groups and people from lower socioeconomic backgrounds, there is documented evidence that a lack of institutional knowledge and social barriers may also contribute to why certain demographic groups fail to succeed in higher education. A longitudinal study conducted over the course of 20 years, starting with children around the age of 10, by Annette Lareau (2015), exemplifies this very relationship.<sup>3</sup> She reports that in many cases middle-class or higher students are much more astute in understanding “the rules of the game” of the collegiate milieu, compared to those of working-class and working-poor students. Middle-class or higher students are more adept at finding academic help, have better study habits, know how to contact their advisors, and are overall more informed about how the bureaucratic systems of higher education operate (Lareau, pp.1, 2015).

Another key difference between these groups is that higher class students regularly contact their parents for advice, and in many cases, their parents go out of the way to assist them with their schooling. For example, one male student, who attended Columbia University, had immense help from his mother throughout school: with his mom even contacting a community college he planned to attend that summer, to see if his courses would transfer (Lareau, 2015). From her observations, parent to child relationships like this are much less common in working-class and poor households. While she believes economic issues play a major role in the reason many students from poorer households fail to find success in higher education, it cannot be downplayed “how important knowledge, expertise, and cultural skills also play in navigating institutions and shaping life paths.” (Lareau, pp.21,2015). She finds that “cultural guides” - people who are easily accessible, who can pass on important institutional information and have

---

<sup>3</sup> “Cultural Knowledge and Social Inequality” uses qualitative interviews, spanning roughly 20 years, to help explain why those from different racial and class backgrounds, often have divergent experiences/outcomes in the US educational system (Lareau, 2015).

an institutional role that can help bypass or accommodate bureaucratic checkpoints - can mitigate some of these issues. These people can include attentive professors, well-informed friends and roommates, parents, and academic advisors. In her experience, students from lower-class backgrounds tend to fair much better in school, when they have consistent support from these “guides” (Lareau, 2015).

In fact, many other researchers are examining the effects that culture shocks can have on first-generation college students. A professor (Strayhorn, 2015) at The Ohio State University conducted interviews with a segment of first-generation students, finding many analogous cases to that of Lareau’s work. For instance, one Latino student, attending Ohio State, actually enrolled against her father’s wishes. This student was very important to her household because she was the only native speaker of English: her parents relied heavily on her for answering the phone, communicating with neighbors, and drawing to attention to any bills or letters with concerning information (Strayhorn, 2015). Here, she had a cultural conflict where the University was pulling her in one direction, as her father pulled her in another. By attending school, she felt like she was betraying her father’s wishes. Clearly, an issue such as this, where a student is the only fluent English-speaking member of the household, would be very uncommon for second-generation and greater college students. Strayhorn believes that college advisors should not only help with academic issues, but also be “cultural navigators”, who are individuals that “care about their students and they signal in meaningful ways that students matter. They help students navigate college by making clear what students need to know and do to be successful. They help students find a sense of belonging on campus” (Strayhorn, 2015, pp. 62). Strayhorn appears to suggest a similar solution to that of Lareau: for many low-income and minority students, easily

contactable consultants who both know the rules and the structure of the system of higher education, can help ease the passage of a student from one cultural arrangement to another.

### The Impact of Socio-Economic Class and Race on Students Entering the Higher Educational System in Ohio

The statistics bare that Ohio is not an outlier in relation to the iterated national issues that plague higher education: a study conducted by the Institution of Higher Education Policy (IHEP) (2018), finds that in 2016 at The Ohio State University (OSU), within six academic years of enrolling, Whites, Blacks, and Hispanics, graduated 84 percent, 76 percent, and 81 percent of the time, respectively. Additionally, the difference between the six-year graduation rates of Low-Income Students to Non-Low-Income Students was 8 percentage points, with Non-Low-Incomes graduating at an 85 percent rate, and Low-Incomes graduating at a 77 percent rate. Even at one of Ohio's most well-known public institutions, these issues of inequity seem to persist. A report generated by The Midwestern Higher Education Compact (2014), illustrates that racial inequality, in terms of graduation, is not just idiosyncratic to OSU, but the entire public university system in Ohio. In 2011, the six-year graduation rates for students in Ohio attending a public four-year university, for Whites, African Americans, Hispanics, and Asians were 56 percent, 32 percent, 51 percent, and 69 percent, respectively. The subsequent section's analyses present a case that inequities in the Ohio higher education system persist, like that of the above-mentioned literature.



## The Impact of Race and Income at the District Level on Postsecondary School Choice and Postsecondary Enrollment: Research Questions

In this section, the goal will be to answer three separate research questions, as well as explain the impacts educational attainment can have on the careers and incomes of prospective Ohio college enrollees, all using descriptive statistics. The first two research questions (Analysis 1 and Analysis 2) will attempt to see if both racial demographics and income predict whether a high school student chooses to enroll in a four-year public university (regional and local campuses) or state community college. These are the following research questions:

Q1 (Analysis 1): Do the descriptive statistics indicate that the higher the median income for households who have a child in public school, the more likely high school seniors are to enroll in a state public university or public regional campus as opposed to a state community college, in Ohio at the school district level?

Q2 (Analysis 3): Do the descriptive statistics indicate that high school seniors who graduate from school districts that contain a higher proportion of students identifying as white (race) will be more likely to enroll in a state public university or public regional campus as opposed to a state community college, in Ohio?

Q3 (Analysis 3): Do the descriptive statistics at the school district level indicate that the higher the median income for households who have a child in public school, the more likely high school seniors are to enroll in an Ohio public university or community college? The third research question's goal is to look at the overall association of median incomes with the number of high school students enrolling in an Ohio public educational institution, while attempting to control for the population size of the district.

The second segment of this study will use descriptive statistics to illustrate why a senior's choice to attend college, and what type of school they attend (for those who attend college) can have long lasting impacts on their future career success, whether it be in Ohio, or somewhere else in the U.S. In fact, there are many indicators that suggest that those who attend two-year state community colleges, on average will have lower graduation rates, less earning potential, and more restricted job opportunities, than their four-year counterparts. Furthermore, those who do not pursue college early in life, compared to those who do, are much more likely to never earn a postsecondary degree.

The reasoning behind Analysis 1 is that in school districts, where parents have lower incomes, their children may not have access to the economic and educational resources of their higher-earning counterparts, resulting in them to be more likely to attend a community college, than a public university. For instance, lower income students may have to incur more debt to attend college, which may make less expensive community colleges more appealing. Their schools may have fewer academic resources since the budgets for schools in Ohio are heavily tied to property tax revenues (Phuong, 2014). Their parents may not have the income to help with college preparation such as: ACT and SAT tutoring and essay writing assistance. Clearly, there are many ways that a parent's income can influence a student's choice in a certain educational institution.

The premise behind Analysis 2 is linked to the first: as discussed previously, both the wealth and incomes of minorities in this country (except those of Asian descent), are much lower than those of Whites (Hamilton and Darity, 2017; Kochhar and Cilluffo, 2018). From this it can be inferred that school districts with a higher percentage of white students are, on average, going to have higher incomes, meaning all the factors from the first hypothesis will come into play.

Also, many minority groups in the U.S. (including Ohio) suffer from other cultural barriers (not just economic ones), as well, like those that were discussed by Lareau (2015) and Strayhorn (2015).

The rationale behind the Analysis 3 is in the same vein: for many students, the economic and cultural barriers may simply be too great, resulting in them not attending college, at least initially out of high school. Often, there are a variety of social mechanisms that can influence a student's choice in what school to attend, or even cause them to forego attending college entirely, many of which are out of their control.

#### Data Sources and Assumptions

There were 612 public school districts in Ohio as of the 2016/2017 school year (Ohio Department of Education). The data used is cross-sectional.<sup>4</sup> It was attained from both the National Center of Education Statistics (NCES) and the Ohio Department of Higher Education (ODHE). The focus of these studies only regards Ohio public school districts, and Ohio public colleges and universities; no data from private high schools or universities was used. Secondly, the median income variable being used for Analysis 1 is “the median income of parents who currently have a child attending public school for the year 2016” (National Center for Education Statistics, ACS Estimates of Median Household Income...<sup>5</sup>). This variable was used as opposed to the median income of the entire district because this group's income would be more likely to

---

<sup>4</sup> Cross-sectional means the data is associated with one time period: one year, one month, etc... For this study all the data used is entirely from 2016 or the 2016/2017 school year.

<sup>5</sup> All data retrieved from the NCES for this study, was initially collected by the US Census's American Community Survey (ACS). This data can be found on both the NCES's public online database, as well as the US census's American Factfinder public online database.

influence the subset of high school seniors deciding on what type of institution they should attend.

The second variable used for Analysis 1 is “the percent of first-time students enrolling in an Ohio public university or university regional campus for the 2017 school year” (Ohio Department of Higher Education, 2018a).<sup>6</sup> This variable is out of all students who have enrolled in either a state community college or a state university, so if for example 75 percent of a school district attended a four-year university, then that means the remaining 25 percent would have attended a two-year college.

The 2016 median household income was used because the parent’s income of a previous year is going to be more likely to influence a high school student’s decision for what type of college, they will attend in the year 2017, since most 2017 seniors would have chosen a school during the 2016/2017 school year. The descriptive statistics displayed in Figure 1, are conditional on income, so for example the “Top 10%” represents the percent of students going to a four-year university as opposed to a two-year college, for the 10 percent of school districts with the highest incomes.

For Analysis 2, the key difference is that instead of school choice being conditional on parent’s income, it is now conditional on the “percentage of the district that is identified as racially white” (The National Center for Education Statistics, ACS Estimates of Racial Demographics...) Here it is assumed that the seniors enrolling in college, resemble that of the overall district. This data set is also from 2016, for the same reasoning as median income.

---

<sup>6</sup> ODHE used 2017 college course enrollment records to measure the number of first-time college students for all public Ohio institutions. This was the first time ever using the method which may have resulted in a more accurate student count (Ohio Department of Higher Education, 2018a).

Remember, the intent is to examine the percent of students who have enrolled in either a public two-year college or a four-year university in Ohio: the total number of students attending an Ohio institution is not being used for this analysis (however, this will be assessed when the third research question is examined).

The variables used for Analysis 3, are “median income” (same data as Analysis 1), “total population of the school district in 2016”, and “the total number of first-time college students (out of high school) attending an Ohio public university or college” (National Center for Education Statistics, ACS Estimates of Population Size...; National Center for Education Statistics, ACS Estimates of Median Household Income...; Ohio Department of Higher Education, 2018a). To control for the fact that school districts in Ohio vary greatly in population size, “the number of first-time college students” variable was divided by the “total population of the district”. This ratio was then multiplied by 10,000, to make the data easier to comprehend. In Figure 3, the “Enrollment Ratio”, basically tells you how many seniors would enroll in an Ohio public state college or university if every district’s population was 10,000. Similar in the way the Analysis 1 is answered, this “Enrollment Ratio” is made conditional on median income, and separated into quartiles, as well as into the “Top 10%” and “Bottom 10” income factions.

This study relies on multiple assumptions: for one, many districts have open enrollment. This means that a lot of high schools will have students who are from other districts (Open Enrollment). Also, in larger school districts, like those in big cities, there are going to be more private schools and charter schools (charter schools are considered their own school district in Ohio), which this study is not accounting for (Community Schools). Since the data of interest is only those in Ohio public high schools going to Ohio public educational institutions, districts in cities may be under-estimated compared to those in less populous ones. Also, there may be other

variables that affect what type of college or university a student will attend, or whether a student attends college at all, including: parent's education, school proximity, type of scholarships awarded, sports offered, etc. The objective is to see if there is a predictive relationship between both racial demographics and median income, on where and if a student attends college. Race and socioeconomic status's relationship to higher education must be seen in the context of the entire social system; in no way are these attributes being prescribed as deterministic.

### Analyses

The data set for Analysis 1 includes a total of 604 observations (8 were omitted due to insufficient data); of the 612 school districts in Ohio. Figure 1 shows the percent of those enrolled in a four-year university split into quartiles by level of income: the 1<sup>st</sup> quartile shows (the lowest) that students were less likely to attend a public four-year university or regional campus by 2 percent, 3 percent, and 8 percent for the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> quartiles, respectively. The differences become even more pronounced when you compare the highest median income districts (Top 10%), to the lowest districts (Bottom 10%); where the "Top 10%" had 15 percent more students on average attending a four-year university as opposed to a two-year school. The statistics in Analysis 1 suggest that the median income of a school district (parents with children in public school), may in fact, on average, predict what type of in-state educational institution a student will attend. Also, as the discrepancies in median income increases across districts, the more likely a student will attend a four-year university as opposed to a two-year college.

The data set for Analysis 2 includes a total of 608 observations (4 were omitted due to insufficient data). In figure 2, you can the results: districts in the "Bottom 25%" (6-89 percent

White), students attending an Ohio public university were less likely to attend a four -year university, than those in the “Top 25%” (97-100 percent White). Once again, when comparing the “Bottom 10%” to the “Top 10%”, the difference becomes even more pronounced, with an 8 percent difference in the number of four-year college enrollees. Here, the descriptive statistics predict that the higher the percentage of minorities in a district, the more likely the seniors of that district will choose a two-year college as opposed to a four-year.

The data set for Analysis 3 includes a total of 604 observations (8 were omitted due to insufficient data). Figure 4’s statistics suggest that as the median income of a random school district becomes larger, the more likely high school seniors will attend a public college or university in Ohio, when controlling for population size. The 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and, 4<sup>th</sup> quartiles (which are the same as in Figure 1), show that the mean number of students who enrolled in an Ohio institution grew from 30, to 39, to 46, to 63, per 10,000 people in a district. Also, the difference between those enrolling in college in the “Bottom 10%” compared to those in the “Top 10%”, was 54 students, with the former having 26 enrollees, and the latter having 70 enrollees per 10,000 people in a district. All three analyses appear to align with an affirmative answer in the three research questions: if these inequities do exist, as these analyses illustrate, then what are the consequences?

### What are the Ramifications?

The descriptive statistics in figures 1 and 2, illustrate a pattern of both demography and income of a school district predicting how high school seniors decide what public college or university to attend. If lower income students and certain minorities are more likely to attend

community colleges as opposed to four-year universities, is that really a problem? It is difficult to know: as evidence from some of the previous literature would suggest, due to students coming from lower income communities often having both a lack of financial resources, as well as lack of institutional knowledge, it is hard to determine whether a student would be more successful in the long-run, if they were to attend a four-year public university, as opposed to a two-year college.

What the statistics show is that in the short-run, students who attend two-year colleges in Ohio are often less successful, in terms of income, graduation rates, and success rates (which will be explained later), than those who attend four-year universities, on average. From 2010 to 2016, the number of students who remained in a public institution after their first year of school was 57 percent for two-year college attendees compared to 71 percent for four-year university attendees (Ohio Department of Higher Education, First to Second Year...).<sup>7</sup> This relationship proposes that Ohio community college enrollees are much more likely to drop out after their first year. In fact, a related longitudinal study conducted by the ODHE yields comparable results: Beginning in 2011, it measured the success rates (which is calculated by measuring the percentage of students, out of the entire 2011 cohort, who have either graduated or are still in a public educational institution) of both two-year college attendees and four-year university attendees (regional campuses were not included for this measurement). For two-year attendees, the success rates are measured after three years, and for four-year attendees, the success rates were measured after six years. Despite the period being half as long, state community colleges success rates were only 45 percent, as opposed to four-year universities, which had success rates of 67 percent, a 22 percent

---

<sup>7</sup> These statistics were calculated from the (Department of Higher Education, First to Second Year...) data report. This was calculated by taking the average of every two-year college and four-years university's "Percent Persisting at Any Institution" from 2010 to 2016. Regional campuses were included as four-year universities, in this instance.



difference (Ohio Department of Higher Education, 2015; Ohio Department of Higher Education, 2018b).

If the statistics related to Analysis 3 are correct (Figure 4): What are the consequences if lower-income districts are less likely to produce college attendees straight out of high school? While Ohio could be an exception, the national data suggests that the enrollment rates for those who attend college later in life are much lower. For example, a study conducted by The National Student Clearinghouse (2014) finds that the enrollment rates in Fall 2014 for students attending postsecondary school over the age of 24 was about 5,200,000 less than those 24 and under, nationally. This discrepancy becomes even more glaring when considering the fact that in 2014, in the U.S., the population of those aged 18 to 24, contained about 31 million people, while the population of those aged 25 to 44 (an age group that is probably most likely to return to school outside of the 18 to 24 demographic), contained approximately 84 million (U.S. Census Bureau, Annual Estimates of the Resident Population). Even those who attend college later in life, tend to be less likely to graduate: the same research organization reports, that the graduation rates of first-time students over a six-year timespan, who started college when they were over the age of 24 were 14.7 percent less likely to have graduated, than those who started when they were 24 or younger (Shapiro et al., 2012). It is well-known that those who don't receive a postsecondary degree tend to have a lower earning potential, on average, especially in comparison to those with a bachelor's degree. According to the American Community Survey (ACS), the median earnings of an Ohio resident with a bachelor's, an associate's and a high school diploma are \$51,083, 34,096, and \$29,954, respectively, as of 2017 (U.S. Census Bureau, Median Earnings...). Also, for those graduates who leave Ohio, the difference in earnings is slightly larger (Figure 5), with those with an associate's earning close to \$750 a week, or \$39,000 annually, and those with a

bachelor's earning close to \$1,200 a week or \$62,400 annually, as of 2017 (Bureau of Labor Statistics, 2018).

While student loan debt is often burdensome for both college graduates and dropouts, due to less earning potential, the latter tends to struggle more than the former. A national econometric study, on low to moderate income households, conducted by Despard et al. (2016) predicts, although respondents who did not complete college (non-graduates) had less debt compared to those who did (graduates) (\$20,399 to \$33,773 , on average, respectively) (the respondents in this portion of the survey includes both graduates and non-graduates who have some form of student debt), non-graduates will experience financial difficulty 55 percent of the time, as opposed to graduates (41 percent). Non-graduates were also more likely to be black, which echoes the findings of a previously mentioned article (Despard et al. ,2016) (Chen et al., 2019).

#### Conclusion: Further Research and Potential Solutions

The first two analyses (Figures 1 and 2) appear to indicate that both racial demography and median income, are predictive of what type of state school seniors choose to attend: demonstrating that those school districts with higher median incomes (for households with children attending public school), and those with less racial minorities, tend to have a higher percentage of those attending four-year universities and regional campuses, as opposed to public community colleges, at least for the 2016-2017 school year. In addition, Analysis 3 (Figure 4), suggests that in districts where median incomes are higher, the more likely high school seniors are to enroll in an Ohio public college, for the 2016-2016 school year. As the descriptive statistics indicate, the graduation rates, success rates, and incomes tend to be much lower for students who enroll in two-year community college compared to one who enroll a four-year

university. Also, at least for the entire U.S., those students who elect not to go college immediately after high school, are less likely to enroll later in life, and the ones that do, are less likely to graduate than their younger counterparts. In addition, students who drop out of college are more likely to struggle to pay their student debts since on average, they have a lower earning potential than those who graduate. These statistics, viewed comprehensively, portrays Ohio's current educational system as one that favors higher incomes, certain racial demographics, and students who choose to attend public universities over community colleges; not one that engenders meritocratic outcomes across the socioeconomic spectrum.

It should be noted that more research needs to be done on this subject regarding Ohio. One issue is that the data used was cross-sectional. This means other factors specific to that year in Ohio could influence how students choose their career and educational paths immediately after high school. Such factors could include: overall economic conditions, federal and state financial aid budgets, cultural phenomenon, and college tuition costs. Also, the data attained was at the school district level, which can vary greatly, especially for large districts. An extended form of this study would be to follow random senior students throughout the state of Ohio over time, like that of the NCES's national longitudinal survey (Beginning Postsecondary Students).<sup>8</sup> The discussion here is also limited, in part, because the data was restricted to Ohio public high school students that attended an Ohio public postsecondary institution. To fully understand the predictive relationship that race and socioeconomic status have on postsecondary success, data

---

<sup>8</sup> "The Beginning Postsecondary Students Longitudinal Study (BPS) currently surveys cohorts of first-time, beginning students at three points in time: at the end of their first year, and then three and six years after first starting in postsecondary education. It collects data on a variety of topics, including student demographic characteristics, school and work experiences, persistence, transfer, and degree attainment" (Beginning Postsecondary Students).

on students who are a part of the private sphere of the educational system and those attending a higher education institution outside of Ohio, would allow for a more thorough analysis.

By no means is this work trying to place the blame for these obstacles entirely on higher education. The issues are systemic, and to suggest the fight (to solve these issues), should be waged entirely by postsecondary institutions would be unrealistic. Regarding the macro-level, some solutions may be to reform the college financial aid system, end institutional racism, rethink college entrance exams, and make college more affordable (Carey, 2013; Hyman, 2017; McLeod et al., 2017). In many cases, these broad solutions will require a shift in the paradigm both culturally and institutionally, which may take decades or even longer. Unfortunately, removing some of these barriers are out of the control of any single college or university. However, that does not mean they are powerless in reducing certain forms of inequality: recent literature provides some ways in which colleges can help to resolve these problems, at a more granular level.

As discussed earlier, one reasonable solution, is to provide “cultural guides”, for students who are having a difficult time adjusting to their new environment in college (Lareau, 2015). Such a program would be relatively easy to implement and could pay huge dividends in terms of greater student success. One strategy could be to recruit upperclassmen as mentors for incoming freshman. A new student might find it easier to contact a peer, than an unknown administrator in an unfamiliar building. Another potential strategy may be to use academic advisors as “cultural navigators”, as Strayhorn (2015) suggested. In this scenario students could not only ask for help related to classes, but with other common issues that freshmen have such as assistance regarding: financial aid, where buildings are located, counseling, how to build study habits, etc... It seems,

schools may often fail to seek out those students (many of whom are minorities or from low-income backgrounds) who are struggling, until it is too late (Lareau, 2015).

Not only should colleges work to reduce culture shock amongst new enrollees; they should also aim to curtail the financial and academic issues that often impact those of lower socioeconomic status. A new program (developed by the City University of New York), called ASAP (Accelerated Study in Associate Programs), is providing a blueprint for how colleges can increase graduation rates for primarily low-income students. Recently implemented by three community colleges in Ohio, this program offers fully paid tuition (by using scholarships to supplement whatever state and federal grants fail to cover), while simultaneously requiring students to regularly meet their academic advisors, attend mandatory tutoring sessions (for those in developmental courses), as well as receive other educational assistance (Sommo et al., 2018).<sup>9</sup> A two-year study conducted by Sommo et al. (2018) discovered that graduation rates for those in the program were 11 percent higher than those in the control group (not in the program) over the span of two years, with the former having rates of 8 percent, and the latter having rates of 19 percent. By assisting the students on two fronts: first financially, by providing scholarships, and, second academically, by mandating the use of academic resources; these schools appear to not only have helped low-income students become more acclimated to postsecondary education, but improved their chances to graduate, as well.

In conclusion, the information presented paints a picture of an education system in Ohio that contributes to seeing a pattern of limited class mobility, wage stagnation, and growing

---

<sup>9</sup> To address the problem of low graduation rates in Ohio, in 2014, three community colleges implemented programs modeled after ASAP. Cincinnati State Technical and Community College, Cuyahoga Community College, and Lorain County Community College provided “students with up to three years of financial and academic support and other support services to address multiple barriers to student success” (Sommo et al., 2018, pp.1).

inequality that has been the status quo, in the U.S., since the 1970's (Carlos, 2019). However, researchers and institutions, in both Ohio and nationally are working to reduce both the inaccessibility and difficulties that many minorities and those of lower socioeconomic status face when attending a college or university. By removing these impediments, one day, Ohio could become a model for those who espouse for an “equal opportunity” higher educational system.

## Appendix

Figure 1

Mean Percentage of Entering Students Enrolling in a Public University or University Regional Campus in Ohio in 2017 Conditional on Median Household Income of Parents with Children Attending Public School for Most Public-School Districts in the State of Ohio in 2016

Median Income Range	Percent of Students Enrolling
\$16,667 - \$42,780 (Bottom 10%)	70%
\$16,667 - \$54,955 (1st Quartile)	71%
\$54,956 - \$66,374 (2nd Quartile)	73%
\$66,375 - \$79,536 (3rd Quartile)	74%
\$79,537 - \$187,564 (4th Quartile)	79%
\$97,561 - \$187,564 (Top 10%)	85%

Sources: ODHE and NCES

Figure 2

Mean Percentage of Entering Students Enrolling in a Public University or University Regional Campus in Ohio in 2017 Conditional on Proportion of District that is Identified as White (Race) For Most Public-School Districts in the State of Ohio in 2016

Percent Identified as White Range	Percent of Students Enrolling
6% - 77% (Bottom 10%)	66%
6% - 89% (Bottom 25%)	70%
97% - 100% (Top 25%)	75%
98% - 100% (Top 10%)	74%

Sources: ODHE and NCES

Figure 3

Equation Used to Estimate the Number of First Time College Students Entering an Ohio Public Educational Institution in 2017 Over the Total Population for each Ohio Public School District (Per 10,000 People) in 2016

$$\left( \frac{\text{Number of First Time College Students per District in 2017}}{\text{Total Population of Each District in 2016}} \right) \times 10,000$$

*= Enrollment Ratio per 10,000 People*

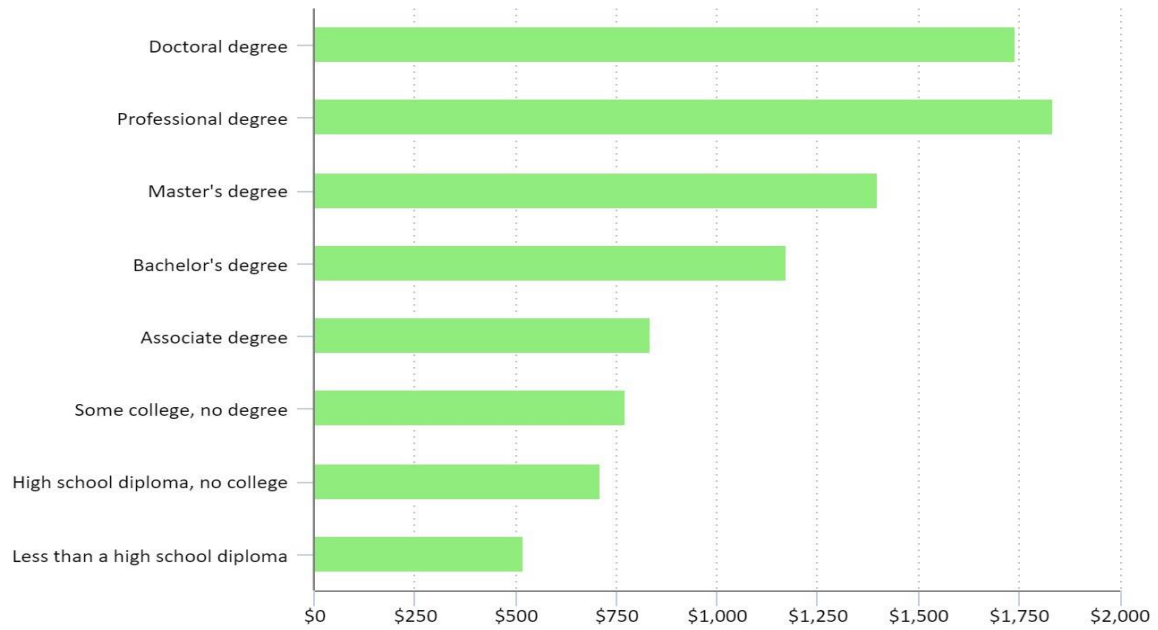
Figure 4

Mean Number of First Time College Students Entering an Ohio Public Educational Institution in 2017 Over the Total Population of an Ohio Public School District (Per 10,000 People) in 2016 Conditional on Median Household Income of Parents with Children Attending Public School in 2016

Median Income Range	Number of Students Enrolling (Per 10,000 People)
\$16,667 - \$42,780 (Bottom 10%)	26
\$16,667 - \$54,955 (1st Quartile)	30
\$54,956 - \$66,374 (2nd Quartile)	39
\$66,375 - \$79,536 (3rd Quartile)	46
\$79,537 - \$187,564 (4th Quartile)	63
\$97,561 - \$187,564 (Top 10%)	70

Sources: ODHE and NCES

Figure 5  
2017 Median Weekly Earnings by Educational Attainment



Source: Bureau of Labor Statistics



## Works Cited

Brookings Institution. About Us. (2019, September 23). Retrieved from <https://www.brookings.edu/about-us/>.

Beginning Postsecondary Students (BPS). (n.d.). Retrieved from <https://nces.ed.gov/surveys/bps/index.asp>

Bureau of Labor Statistics. (2018, April). Median weekly earnings and unemployment rate by educational attainment, 2017. Retrieved from <https://www.bls.gov/careeroutlook/2018/data-on-display/education-pays.htm>.

Bruenig, Matt. (2013, November 5) “The Racial Wealth Gap.” The Policy Shop, Demos [Blog].

Cahalan, M., Perna, L. W., Yamashita, M., Wright, J., Santillan, S., Pell Institute for the Study of Opportunity in Higher Education, & University of Pennsylvania, A. for H. E. and D. (AHEAD). (2018). *Indicators of Higher Education Equity in the United States: 2018 Historical Trend Report*. Pell Institute for the Study of Opportunity in Higher Education. Pell Institute for the Study of Opportunity in Higher Education.

Carey, K. (2013). Fixing Financial Aid. *Chronicle of Higher Education*.

Carlos Bresser-Pereira, L. (2019). Secular Stagnation, Low Growth, and Financial Instability. *International Journal of Political Economy*, 48(1), 21–40.

Chen, X., Elliott, B. G., Kinney, S. K., Cooney, D., Pretlow, J., Bryan, M., ... RTI International. (2019). *Persistence, Retention, and Attainment of 2011-12 First-Time Beginning Postsecondary Students as of Spring 2017. First Look. NCES 2019-401. National Center for Education Statistics*. National Center for Education Statistics.

Community Schools. (n.d.). Retrieved from <http://education.ohio.gov/Topics/Community-Schools>

Despard, M. R., Perantie, D., Taylor, S., Grinstein-Weiss, M., Friedline, T., & Raghavan, R. (2016). Student debt and hardship: Evidence from a large sample of low- and moderate-income households. *Children and Youth Services Review, 70*, 8–18.

Greenstone, M., Harris, M., Li, K., Looney, A., Patashnik, J., & Brookings Institution, H. P. (2012). *A Dozen Economic Facts about K-12 Education. Policy Memo. Hamilton Project.* Hamilton Project.

Hamilton, D., & Darity, W. A., Jr. (2017). The Political Economy of Education, Financial Literacy, and the Racial Wealth Gap. *Federal Reserve Bank of St. Louis Review, 99*(1), 59–76.

Hyman, J. (2017). ACT for All: The Effect of Mandatory College Entrance Exams on Postsecondary Attainment and Choice. *Education Finance and Policy, 12*(3), 281–311.

Institute for Higher Education Policy (IHEP). (2018). *The Ohio State University - Main Campus. Equity Snapshot. Institute for Higher Education Policy.* Institute for Higher Education Policy.

Kochhar, R., & Cilluffo, A. (2018). Racial and ethnic income inequality in America: 5 key findings. Retrieved from <https://www.pewresearch.org/fact-tank/2018/07/12/key-findings-on-the-rise-in-income-inequality-within-americas-racial-and-ethnic-groups>

Lareau, A. (2015). Cultural Knowledge and Social Inequality. *American Sociological Review, 80*(1), 1–27.

McLeod, B. A., Gilmore, J., & Jones Jr., J. T. (2017). Solutions to Structural Racism: One Organization's Community-Engaged Approach in the Aftermath of Civil Unrest. *Social Work, 62*(1), 77–79.

Midwestern Higher Education Compact. (2014). Advancing Postsecondary Opportunity, Completion, and Productivity: Essential Performance Indicators for Ohio and Selected Peer States. 2012-2013. *Midwestern Higher Education Compact.*

National Center for Education Statistics. (n.d.). ACS Estimates of Racial Demographics for All Ohio Public School Districts as of 2016. Retrieved from <https://nces.ed.gov/programs/edge/TableViewer/acsProfile/2016>.

National Center for Education Statistics. (n.d.). ACS Estimates of Population Size for All Ohio Public School Districts as of 2016. Retrieved from <https://nces.ed.gov/programs/edge/TableViewer/acsProfile/2016>.

National Center for Education Statistics. (n.d.). ACS Estimates of Median Household Income of Parents with Children Attending Public School for Ohio Public School Districts as of 2016. Retrieved from <https://nces.ed.gov/programs/edge/TableViewer/acsProfile/2016>.

National Student Clearinghouse Research Center. (2014). Current Term Enrollment Estimates: Fall 2014. *National Student Clearinghouse*.

Ohio Department of Education. Facts and Figures. (n.d.). Retrieved from <http://education.ohio.gov/Media/Facts-and-Figures>

Ohio Department of Higher Education. (2015, October). Three-Year Success Measures: Fall 2011 Cohort of First-Time, Full-Time, Degree/Certificate-Seeking Undergraduate Students. Retrieved from [https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/data/statistical-profiles/3\\_yr\\_success\\_public\\_2011.pdf](https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/data/statistical-profiles/3_yr_success_public_2011.pdf).

Ohio Department of Higher Education. (2018, December). Retrieved Remediation of Ohio High School Graduates Going Directly to a University System of Ohio College: High School Graduates in 2017 Enrolling as First-Time College Students in Fall 2017: Results by District of Graduation. Retrieved from [https://www.ohiohighered.org/sites/default/files/uploads/data/reports/hs-to-college/2018-Remediation-Report\\_FINAL.pdf](https://www.ohiohighered.org/sites/default/files/uploads/data/reports/hs-to-college/2018-Remediation-Report_FINAL.pdf).

Ohio Department of Higher Education. (2018, March). Six Year Success Measures: Fall 2011 Cohort of First-Time, Full-Time, Degree Seeking Undergraduate Students. Retrieved from [https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/data/statistical-profiles/student-progression/6\\_yr\\_success\\_public\\_2011.pdf](https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/data/statistical-profiles/student-progression/6_yr_success_public_2011.pdf).

Ohio Department of Higher Education. (n.d.). First to Second Year Retention of First-Time, Full-Time, Degree-Seeking Freshmen by Campus: University System of Ohio Institutions - Fall 2010 to Fall 2016 Cohorts. Retrieved from <https://www.ohiohighered.org/data-reports/graduation-retention>.

Open Enrollment. (n.d.). Retrieved from <http://education.ohio.gov/Topics/Ohio-Education-Options/Open-Enrollment>

Phuong Nguyen-Hoang. (2014). School District Income Taxes and School Inputs: The Case of Ohio. *Journal of Education Finance*, 40(1), 38.

Ross, T., Kena, G., Rathbun, A., Kewal Ramani, A., Zhang, J., Kristapovich, P., ... National Center for Education Statistics (ED). (2012). Higher Education: Gaps in Access and Persistence Study. Statistical Analysis Report. NCES 2012-046. *National Center for Education Statistics*.

Shapiro, D., Dundar, A., Chen, J., Ziskin, M., Park, E., Torres, V., ... National Student Clearinghouse. (2012). Completing College: A National View of Student Attainment Rates. Signature [TM] Report 4. *National Student Clearinghouse*.

Sommo, C., Cullinan, D., Manno, M., & MDRC. (2018). *Doubling Graduation Rates in a New State: Two-Year Findings from the ASAP Ohio Demonstration*. Policy Brief. MDRC.

Strayhorn, T. L. (2015). Reframing Academic Advising for Student Success: From Advisor to Cultural Navigator. *NACADA Journal*, 35(1), 56–63.

U.S. Census Bureau (n.d.) Annual Estimates of the Resident Population for Selected Age Groups for the United States and Puerto Rico, 2014 Population Estimates. Retrieved from [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP\\_2018\\_PE\\_PAGESEX&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2018_PE_PAGESEX&prodType=table)

U.S. Census Bureau (n.d.) Median Earnings in the Past 12 Months (In 2017 Inflation Adjusted Dollars) by Educational Attainment for the Population 25 Years and Over. Retrieved from [https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_17\\_5YR\\_B20004&prodType=table](https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B20004&prodType=table)