

A decade of decline College-Going Rates in Central Indiana

Aaron Olson, Matt Nowlin, and Sydney
Dauphinais

SAVI 2022

Presenters

Aaron Olson



Research Data Analyst,
The Polis Center

Matt Nowlin



Community Analysis
Manager, The Polis
Center

**Sydney
Dauphinais**



Economic Equity
Reporter,
WFYI Public Media



Today's Goals

- Explain how college-going rates have changed at several levels of geography in Indiana: statewide, metro areas, Central Indiana counties, school districts, and high schools
- Discuss factors influencing college enrollment rates at Central Indiana high schools



Data Sources & Definitions

Sources:

- Indiana Commission for Higher Education
 - College-Going Data, school-level demographics
- U.S. Census Bureau, American Community Survey
 - School District demographics



Data Sources & Definitions

College-Going Rate:

The share of graduating high school students who choose to pursue a post-secondary degree or certificate. This includes the full range of credentials beyond high school from a one-year certificate on up through a four-year degree.



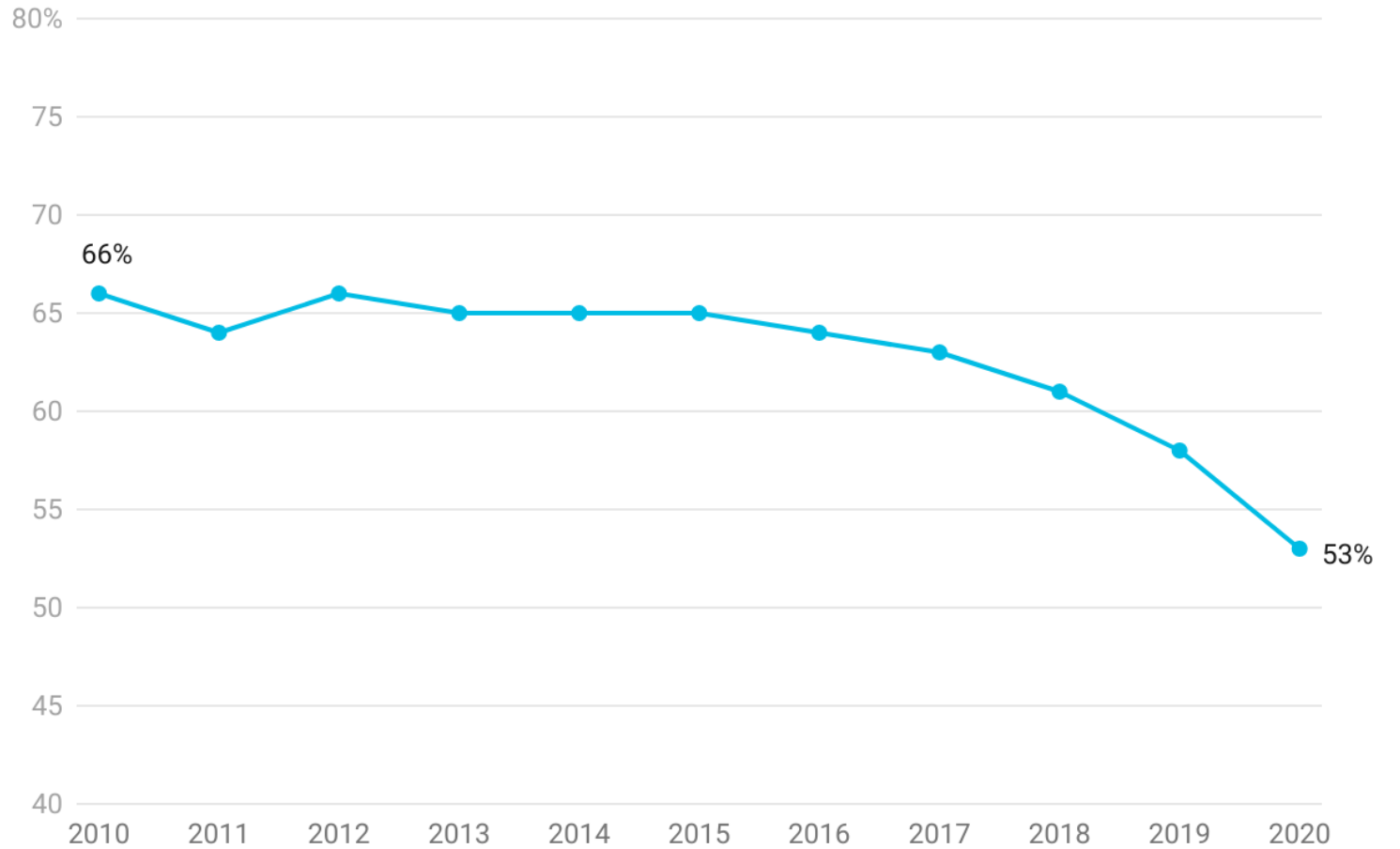
Statewide Decline in College





The share of graduating high school students choosing college declined by 13 points in the last decade

Statewide College-Going: 2010 - 2020



Source: SAVI analysis of data from Indiana Commission for Higher Education • Created with Datawrapper

Source: Indiana Commission for Higher Education



College education is correlated with higher wages and net worth

- Impact on household earnings and the economy
- Impact on civil society

ECONOMIC METRICS BY EDUCATION LEVEL				
EDUCATION LEVEL	UNEMPLOYMENT RATE	INDIANA LABOR PARTICIPATION RATE	WAGES – MEDIAN INCOME (U.S.) (2019)	WEALTH – AVERAGE NET WORTH (U.S.) (2019)
LESS THAN A HIGH SCHOOL DIPLOMA	6.4%	42.3%	\$30,950	\$137,800
HIGH SCHOOL DIPLOMA	4.4%	57.0%	\$39,050	\$305,200
SOME COLLEGE OR ASSOCIATE DEGREE	2.6%	65.3%	\$44,850	\$376,400
BACHELOR'S DEGREE + UP	0.9%	73.0%	\$72,000	\$1,519,900

“We lose something intrinsic when too few receive education beyond high school. Education is basic to civil society. And it should provide the opportunity of prosperity for all people. It is imperative to promote the value of education beyond high school to achieve not only the narrower goal of increasing student enrollment and successful completion to enter the world of work—but the broader goal of ensuring an educated and prosperous society.”

– Indiana Commission for Higher Education

Potential Reasons Why?

- Examples and stories from Sydney's reporting



How is this impacting various student subgroups?

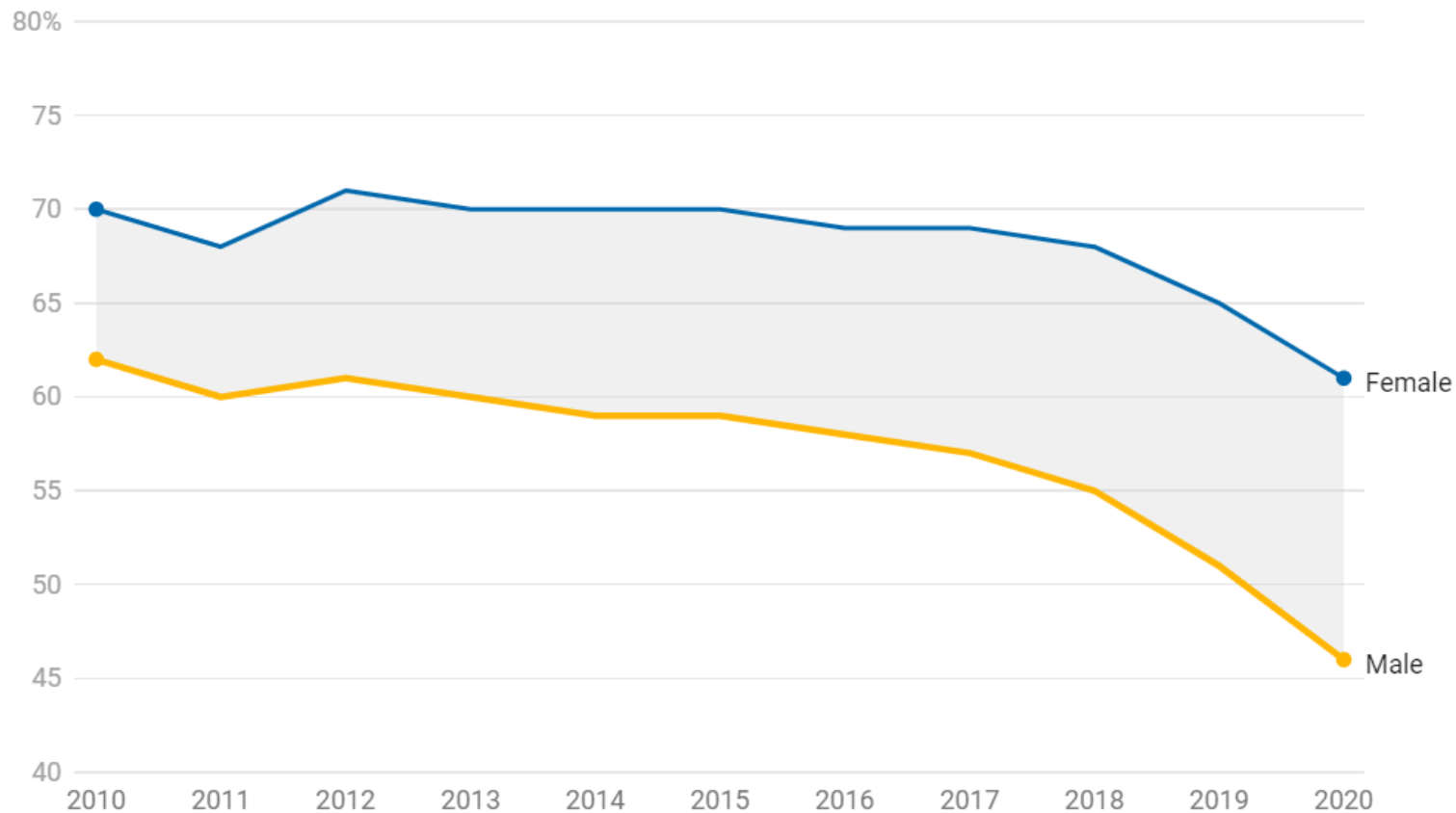




Male high school students are far behind female students in choosing to attend college

Statewide College-Going by Gender: 2010 - 2020

Source: Indiana Commission for Higher Education



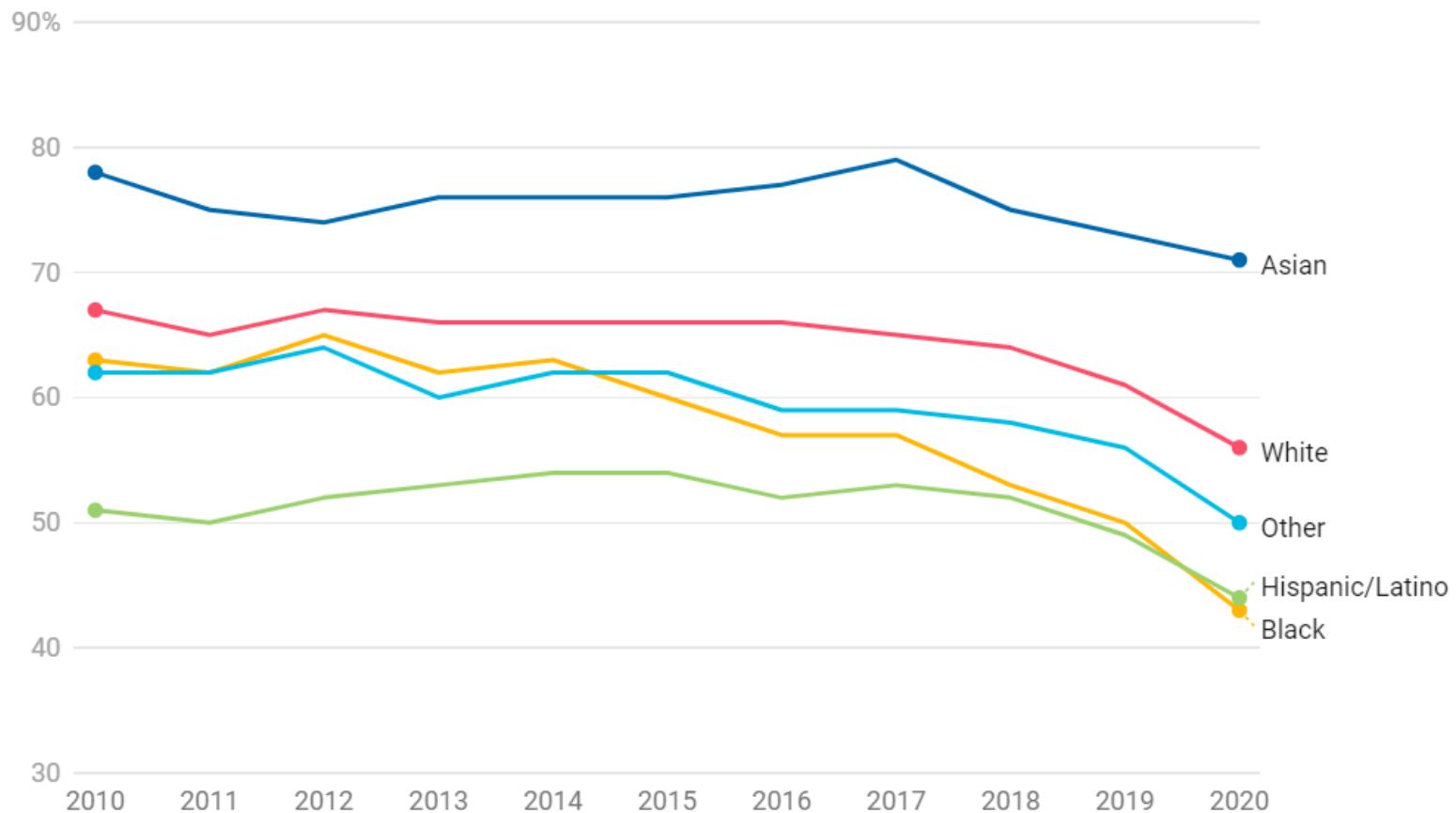
Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



Black students had the largest decline in college-going compared to other racial and ethnic groups

Statewide College-Going by Race & Ethnicity: 2010 – 2020

Source: Indiana Commission for Higher Education

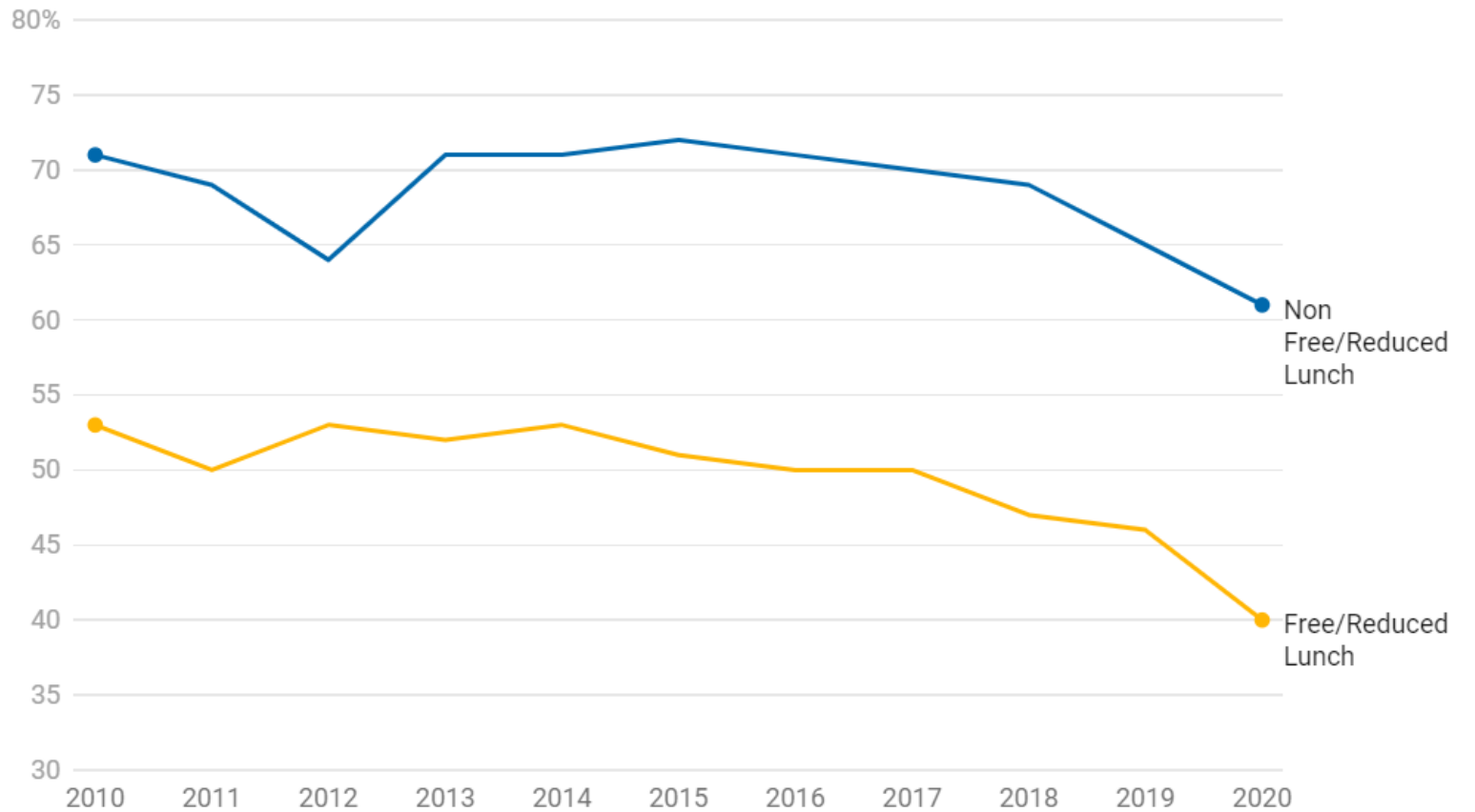


Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



Students on the Federal Free or Reduced-Price Lunch Program had a steep decline in college enrollment

Statewide College-Going by Socioeconomic Status: 2010 – 2020



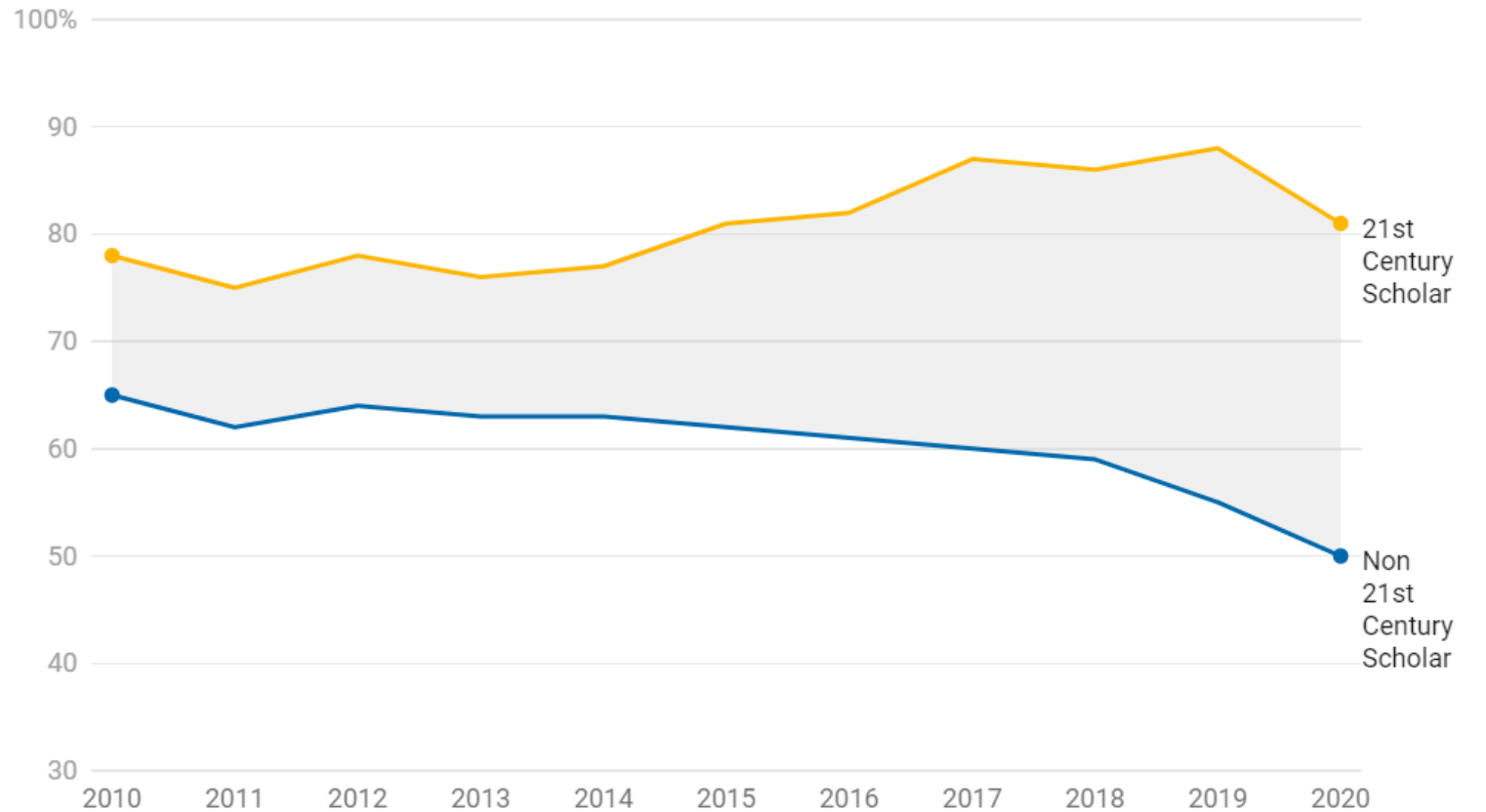
Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

Source: Indiana Commission for Higher Education



Students in the 21st Century Scholars Program have a 30-point college-going advantage compared to students not in the program

Statewide College-Going by 21st Century Scholars Status: 2010 – 2020



Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

Source: Indiana Commission for Higher Education

Going in Central Indiana

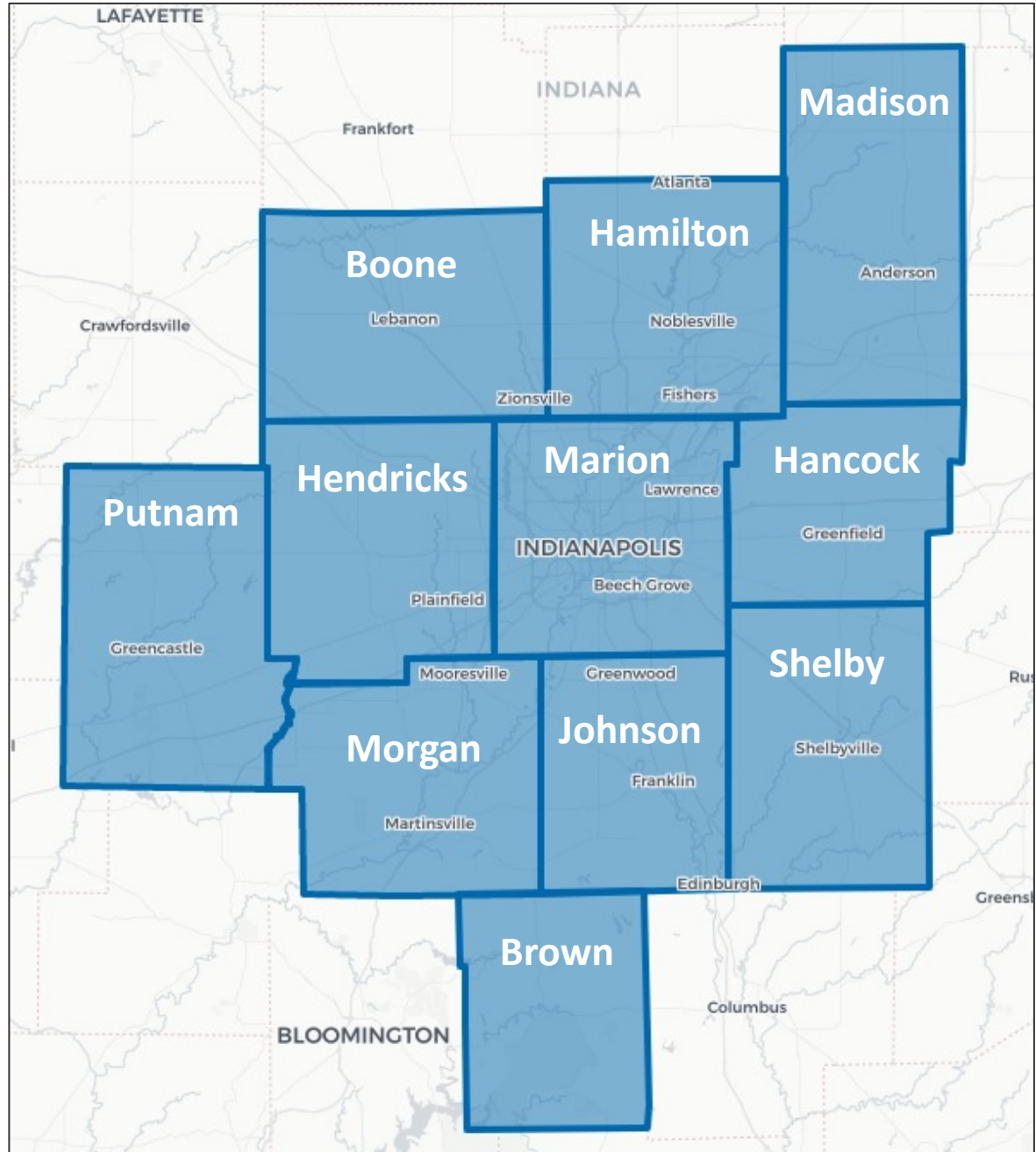




Declining College-Going in Central Indiana

Indianapolis Metro Area Counties
(largest city/town)

- Boone (Zionsville)
- Hamilton (Carmel/Fishers)
- Madison (Anderson)
- Putnam (Greencastle)
- Hendricks (Plainfield)
- Marion (Indianapolis)
- Hancock (Greenfield)
- Morgan (Martinsville)
- Johnson (Greenwood)
- Shelby (Shelbyville)
- Brown (Nashville)





The Indianapolis Metro Area had a larger decline in college-going than six of the state's fourteen metro areas

Change in College-Going rate by Metro Area: 2010 - 2020

Source: Indiana Commission for Higher Education

Metro Area	2010 College-Going Rate	2020 College-Going Rate	Rate Change	Rate Change Relative to State
Terre Haute	66%	58%	-7 points	6 points
Michigan City-Laporte	57%	48%	-9 points	4 points
Cincinnati	65%	56%	-9 points	4 points
Lafayette	64%	55%	-10 points	3 points
Bloomington	71%	61%	-10 points	3 points
Chicago	66%	55%	-11 points	2 points
Indianapolis	67%	56%	-12 points	1 points
Evansville	71%	59%	-12 points	1 points
Columbus	68%	55%	-13 points	0 points
Non-metro	63%	49%	-13 points	0 points
Muncie	69%	56%	-14 points	-1 points
Louisville	62%	47%	-15 points	-2 points
Kokomo	69%	52%	-16 points	-3 points
South Bend	65%	48%	-17 points	-4 points
Fort Wayne	70%	53%	-17 points	-4 points

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

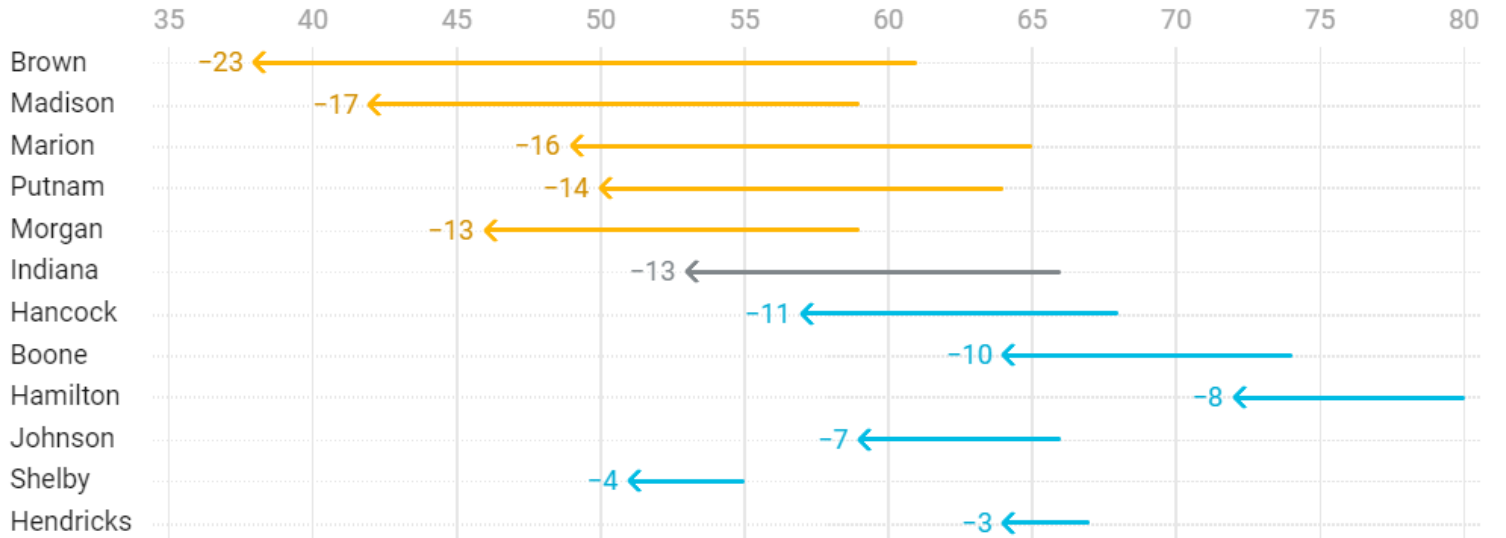


Marion County was among the five Central Indiana counties with a larger decline in college-going than the state overall

Change in College-Going Rate Relative to Statewide Shift: 2010 - 2020

Source: Indiana Commission for Higher Education

Blue arrows represent counties with smaller percentage point declines than the state, while orange arrows indicate larger declines than the state.



Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



Spotlight - Shelby County

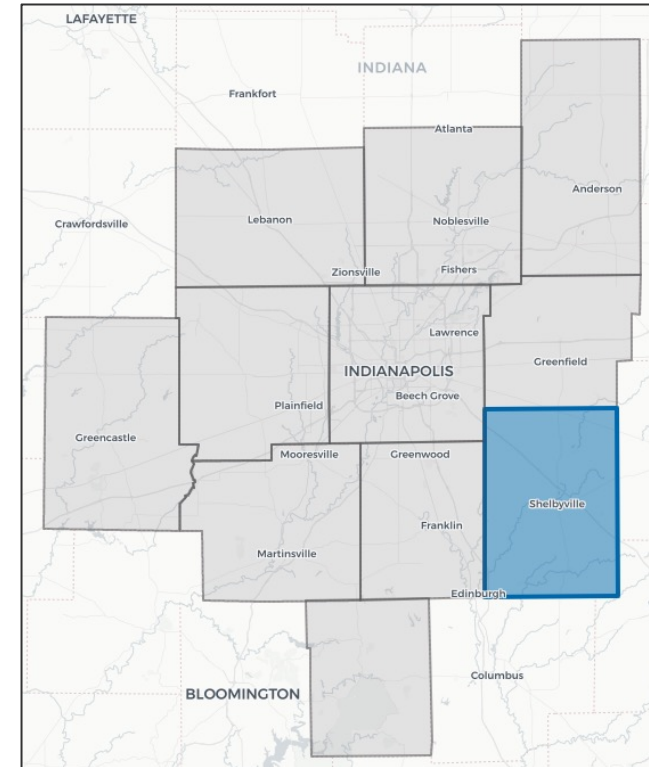
Shelby County had a much lower decline in college-going than most surrounding counties

Shelby's demographics predicted a much steeper drop in college-going compared to other similar counties around the state

Shelby high schools in our data:

- Triton Central
- Morristown
- Shelbyville
- Waldron
- Southwestern

Source: Indiana Commission for Higher Education



2010

College-Going Rank

85th

55% went to college

2020

College-Going Rank

49th

51% went to college

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

Going in Central Indiana School Districts



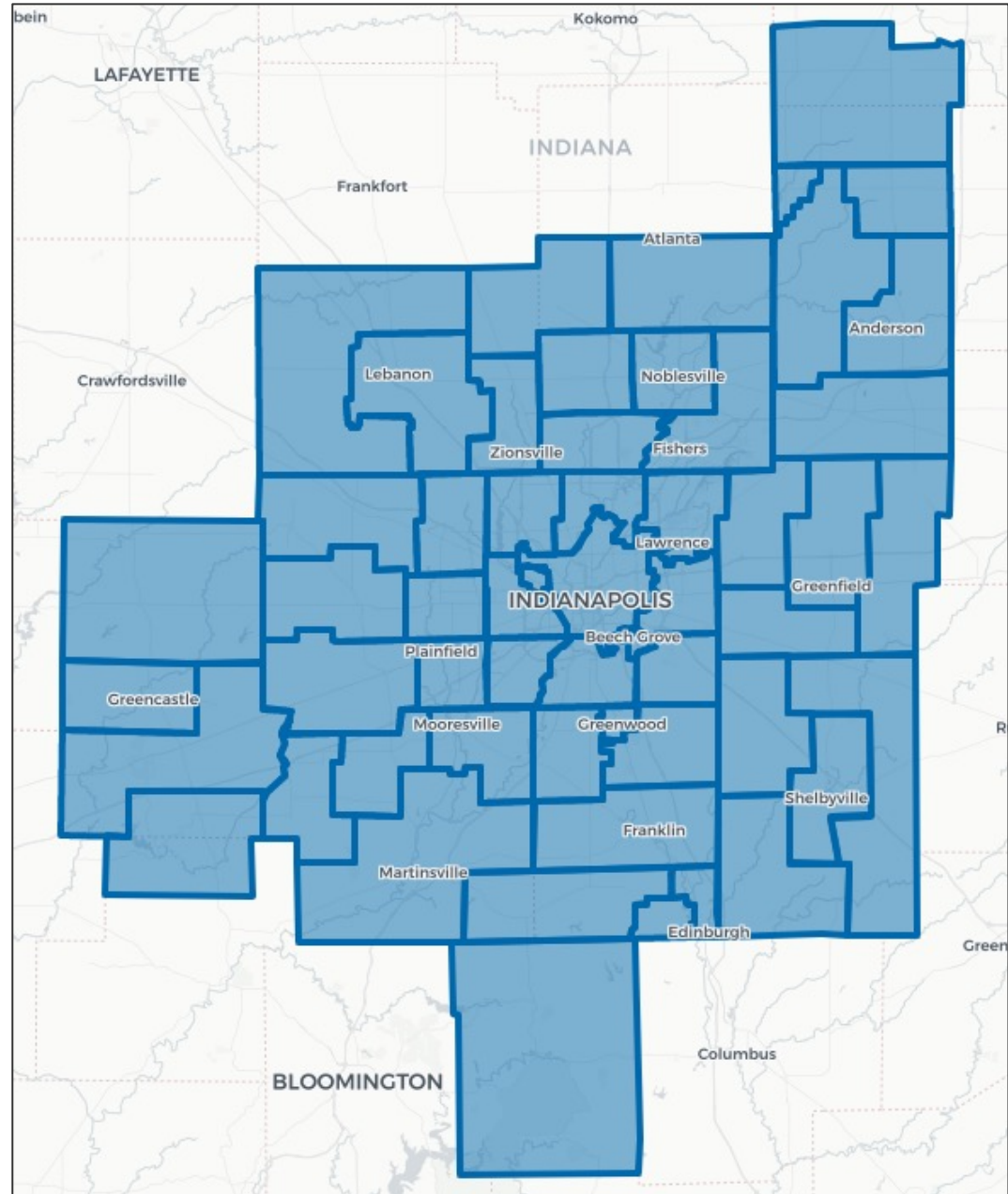


Declining College-Going in Central Indiana School Corporations

There are 54 geography-based school districts in our 11-county metro area

Some corporations only have one high school (e.g. Anderson Community School Corporation), others have multiple (Indianapolis Public Schools, for example)

Source: Indiana Commission for Higher Education





School districts with the ten highest college-going rates in 2010

- 7/10 top ten college-going school districts in 2010 had above average bachelor's degree attainment
- 8/10 had above average median household income

Source: Indiana Commission for Higher Education / US Census Bureau

School Corporation	County	College-Going Rate, 2010	Median Household Income, 2010	Bachelors' Degree or Higher - Age 25+, 2010
Zionsville Community Schools	Boone	86%	\$106,938	62%
Carmel Clay Schools	Hamilton	86%	\$98,611	64%
Hamilton Southeastern Schools	Hamilton	85%	\$85,410	59%
MSD Washington Township	Marion	78%	\$49,867	48%
Westfield-Washington Schools	Hamilton	77%	\$84,688	49%
Center Grove Community School Corp	Johnson	75%	\$82,976	38%
Noblesville Schools	Hamilton	75%	\$69,574	45%
Southern Hancock County Community School Corp	Hancock	75%	\$66,108	28%
Greenwood Community School Corp	Johnson	74%	\$48,276	25%
South Madison Community School Corp	Madison	72%	\$62,244	21%

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



School districts with the ten highest college-going rates in 2020

- Northwestern Consolidated School Corp, Hamilton Heights, and North West Hendricks all have bachelor's degree attainment levels at or below the metro area average

Source: Indiana Commission for Higher Education / US Census Bureau

School Corporation	County	College-Going Rate, 2020	Median Household Income, 2020	Bachelor's Degree or Higher - Age 25+, 2020
Carmel Clay Schools	Hamilton	83%	\$115,973	72%
Hamilton Southeastern Schools	Hamilton	74%	\$102,303	63%
Zionsville Community Schools	Boone	72%	\$135,512	74%
Westfield-Washington Schools	Hamilton	71%	\$93,473	53%
Center Grove Community School Corp	Johnson	70%	\$92,326	46%
Brownsburg Community School Corp	Hendricks	69%	\$96,507	48%
Northwestern Consolidated School Corp	Shelby	68%	\$62,984	25%
Hamilton Heights School Corp	Hamilton	67%	\$66,335	27%
North West Hendricks Schools	Hendricks	67%	\$82,044	36%
Avon Community School Corp	Hendricks	65%	\$87,450	41%

Source: SAVI analysis of data from the Indiana Commission of Higher Education • [Get the data](#) • Created with [Datawrapper](#)



School districts with the ten largest declines in college-going rates: 2010-2020

- Just three school districts had an *increase* in college-going in the last decade
- Many districts with the largest declines had below average bachelor's degree attainment and income
- Four Marion county districts were in the top 10 for declines

Source: Indiana Commission for Higher Education / US Census Bureau

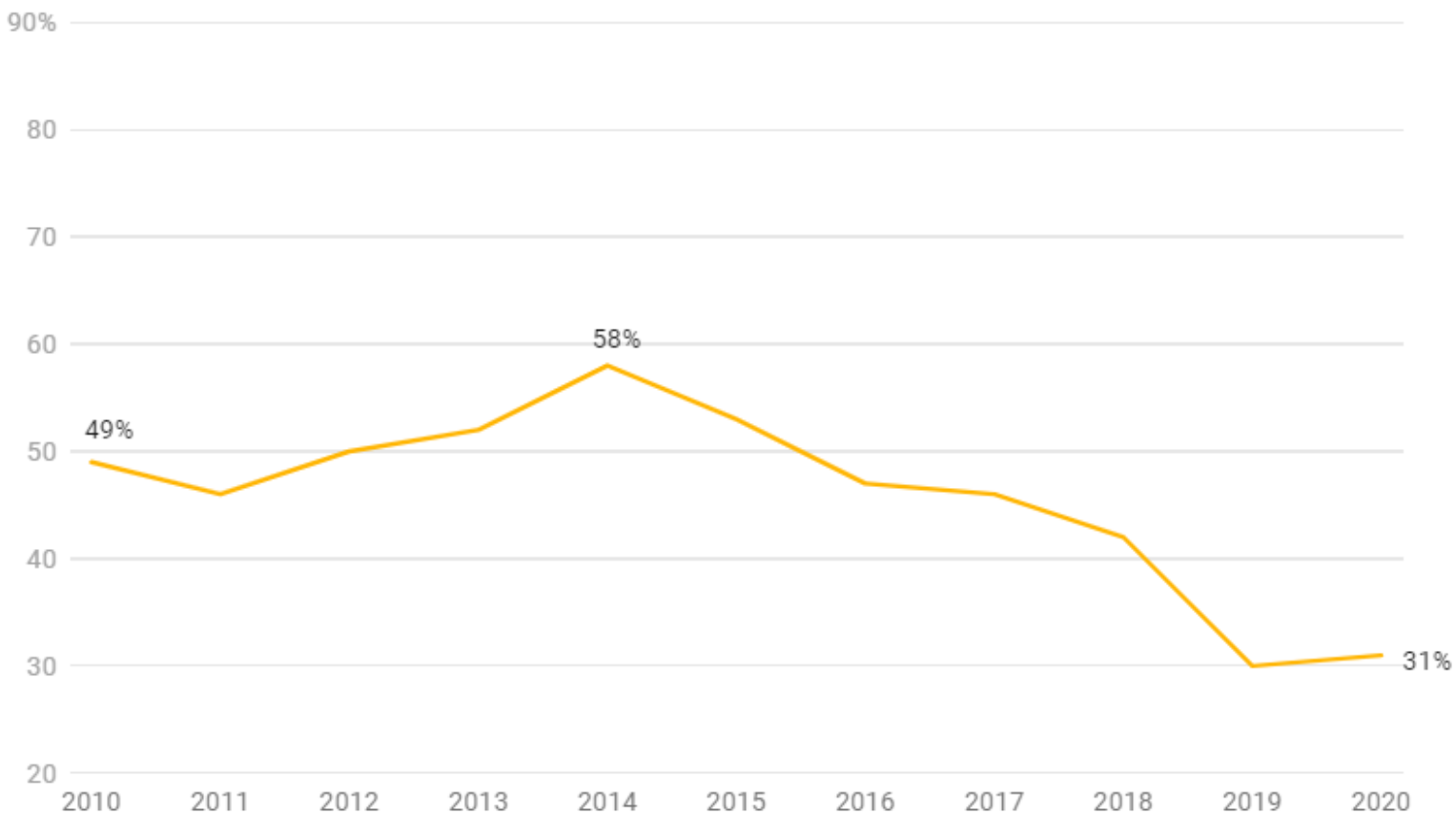
School Corporation	County	Median Household Income, 2020	Bachelor's Degree or Higher - Age 25+, 2020	Change in College-Going Rate	Change Relative to State
Anderson Community School Corp	Madison	\$42,475	17%	-25 points	-12 points
South Putnam Community Schools	Putnam	\$68,446	12%	-25 points	-12 points
Brown County School Corp	Brown	\$66,833	29%	-22 points	-9 points
MSD Lawrence Township	Marion	\$61,092	43%	-22 points	-9 points
MSD Warren Township	Marion	\$52,267	21%	-22 points	-9 points
Sheridan Community Schools	Hamilton	\$60,369	21%	-21 points	-8 points
Greenwood Community School Corp	Johnson	\$60,088	30%	-20 points	-7 points
Indianapolis Public Schools	Marion	\$40,010	28%	-18 points	-5 points
South Madison Community School Corp	Madison	\$71,705	23%	-18 points	-5 points
MSD Washington Township	Marion	\$60,865	52%	-17 points	-4 points

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



College-Going at IPS Schools peaked at 58% in 2014 and has since sunk to 31% in 2020

College-Going Rate at IPS Schools: 2010 - 2020



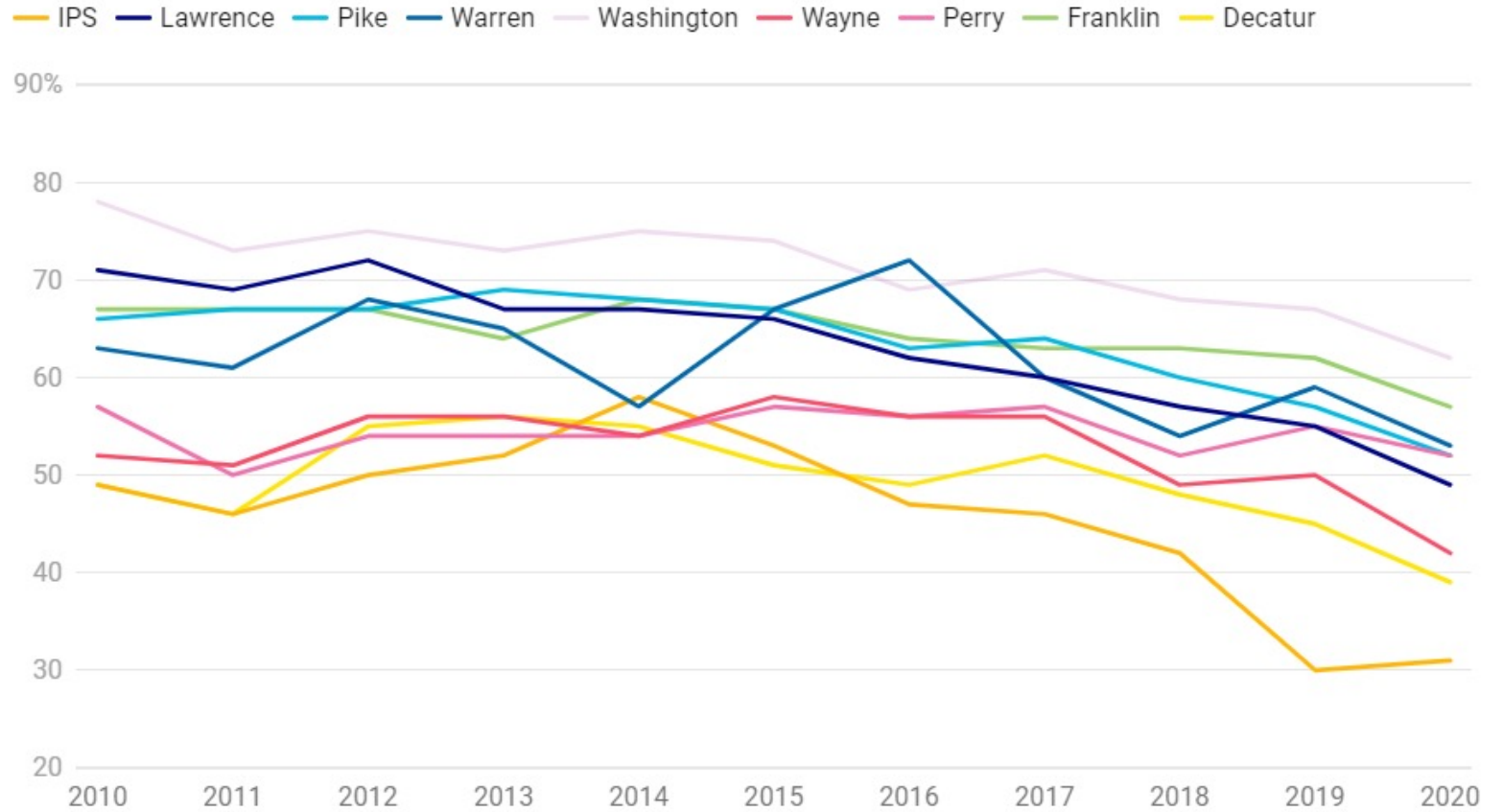
Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

Source: Indiana Commission for Higher Education



All Indianapolis Metropolitan School Districts had College-Going Declines since 2010

College-Going at Indianapolis Metropolitan School Districts: 2010-2020



Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)

Source: Indiana Commission for Higher Education

Going in Central Indiana High Schools



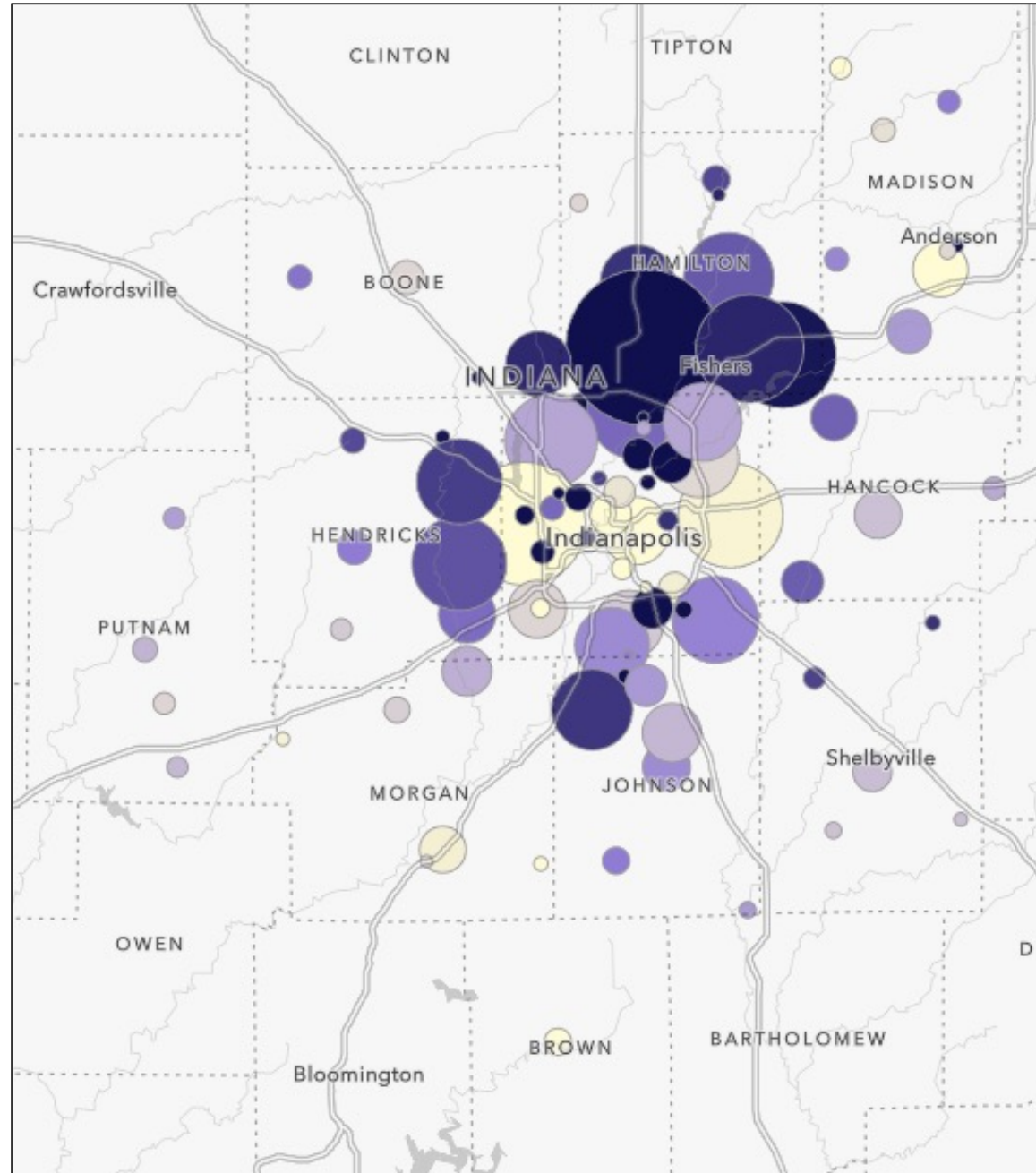


Declining College-Going in Central Indiana High Schools

There are 96 high schools in our 11-county metro area which met our criteria for inclusion in analysis

A link will be provided to the interactive map shown on the right at the end of the presentation

Source: Indiana Commission for Higher Education





Data Inclusion Criteria

How we decided which schools to include in our analysis

- Schools that serve traditional high school-going populations. This means that organizations like career centers, juvenile correctional facilities, and schools for students with unique circumstances (e.g. Indiana School for the Deaf) were excluded from the data set.
- Schools with at least 10 students in their graduating class in 2020. Class sizes smaller than this produce college-going rates that can skew overall averages and trends.
- **Schools that had valid data reported to the Commission on variables potentially related to college-going.** Not all schools reported data on every variable collected by the Commission. Some did not because of privacy concerns, others because of very small subpopulation numbers

What variables influence college



Linear Regression Model



Regression Model Variables & Process

- **Goal:** use statistical modelling techniques to measure the impact of several variables on college-going rates at Central Indiana High Schools
- **Candidate Variables:**
 - Advanced Placement Share
 - Honors Diploma Share
 - Race/Ethnicity
 - Free or Reduced-Price Lunch Share
 - 21st Century Scholars Share
 - Graduating Class Size





Regression Model Variables

Some variables may be correlated with one another, or may be duplicative, so not all were used in order to create a cleaner model

Honors Diploma Share

- Percentage of students who graduated with an honors diploma
- Measures academic achievement and access to accelerated academic programs

White Share

- Percentage of graduating students who identify their race as white
- Approximates racial diversity of student body

Free or Reduced-Price Lunch Share

- Percentage of graduating students who were enrolled in the Federal Free or Reduced-Price Lunch program for lower income students
- Proxy measure for student household income

21st Century Scholars Share

- Percentage of graduating students who were enrolled in the 21st Century Scholars program, which provides tuition to any public university upon meeting certain household income and academic performance thresholds
- Approximates financial assistance received by graduating class



Regression Model Results

The resulting impact of each variable in our model is shown on the right.

Variables are ordered by level of significance.

These four variables explained about 55% of the total variation in college-going rates between schools

***Honors Diploma Share – 99% Confidence**

- For every 10% increase in the share of graduating students with an honors diploma, the college-going rate *increases* 5%

***Free or Reduced-Price Lunch Share – 95% Confidence**

- For every 10% increase in the share of students on the free or reduced-price lunch program, the college going rate *decreases* 3%

White Share – 90% Confidence

- Not confident enough to make an estimate

21st Century Scholars Share - <90% Confidence

- Not confident enough to make an estimate

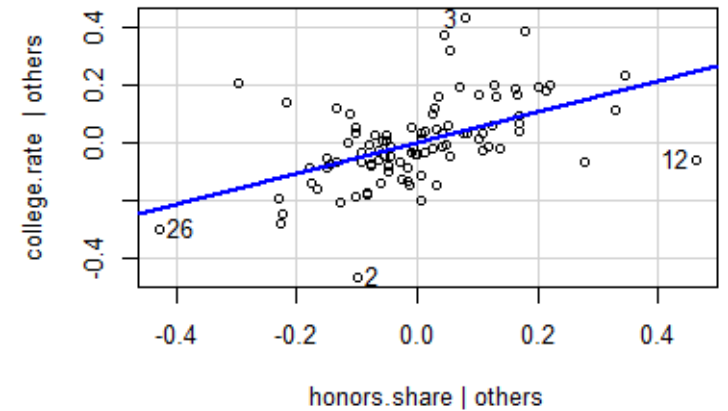
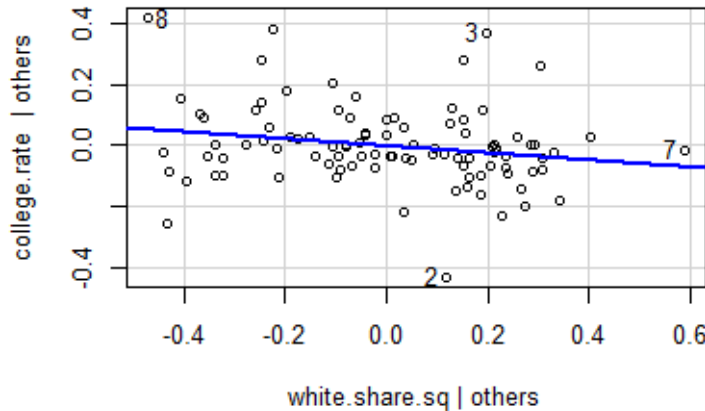
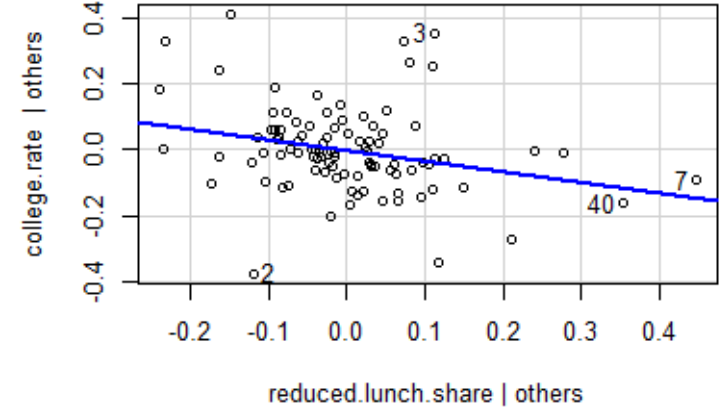
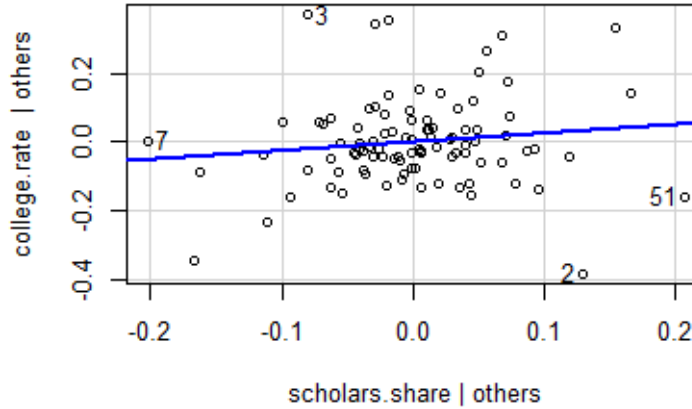


Regression Model Results

Each input variable is plotted against college-going rate to show its relationship

A steeper slope means a stronger impact; "Honors Share" clearly has the steepest slope

Added-Variable Plots





The share of students receiving an honors diploma had the most impact on college-going

Schools with the ten highest shares of students receiving honors diplomas, 2020

All schools at the top list for honors diplomas also had very high college-going rates

School	Share of students receiving honors diplomas, 2020	College-Going Rate, 2020
International Sch of IN HS	100%	68%
Ben Davis University High School	99%	77%
Bethesda Christian School	82%	76%
Brebeuf Jesuit Preparatory School	80%	86%
Guerin Catholic High School	74%	87%
Bishop Chatard High School	72%	89%
Greenwood Christian Academy High School	69%	92%
Zionsville Community High School	69%	72%
Roncalli High School	68%	87%
Brownsburg High School	68%	69%

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



The share of students on the Free or Reduced-Price Lunch Program also influenced college-going

Schools with the ten highest shares of students receiving free or reduced-price lunch, 2020

Some schools with high shares of reduced-price lunch students also have high college going rates. Still, many are low.

School	Share of students receiving free or reduced-price lunch	College-Going Rate, 2020
MTI School of Knowledge	100%	79%
Emmerich Manual High School	99%	21%
Providence Cristo Rey High School	95%	76%
IN Math & Science Academy - North	94%	52%
Indianapolis Metropolitan High Sch	73%	19%
Charles A Tindley Accelerated Sch	73%	85%
Decatur Twp School for Excellence (Decatur Discovery)	69%	7%
Arsenal Technical High School	69%	25%
Irvington Community School	68%	42%
Anderson High School	68%	27%

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



The share of white students did not have a significant effect on college enrollment

Ten schools with at least 65% white graduating class but below average college-going rate

There are many schools with overwhelmingly white student bodies in less economically fortunate areas—often rural areas

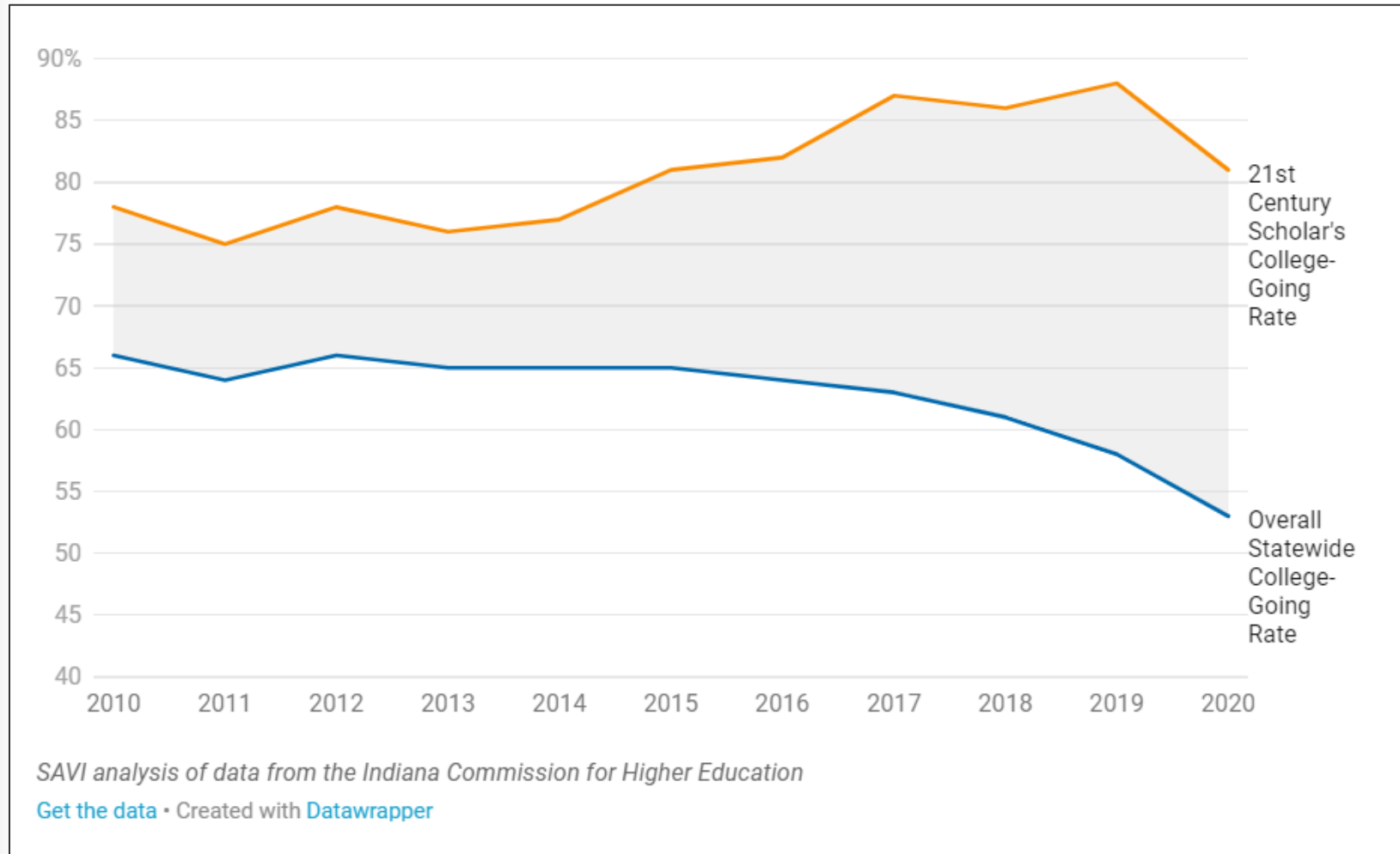
School	Share of graduating students who are white, 2020	College-Going Rate, 2020
Elwood Jr-Sr High School	90%	31%
Brown County High School	95%	38%
Eminence Jr-Sr High School	93%	41%
Martinsville High School	94%	42%
Beech Grove Sr High School	65%	42%
Frankton Jr-Sr High School	94%	44%
Lebanon Senior High School	93%	45%
Sheridan High School	92%	45%
Decatur Central High School	67%	45%
South Putnam High School	95%	45%

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datawrapper](#)



The share of students in 21st Century Scholars did not have a significant effect on college enrollment

This does *not* mean that 21st Century Scholars is an ineffective program, it simply shows the limitations of the model



Limitations of the Model

- This model estimates impact on college-going at the school level, not the individual level
- We do not have information on “why” students are choosing college less often; we only know the “what” and “who”



Potential Solutions

- 21st Century Scholars enrollment
- IndyAchieves
- Improving support services for high schoolers



Conclusions & Closing Thoughts

- In order to better understand these trends, future analysis could compare college-going rates at schools in metro areas like Indianapolis in other states
- We need better data on “why” students are making these choices
- This is a very complex problem that no one policy change will resolve





View the Interactive Map

Scan the code to the right to view the map of college-going rates at Central Indiana high schools



<http://bitly.ws/sSQY>



Activity Answers!

School	College-Going Rate, 2020
Charles A Tindley Accelerated Sch	85%
Zionsville Community High School	72%
Brownsburg High School	69%
Plainfield High School	61%
Pike High School	52%
Greenfield-Central High School	48%
Southport High School	47%
Lebanon Senior High School	45%
Elwood Jr-Sr High School	31%
Arsenal Technical High School	25%

Source: SAVI analysis of data from the Indiana Commission for Higher Education • [Get the data](#) • Created with [Datwrapper](#)

Thank you!



Any questions?

