Open Enrollment

and **Student Diversity**

in Ohio's Schools

By Deven Carlson
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About the author

Dr. Deven Carlson is an associate professor in political science at the University of Oklahoma. Carlson has worked on several projects, including analyses of neighborhood contributions to student academic outcomes, the Milwaukee Parental Choice (private school voucher) Program, and the effects of school closures. Carlson holds a doctorate in political science from the University of Wisconsin–Madison.

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■ Foreword

By Aaron Churchill and Chad L. Aldis

One of the most entrenched practices in K–12 education is the assignment of children to public schools based on their home addresses. On the plus side, this "zip code" method of assignment is a way to ensure that every student has one "home" district and school and, most of the time, has a school to attend that is relatively close to their own residence. Neighborhood schools also tend to be extremely popular with parents. On the other hand, these attendance zones have some worrisome side effects, especially for less advantaged students. They may be assigned to unsatisfactory schools. Sometimes they are assigned to schools that aren't actually closest to their homes. And then there is the concern of "fault lines," as the education-reform group EdBuild puts it: the boundaries that separate neighboring districts can result in segregation by race and/or socioeconomic status. That's the issue tackled in this study.

With mixed results, policymakers have tried for decades to promote school integration through various means, ranging from busing to magnet schools to district consolidation. Though not typically viewed as a desegregation initiative, interdistrict open enrollment is another potential avenue for integration as well as other desirable outcomes, such as access to more effective schools and teachers. Because it allows students to attend schools outside their home districts, open enrollment effectively erases district boundary lines. If more prosperous jurisdictions open their doors, then less advantaged children—from families that cannot afford housing there— would have opportunities to enroll, helping to create a more diverse student body.[1]

That's a big "if," of course, as much hinges on whether states and districts encourage—or even permit—such boundary crossing to occur. Although some states require districts to accept open enrollees—Arizona, Florida, and Minnesota being examples—Ohio follows a voluntary model whereby districts decide whether to welcome students outside their boundaries. Thankfully, about 80 percent of Ohio's 608 districts do indeed participate in open enrollment, enabling approximately 86,000 students in 2017 to cross district lines. Even though not all districts participate—an issue we'll come back to—the movement of this many students has the potential to improve the diversity of Ohio schools. But has it?

To examine this question, we engaged Dr. Deven Carlson of the University of Oklahoma, who previously coauthored a rigorous study on the academic impacts of open enrollment in the Buckeye State.[2] Relying on anonymous, student-level data from the Ohio Department of Education (ODE), he analyzed open enrollment's effects on the racial and socioeconomic makeup of school districts between 2012–13 and 2017–18. Because the data permit a determination of students' district of residence and attendance, segregation can be measured both with and without open enrollment. By examining the difference, one can calculate the impact of open enrollment. Carlson employs two commonly used measures of segregation, one that focuses on the "exposure" that one group has to another while the other considers the "evenness" of the distribution of student groups across school districts.

Four key findings need to be highlighted.

1. **Ohio school districts are highly segregated, more so than the national average.** The analysis confirms what many in Ohio likely sense: intentionally or not, the way school district borders have been drawn within the state has produced high levels of segregation, most acutely between black and white students. When examining the evenness of the distribution of students, Carlson finds that "a full 70 percent of black students would need to move in order to be evenly distributed across districts." According to research standards, this amounts to "very high levels of segregation," levels that also exceed the national average.[3] Segregation across Ohio districts is more moderate by socioeconomic background than by race, however.

2. **Statewide, interdistrict open enrollment does not result in significantly more (or less) integrated districts.** Under both measures that he utilized, Carlson's analysis finds that open enrollment has neither significantly improved nor worsened segregation across Ohio districts. In terms of black-white integration, the analysis finds virtually no change in segregation levels. For instance, 70 percent of black students would need to relocate to achieve an even distribution across districts. Had there been no open enrollment, 69.6 percent of black students would need to move—a miniscule difference. When examining integration by socioeconomic status, the impacts of open enrollment statewide are again extremely small to nonexistent.

3. **At the school level, open enrollment does not appear to substantially increase or decrease segregation.** Students, of course, interact with peers within individual schools, so the way in which open enrollment influences school-level diversity matters. Although data do not permit a direct examination of this question (students' assigned schools are not recorded in the state dataset), Carlson conducts simulations that estimate the impacts at the school level. These analyses suggest no appreciable effects: segregation by race and socioeconomic status across Ohio schools differ by less than one percentage point, with or without open enrollment.

4. **In metropolitan areas, interdistrict open enrollment has little effect on district-level integration.** Even when zeroing in on Ohio's more diverse suburban and urban districts, we still uncover only minor changes. According to the evenness measure, 62.6 percent of urban-suburban black students would need to relocate to achieve an even distribution, nearly the same percentage (62 percent) had there been no open enrollment. In similar vein, the effects of open enrollment on socioeconomic segregation are very small among the state's metropolitan districts.

These findings should help to alleviate some concerns that have arisen in recent years that open enrollment may be worsening segregation.[4] But the last finding is especially surprising, as one might expect open enrollment to play a greater role in shaping the composition of urban and suburban districts, given the sharp differences in the racial and socioeconomic composition

of student populations between such districts. But two stark on-the-ground realities in Ohio undoubtedly constrain open enrollment's potential to improve student diversity within metropolitan areas.

First, and most importantly, a large majority of suburban Ohio districts don't participate in open enrollment. The map on page 10, with its donut-shaped patterns in most metro areas, reveals the unsettling facts. Most of the wealthier suburbs surrounding cities such as Cleveland, Columbus, and Dayton refuse to accept nonresident students who live just across the border. These refusals not only represent missed opportunities for integration but also remove quality education options for low-income children and students of color.

Second, even in the rare instances when such districts open their doors, less advantaged students could face obstacles to exercising this choice. The most critical is likely transportation. Under state policy, neither the district of attendance nor the district of residence is obligated to transport open enrollees to school. Left on their own, low-income children are sure to have more difficulty securing reliable transportation. Indeed, this factor alone might explain a few idiosyncratic districts in which more advantaged students appear to disproportionately use open enrollment.

To address these challenges, state policymakers should consider two changes to strengthen Ohio's open enrollment program.

- **Require all school districts to participate in open enrollment, subject to available capacity.** We understand that there will be objections, whether rooted in complaints about local tax money being used to educate nonresident pupils or in unpleasant attitudes toward "those kids." But education is a state responsibility, and as public institutions, school districts should truly be open to all—even to students who live across municipal borders. Moreover, universal participation may also encourage more diverse schools, a goal that many Americans support. Most important, full district participation would enable more students to attend schools that meet their academic needs or extracurricular interests, go to class with their friends, and even attend the school—in some cases—that is nearest to their home. Given that enrollment is declining in many Ohio districts, including some suburban ones, they should have space to welcome newcomers.

- **Ensure that open enrollees have reliable transportation.** Ohio law generally ensures that students receive district-provided transportation when they attend district-operated, charter, and private schools within their home district. But open enrollees are currently left out. To address their transportation needs, the state could require the district closer to an open enrollee's home—either the district of residence or the district of attendance—to provide transportation. Alternatively, Ohio could ensure that the parents who transport open enrolling children receive reimbursement. State policy already permits districts in certain circumstances to provide "payment in lieu of transportation"; that law could be revised to make sure that open enrollees are covered, as well.

For three decades, Ohio's interdistrict open enrollment policy has made possible the educational choices exercised by tens of thousands of Buckeye students. The existing evidence indicates that students benefit from this form of public school choice, especially when used on a consistent, year-to-year basis. Can open enrollment also boost school diversity and reduce segregation? Possibly, yes. But we cannot know for sure, unless policymakers give it the chance to work for all Ohio children.

Acknowledgments

Executive summary

Does school choice ease or worsen segregation—or possibly make no difference? This question has drawn much attention in recent years from education reformers, policy makers, scholars, and the media. Ohio in particular has seen great interest in how, if at all, interdistrict open enrollment affects student diversity—both racial and socioeconomic—in the state's public schools. Skeptics claim that the program exacerbates segregation, allowing affluent, mostly white students to congregate in certain districts while leaving poorer and disproportionately minority students clustered in other ones. Open enrollment supporters argue that the program has no segregating effect and may even reduce segregation by providing students with access to school districts in areas where they cannot afford to live. Though there's been no shortage of rhetoric on these issues, actual evidence has been in very short supply. Indeed, until now, there's been no systematic analysis of how interdistrict choice affects student diversity in Ohio's schools.

This report presents such an analysis. It draws on annual, individual-level information about all students attending Ohio public schools between the 2012–13 and 2017–18 school years, data that are well suited to addressing the research question at hand. It analyzes them using multiple measures grounded in the two major conceptualizations of segregation: "exposure" and "evenness." Exposure is the average level of contact that one group has with a second group. Evenness looks at the proportion of a group that would need to relocate to a different district in order for that group to be evenly spread across all districts. The report presents the results of these measures in a manner that makes clear how Ohio's interdistrict choice program affects diversity levels across districts and schools in the state, if at all.

Several important findings emerge from the analysis:

- Black-white segregation levels across Ohio school districts are quite high. The average black student attends school in a district that is only 45 percent white. Given that Ohio's student population is more than 70 percent white, this indicates that black students are quite segregated from their white peers. The dissimilarity index—the gauge of evenness—indicates that a full 70 percent of black students would need to move in order to be evenly distributed across districts. As a point of comparison, in 2012, 61 percent of black students across the U.S. would have had to relocate to be evenly distributed across districts (Rivkin 2016), demonstrating that black-white dissimilarity in Ohio is substantially higher than in the nation as a whole.

- Eighty-one percent of Ohio school districts participate in interdistrict open enrollment, allowing approximately 86,000 students in 2017–18 to attend schools outside of their home district. However, 122 school districts, located predominately in the suburban areas around the state's largest cities, refuse to accept open enrollers. The map on page 10 displays the geographic pattern of district participation/nonparticipation in open enrollment.

- Open enrollment slightly increases black-white segregation across Ohio school districts, but the effect is not large enough to be meaningful from a policy standpoint. The exposure index shows us that in 2017–18, open enrollment decreased the share of white students in the average black student's district from 45.1 percent to 44.4 percent, a difference of less than one percentage point. Effects calculated using the dissimilarity index are even smaller.

- On the other hand, open enrollment has no effect at all on socioeconomic segregation. For example, in 2017–18, open enrollment reduced the exposure of economically disadvantaged students to their more advantaged peers by just one-tenth of a percentage point, from 32.6 to 32.5 percent. Dissimilarity index results are comparable, showing that open enrollment decreased the percentage of economically disadvantaged students who would need to relocate to achieve an even distribution across districts by just one-tenth of one percent, from 49.9 percent to 49.8 percent.

- Although open enrollment had no meaningful statewide effect on black-white or socioeconomic segregation, in a small number of districts, it significantly changed the racial or—especially—the socioeconomic composition of the student body. About 5.5 percent of districts saw open enrollment change the socioeconomic composition of their student body by at least five percentage points. Of these districts, interdistrict choice increased the population of economically disadvantaged students much more often than it reduced it. About 60 percent of these increases occurred in districts with economic disadvantage levels exceeding that of the average district in the state; the remaining 40 percent took place in more advantaged districts.

- Open enrollment affects socioeconomic segregation slightly differently in rural/small-town districts than in urban/suburban locales. The evidence indicates that interdistrict choice has little effect on socioeconomic segregation in urban/suburban districts but may slightly increase it in rural areas and small towns. All these effects are very small, however.

- Open enrollment produced a slight increase in black-white segregation in urban/suburban districts. For example, in these districts, open enrollment decreased the share of white students in the average black student's district from 42.9 percent to 42.1 percent in 2017–18. I do not analyze black-white segregation in rural/small-town districts because the population of black students is so small—only about 2 percent of enrollment—that any comparisons are meaningless. In rural and small-town Ohio, black students will attend overwhelmingly white districts regardless of any open-enrollment-driven changes.

- The analysis of the effect of open enrollment on school-level segregation produces conclusions in line with those emerging from the district-level analysis. Open enrollment produces a miniscule increase in black-white segregation and has no effect whatsoever on socioeconomic segregation. In neither case are the effects large enough to be either noticeable or meaningful from a policy standpoint.

Introduction

Each year, approximately 86,000 students in the Buckeye State use interdistrict open enrollment to attend a public school located outside of the district in which they live. More than 80 percent of Ohio school districts allow nonresident students to open enroll, providing educational options to students who might otherwise have few alternatives. By expanding the range of schooling options for the vast majority of Ohio students, interdistrict open enrollment has the potential to alter various aspects of the education landscape. One question on many minds is whether interdistrict open enrollment affects segregation levels—either racial/ethnic or socioeconomic—both across the state as a whole and in particular schools and districts. Open enrollment skeptics claim that it worsens segregation, allowing affluent, mostly white students to congregate in one set of districts while leaving poorer, disproportionately minority students clustered in a second set. Open enrollment supporters argue that the program has no segregating effect, at least not any that's significant, and that it could actually serve to reduce segregation by providing students with access to school districts where they cannot afford to live.

Yet very little information on these topics has actually been available. No previous study has systematically examined how Ohio's interdistrict choice program affects segregation levels in the state's public schools. Even nationally, the number of studies that assess how interdistrict open enrollment shapes segregation levels can be counted on one hand. And the major takeaway from those few studies is that the (de)segregating effects of interdistrict choice are context specific. For example, studies from Colorado indicate that the Rocky Mountain State's open enrollment program reduces racial and ethnic segregation across districts but slightly increases socioeconomic segregation (Carlson 2014; Holme and Richards 2009). Work from Phoenix suggests that interdistrict choice there had no meaningful effect on cross-district stratification (Powers, Topper, and Silver 2012). And a study of the Twin Cities concluded that open enrollment exacerbated racial and ethnic segregation in the metro area (Institute of Metropolitan Opportunity 2012).

Somewhat more analysis has been done on how other school choice programs—particularly charter schools—affect segregation levels, but those results just underscore the conclusion that the effects are context specific. For example, the Urban Institute recently released a report using data from all fifty states to examine how charter schools affected segregation levels. It found these effects, on average, to be quite small—eliminating all charter schools would only reduce segregation levels by about 5 percent (Monarrez, Kisida, and Chingos 2019). The real story, however, was just how much the segregating effects of charter schools varied across states. The results show that charter schools have large segregating effects in places such as Louisiana, New York, Oklahoma, New Mexico, and North Carolina. But in states such as Connecticut, Georgia, Florida, New Jersey, and Nevada, they have no segregating effects—and in some cases even have integrating effects.

Given the context-dependent nature of open enrollment's (de)segregating effects, attempting to gauge how it has worked in Ohio requires the proper data, appropriate analysis, and thoughtful interpretation. This report aims to do all three things. It draws on annual, individual-level data from all students attending Ohio public schools between 2012–13 and 2017–18—data that are

well suited for addressing the research questions at hand. It analyzes these data using multiple measures grounded in the two major conceptualizations of segregation, commonly termed exposure and evenness. And it interprets the results of these measures in a manner that makes clear how Ohio's interdistrict choice program affects student diversity (spoiler alert: not very much). In sum, this report brings rigorous evidence to bear on an important policy topic that, to date, had not been studied in the Ohio context.

How interdistrict open enrollment works in Ohio

States' policies in this realm take two primary forms—voluntary and mandatory. In the former case, each school district decides whether it will allow students from other districts to enroll. Mandatory programs, on the other hand, compel districts to accept student transfers from other districts, although state laws generally specify conditions that districts can use as a basis for refusing transfers. Enacted in 1989, Ohio has one of the oldest interdistrict open enrollment programs in the United States—the first one was enacted just one year earlier in Minnesota. Today, about 86,000 students across the Buckeye State use open enrollment to attend district-run schools outside their districts of residence.

Ohio's voluntary policy requires each district annually to decide whether to (1) refuse all interdistrict transfers, (2) allow transfers from any school district, or (3) allow transfers from adjacent districts only. In recent years, between 70 and 75 percent of districts have elected to accept students from any school district, while not quite 10 percent limit transfers to students from adjacent districts and 15–20 percent opt out of open enrollment altogether. Districts opting out may still enroll out-of-district students and charge them tuition, but few Ohio students cross district boundaries via tuition payments.[5]

Although districts can decline to accept open enrollment transfers, they generally cannot prevent students from exiting via open enrollment. The sole exception is a provision in state law allowing districts to prohibit transfers out if they would lead to racial imbalance. The constitutionality of this provision is unclear, however, given the United States Supreme Court decision in *Parents Involved in Community Schools v. Seattle School District No. 1*, which struck down school assignment policies that considered the race of individual students. Nevertheless, in recent years, at least one district has taken advantage of the fact that these provisions have not been subject to direct legal scrutiny and considered prohibiting outgoing transfers on the basis of potential racial imbalance.

Districts that elect to accept transfers from other districts via open enrollment must have clear and well-defined policies and procedures for doing so. In particular, they must set clear capacity limits by grade level, school building, and educational program. These limits effectively specify the maximum number of transfers the district will accept via open enrollment. In addition, district policies and procedures generally specify how applicants will be allocated across schools in the district. State policy provides districts with significant discretion on these issues. The statute does, however, prohibit districts from selecting students on the basis of academic, athletic, or artistic ability.

Four additional aspects of Ohio's interdistrict choice policies warrant mention. First, state law specifies that districts must first enroll all students who reside in the district before they consider accepting nonresident transfers. Second, the authorizing legislation allows participating districts to refuse transfers from students who were expelled or suspended for ten or more consecutive days in the previous school year; this is the only form of selectivity allowed under the program. Third, Ohio's interdistrict choice policies make clear that "sending" districts have no transportation obligations and "receiving" districts are only required to provide transportation

from an existing bus stop within the district. In effect, participating families must get their own kids to school. Finally, for each student enrolled via interdistrict choice, the receiving district receives the per-pupil state aid amount set by the General Assembly, which was $6,020 in 2018–19—dollars that are subtracted from the resident district. Receiving districts may also bill resident districts for special education services provided to students enrolled via interdistrict choice. Other than that, however, no additional dollars change hands under the program.

A 2017 report from the Fordham Institute provides further insight into the operations and outcomes of Ohio's interdistrict choice program (Carlson and Lavertu 2017). It showed that districts opting out of open enrollment are primarily located in the suburbs surrounding Ohio's "Big Eight" school districts—Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown. Districts that decline to accept open enrollers are generally among the more prosperous districts in the state. The map below provides a stark illustration of this pattern, making clear that districts opting out of open enrollment are located almost exclusively in the areas surrounding Ohio's eight largest urban areas. This pattern of district participation has important implications for the (de)segregating effects of open enrollment: the task of reducing segregation, either racial or socioeconomic, is made much more difficult by affluent white suburbs opting out of the program *en masse*.
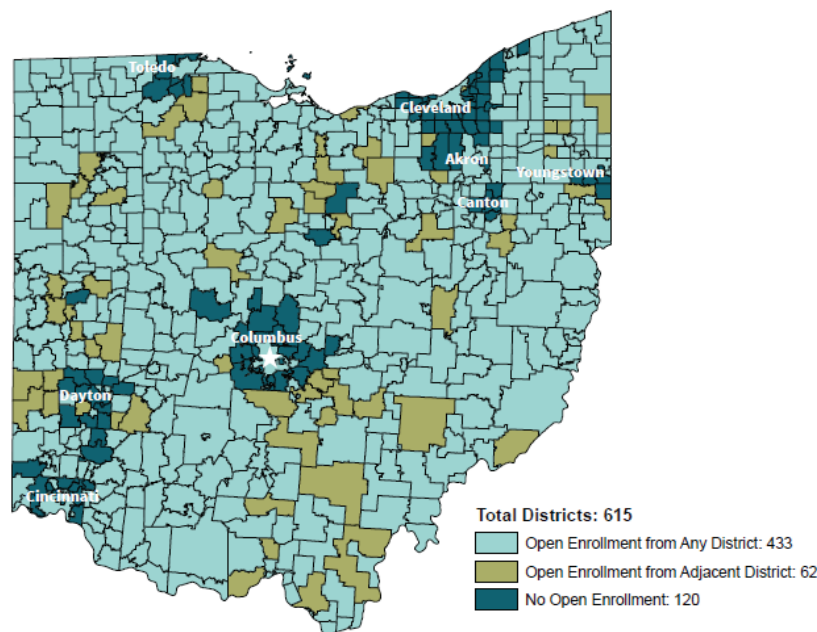
The 2017 analysis demonstrated that those students who use interdistrict open enrollment are relatively advantaged along both socioeconomic and achievement dimensions. With respect to race/ethnicity, it showed that, for the state as a whole, white students open enroll at disproportionately high rates, while black students are underrepresented among open enrollers. These disproportionalities disappear, however, when open enrollers are compared to nonparticipants in their district of residence, suggesting that the relatively low participation levels among black students statewide is primarily attributable to having fewer open enrollment

options—districts in areas with large black populations are much more likely to refuse to accept transfers via open enrollment. As noted above, these district participation patterns significantly limit the potential for open enrollment to reduce segregation.

Further, the report showed that students in general make use of open enrollment to transfer to districts that are higher achieving, more advantaged, and smaller than their districts of residence. And those students who open enrolled consistently—defined as open enrolling every year they were observed in the data—rack up significant achievement gains when compared to students who never open enroll. These gains are particularly large for black students and for those who transfer out of high-poverty urban districts such as the Big Eight.

Together, these insights provide important context and background for considering how Ohio's open enrollment might bear on segregation levels in the state. With respect to race/ethnicity, the fact that a nontrivial number of suburban districts do not accept open enrollment transfers—decisions that generate disproportionately low participation rates among black students—suggests that Ohio's open enrollment program may well not lead to meaningful reductions in segregation. At the same time, though, these dynamics indicate that open enrollment might not substantially increase segregation either. On the socioeconomic front, the disproportionate participation of advantaged students, coupled with the finding that students use open enrollment to transfer to more affluent and higher achieving districts, suggests that open enrollment could induce greater levels of socioeconomic stratification. In the following section, I describe my approach to empirically assessing these possibilities.

Measuring segregation in Ohio schools and districts

Segregation can be defined and measured in two very different ways, a key point that's often glossed over in education policy debates but that has important implications for understanding segregation levels and trends. First, we can think about segregation in terms of exposure—that is, the degree of contact that one group of students has with a second group in school. For example, we can think of black-white segregation in terms of the degree of interaction that black students have with their white peers. Alternatively, we can think about segregation in terms of evenness, which is the degree to which different groups are evenly distributed across a given set of units, such as school districts.

To illustrate how these different conceptualizations can lead to different conclusions about the extent of segregation, consider a hypothetical state that has only two equally sized school districts and only two racial groups: black and white. In the first district, 80 percent of students are white and 20 percent are black, whereas the in the second district 96 percent of students are white and only 4 percent are black. Thinking about black-white segregation from an exposure standpoint would result in a finding of relatively low segregation levels: across both districts, black students have significant exposure to their white peers. An evenness perspective, however, would lead to a very different conclusion: high segregation levels as black students are very unevenly distributed across the two districts (12 percent black enrollment across both districts would yield an even distribution, but neither district is anywhere close to that). It is important to highlight that neither conceptualization of segregation is inherently preferable. Each offers different information that, taken together, provide a more comprehensive understanding of the phenomenon than either one alone.

The hypothetical example above reveals the importance of clear thinking about segregation. It shows that the conclusions we draw can differ depending on how we conceptualize this issue, which is why it's important to present both. Of course, things get far more complicated when we move to the real world, where states have hundreds of districts and we are interested in more than two groups of students. To gauge segregation in more complex settings, scholars have developed high-quality measures that—separately for each conceptualization of segregation—produce a single statistic summarizing the segregation level across the relevant school districts in an easily interpretable manner. Moreover, because these measures are commonly used, we can benchmark the results of the measures against segregation levels in other areas.

For the exposure-based conceptualization of segregation—the degree of contact one group has with a second—this report relies on the exposure index.[6] The exposure index ranges from zero to one, with values near zero indicating high segregation levels and values near one indicating low levels. A more complete interpretation can perhaps be illustrated best with a quick hypothetical example. Assume we are measuring black-white segregation levels across Ohio school districts, and the exposure index returned a value of 0.7. This can be interpreted to mean that the average black student in Ohio attends school in a district where 70 percent of students are white. If, on the other hand, the exposure index returned a value of 0.1, it would indicate that the average black student attends school in a district where only 10 percent of students are white.

For the evenness-based conceptualization, this report relies on the dissimilarity index.[7] This measure indicates the proportion of a group that would need to relocate to a different district in order for that group to be evenly spread across all districts. Like the exposure index, the dissimilarity index ranges from zero to one. Unlike the exposure index, however, values near zero indicate low segregation levels, while values close to one indicate high levels. Again, a brief example illustrates this measure. Assume we are measuring black-white segregation levels across Ohio school districts, and the dissimilarity index produces a value of 0.9. This means that 90 percent of black students would need to relocate to a different district in order to achieve an even distribution across Ohio districts. If, on the other hand, the dissimilarity index had returned a value of 0.1, only 10 percent of black students would need to relocate to a different district— black students were already distributed across districts in a relatively even manner.

What do these measures tell us about segregation levels across Ohio districts in recent years? To find out, I exploit a rich dataset that contains annual information on every student attending Ohio public schools between 2012–13 and 2017–18. The dataset contains important demographic characteristics, such as race/ethnicity, an indicator of economic disadvantage, English-language-learner status, and a flag indicating disability status. With respect to enrollment information, the dataset contains students' grade, as well as identifiers for the school they attended and the district operating that school. And, for open enrollers, the dataset contains an identifier of students' district of residence.

Before diving deeper, it's helpful to have a baseline for understanding segregation levels in Ohio. As a first step in providing such a baseline, I use the statewide data described above to depict the racial/ethnic and socioeconomic composition of Ohio students educated in traditional public school districts (see table 1). With respect to race/ethnicity, the table shows that the percentage of white students declined from 75 percent in 2012–13 to just less than 72 percent in 2017–18. This decline was offset by increases in Hispanic students and students of other races/ethnicities. The percentage of black students held steady at almost 15 percent of Ohio public school students. With respect to socioeconomic status, table 1 shows that the percentage of students considered economically disadvantaged increased from less than 47 percent in 2012–13 to more than 50 percent in 2017–18. Together, table 1 depicts an Ohio student body that remains overwhelmingly white but is slowly diversifying. Additionally, the table makes clear that the economic disadvantage of Ohio's public school population has grown over time. A portion of this growth in economic disadvantage is undoubtedly attributable to the Community Eligibility Provision (CEP) of the free- and reduced-price lunch program, which provides participating school districts with full reimbursement for all meals served to students attending a school with at least 62.5 percent of students eligible for free or reduced-price lunch. Participating districts are eligible to receive partial reimbursement if a school has at least 40 percent of students eligible for subsidized meals. This results in all students an eligible school being classified as economically disadvantaged, regardless of each individual student's economic standing. Therefore, as the number of schools taking advantage of CEP grows, the number of students classified as economically disadvantaged increases. And although this is a clear limitation to measuring the economic disadvantage of Ohio's student population, the measure employed in this report remains the best available.

Table 1. Racial/ethnic and socioeconomic composition of public, noncharter school students in Ohio, by year

Year	Race/ethnicity				Socioeconomic status	
	White	Black	Hispanic	Other race/ ethnicity	Economic disadvantage	No economic disadvantage
2012–13	75.0%	14.2%	4.4%	6.5%	46.6%	53.4%
2013–14	74.4%	14.2%	4.7%	6.7%	47.6%	52.4%
2014–15	73.7%	14.3%	5.0%	7.0%	49.2%	50.8%
2015–16	73.0%	14.5%	5.3%	7.3%	49.4%	50.6%
2016–17	72.3%	14.6%	5.5%	7.6%	50.5%	49.5%
2017–18	71.6%	14.7%	5.8%	7.8%	50.2%	49.8%

Source: Author calculations from ODE data.

As a further baseline for understanding segregation levels in Ohio, I apply the two measures outlined earlier—the exposure and dissimilarity indices—to calculate both racial and socioeconomic segregation levels across all Ohio school districts for each year from 2012–13 to 2017–18. Specifically, I calculate black-white segregation and economically disadvantaged-nondisadvantaged segregation. The focus on black-white segregation provides insight into segregation levels among the state's two largest racial groups and mirrors the focus of prior studies. Importantly, this analysis calculates segregation levels based on the district where students attend school and excludes the approximately 100,000 students who attend charter schools. The decision to exclude charter schools is driven by the fact that, in Ohio, each charter school is considered its own district, and including them in the analysis would result in something of an apples-to-oranges comparison, as it would intermix single schools with entire districts. Thus, the results that follow should be interpreted as cross-district segregation levels among students attending school in traditional Ohio public school districts.

Table 2 displays the results of this analysis. The left-hand panel presents results from the exposure index for black-white segregation (column 1) and socioeconomic segregation (column 2), while the right-hand panel presents dissimilarity-index results for the same two comparisons. Both measures reveal black-white segregation to be remarkably consistent across all six years that I examined. The exposure index indicates that the average black student attends a district that is about 45 percent white. Given that Ohio's student population is more than 70 percent white, a value of 0.45 indicates that black students are generally quite segregated from their white peers. The dissimilarity index reinforces this interpretation, indicating that a full 70 percent of black students would need to move in order to be evenly distributed across districts. To provide some context to this result, a common rule of thumb states that dissimilarity-index values above 0.6 indicate very high levels of segregation (Massey and Denton 1993). As a further point of comparison, Rivkin (2016) calculated the black-white dissimilarity index across all U.S. districts to be 0.61 in 2012, again indicating that black-white dissimilarity in Ohio is substantially higher than in the nation as a whole.

The results in table 2 portray quite a different picture of socioeconomic segregation in Ohio. Results from the exposure index indicate that in 2012–13, the average economically disadvantaged student attended a district with about 40 percent of students classified as not

being economically disadvantaged. By 2017–18, however, that number had declined to less than 33 percent, indicating that the average economically disadvantaged student was exposed to fewer higher-income students than in 2012–13. In principle, there could be two different explanations for this decline in the exposure index. First, and perhaps most obviously, it could be driven by higher-income families simply becoming less likely to attend schools in the same districts as low-income families—a standard assumption when segregation increases. Second, because the exposure index is sensitive to compositional changes, it is possible that the decline could be attributable to the growth in the percentage of economically disadvantaged students, a pattern illustrated by table 1 and at least partially due to increased CEP participation. Put differently, the decline in the exposure index could simply be a product of fewer higher-income students to whom economically disadvantaged students could be exposed.

The dissimilarity index, which is less sensitive to compositional changes, can help adjudicate between these two explanations. These results show a stark increase in socioeconomic dissimilarity over the six-year period. In 2012–13, about 41 percent of economically disadvantaged students would need to relocate to achieve an even distribution across districts. By 2017–18, that number had risen to nearly 50 percent, an increase of nine percentage points in just six years. Given the dissimilarity index's relative insensitivity to compositional changes, these results indicate that students from low- and high-income Ohio families are increasingly unlikely to attend school in the same district as one another. Again, though, some portion of the increase in socioeconomic stratification is undoubtedly attributable to increased CEP participation.

Table 2. Segregation levels across Ohio school districts, by year

	Exposure index		Dissimilarity index	
Year	Black-white	Econ disadv.–no econ disadv.	Black-white	Econ disadv.–no econ disadv.
2012–13	0.452	0.402	0.700	0.411
2013–14	0.452	0.386	0.700	0.426
2014–15	0.450	0.358	0.700	0.449
2015–16	0.448	0.349	0.700	0.461
2016–17	0.446	0.329	0.700	0.486
2017–18	0.444	0.325	0.700	0.498

Source: Author calculations are from ODE data. **Note**: The exposure index ranges from zero to one, with values closer to one corresponding to lower segregation levels. The dissimilarity index ranges from zero to one, with values closer to one corresponding to higher segregation levels.

Table 2 paints a reasonably clear statewide picture of segregation in Ohio. For black-white segregation, it shows that levels are extremely high but have remained constant at that high level. Socioeconomic segregation, on the other hand, is at a more moderate level but has starkly increased over the six-year study period. Together, these results provide a thorough understanding of both black-white and socioeconomic segregation in Ohio. In doing so, they set the stage for analyzing the role, if any, that interdistrict open enrollment plays in shaping segregation levels across the Buckeye State.

Interdistrict open enrollment and segregation in Ohio

The ability to analyze the impact of open enrollment on student diversity across districts stems from the fact that, for students who open enroll, ODE maintains records of not only the district where a student attends school but also the district where they reside. This allows for calculation of cross-district segregation under two scenarios: (1) students' district of attendance and (2) a hypothetical situation wherein all students attend school in the district where they live. The results presented in table 2 are calculated under the first scenario. I present segregation levels calculated under the second scenario below, and the difference between the two scenarios sheds light on the question of how interdistrict open enrollment affects cross-district diversity levels in Ohio.

Table 3. District and student participation in Ohio's interdistrict open enrollment program

| | Districts | | | | | | Open enrolling Students | |
| Year | Accept open enrollers from any district | | Accept open enrollers from adjacent districts | | Do not accept open enrollers | | | |
	Number	Percent of Ohio school districts	Number	Percent of Ohio school districts	Number	Percent of Ohio school districts	Number	Percent of Ohio public school students
2012–13	404	65.9%	70	11.4%	139	22.7%	70,544	3.8%
2013–14	432	70.5%	63	10.3%	118	19.2%	75,464	4.1%
2014–15	441	71.9%	57	9.3%	115	18.8%	80,609	4.3%
2015–16	449	73.0%	50	8.1%	116	18.9%	82,141	4.4%
2016–17	482	73.9%	53	8.1%	117	17.9%	84,585	4.6%
2017–18	476	72.8%	56	8.6%	122	18.7%	86,484	4.7%

Source: ODE. **Note**: Beginning with the 2016–17 school year, Joint Vocational School Districts (JVSD) were required to report their open enrollment status to ODE. Reporting was optional prior to that year, and JVSDs are not included in the calculations for the 2012–13 through 2015–16 school years. The final column presents open enrolling students as a percent of all Ohio public school students, including those enrolled in charter schools. Charter school students are not counted as open enrolling students.

Table 3 conveys information about the size and scope of Ohio's interdistrict choice program, both in terms of district and student participation. Regarding district participation, it shows that the number of districts accepting open enrollers from anywhere in the state rose steadily over the six-year study period, with a corresponding decline in districts that only accept open enrollment transfers from adjacent districts. The number of districts that opt out of open enrollment entirely exhibited a noticeable decline from 2012–13 to 2013–14 but has held steady ever since. The right-hand panel of table 3 demonstrates slow but steady growth in the number of students choosing to open enroll. Considered as a whole, table 3 paints a picture of a growing number of districts opening their doors via open enrollment and an increasing number of students taking advantage of that option.

Against this backdrop, table 4 presents results for the exposure index—the measure aligning with a contact-oriented conceptualization of segregation—for Ohio students enrolled in traditional public school districts; it excludes charter schools. The table presents results for each of the two scenarios described above, one that uses the district where students actually attend school versus a second, hypothetical scenario where every student attends school in the district where they live. This allows for a direct comparison of segregation levels in a world with and without open enrollment; this comparison is presented in the "difference" columns of table 4. The difference can be considered the effect of open enrollment on segregation, with positive values indicating that open enrollment increases segregation and negative values indicating that interdistrict choice reduces segregation.

Table 4. Exposure-index calculations for students' districts of residence and districts of attendance

Year	Black-white			Poor–not poor		
	District of residence (no OE)	District of attendance (with OE)	Difference (effect of OE)	District of residence (no OE)	District of attendance (with OE)	Difference (effect of OE)
2012–13	0.458	0.452	0.006	0.404	0.402	0.002
2013–14	0.457	0.452	0.005	0.388	0.386	0.002
2014–15	0.455	0.450	0.005	0.360	0.358	0.002
2015–16	0.454	0.448	0.006	0.351	0.349	0.002
2016–17	0.453	0.446	0.007	0.330	0.329	0.001
2017–18	0.451	0.444	0.007	0.326	0.325	0.001

Source: Author calculations are from ODE data. **Note**: Results in the difference columns can be considered the effect of open enrollment on segregation, with positive values indicating that open enrollment increases segregation and negative values indicating that interdistrict choice reduces segregation. Results in the district of attendance columns are identical to the results in table 2 but are presented again to facilitate interpretation of the effect of open enrollment.

For black-white segregation, the results in table 4 suggest that open enrollment slightly increases segregation levels. However, the magnitude is less than one percentage point in each of the six years I analyze. For example, in 2017–18 the average black student attended school in a district where 44.4 percent of students were white. Had there been no open enrollment, the average black student would have attended school in a district that was 45.1 percent white, a number that is slightly higher but substantively indistinguishable. Overall, table 4 suggests that interdistrict open enrollment results in the average black student being exposed to a slightly lower number of white students, but the magnitude of the difference is not large enough to be meaningful from a policy standpoint.

With respect to socioeconomic status, table 4 shows that open enrollment does not substantially change segregation levels. Whether I calculate segregation levels according to students' district of attendance or their district of residence, all calculations are within two-tenths of a point of one another. Such results make clear that interdistrict open enrollment did not significantly increase or decrease socioeconomic segregation—at least conceptualized as exposure—in Ohio over the years I studied.

Whereas table 4 presents statewide results on the role that open enrollment plays in shaping an exposure-based conceptualization of segregation, table 5 presents analogous results for the dissimilarity index, which provides information aligning with an evenness-based conceptualization. For black-white segregation, table 5 illustrates that open enrollment does not substantially affect the proportion of black students that would need to relocate to achieve an even distribution across districts. For example, in 2017–18, the dissimilarity index for the "with open enrollment" scenario indicates that 70 percent of black students would need to relocate in order to achieve an even distribution across districts. The analogous number for the "without open enrollment" scenario is a nearly indistinguishable 69.6 percent, indicating that interdistrict choice has only a trivial impact on the evenness with which black and white students are spread across Ohio districts.

For socioeconomic segregation, the differences between dissimilarity-index calculations across the two scenarios are similarly small, two-tenths of a percentage point or less in each of the six years. To illustrate, in 2017–18 the results indicate that open enrollment decreased the share of economically disadvantaged students that would need to be relocated to achieve an even distribution across districts from 49.9 percent to 49.8 percent. Still, the main takeaway from tables 4 and 5 is that interdistrict open enrollment does not substantially shape either black-white or socioeconomic segregation—conceptualized as either exposure or evenness—across Ohio districts over the six-year study period.

Table 5. Dissimilarity-index calculations for students' districts of residence and districts of attendance

Year	Black-white			Poor–not Poor		
	District of residence (no OE)	District of attendance (with OE)	Difference	District of residence (no OE)	District of attendance (with OE)	Difference
2012–13	0.697	0.700	0.003	0.409	0.411	0.002
2013–14	0.698	0.700	0.002	0.424	0.426	0.002
2014–15	0.697	0.700	0.003	0.448	0.449	0.001
2015–16	0.696	0.700	0.004	0.460	0.461	0.001
2016–17	0.696	0.700	0.004	0.487	0.486	−0.001
2017–18	0.696	0.700	0.004	0.499	0.498	−0.001

Source: Author calculations are from ODE data. **Note**: Results in the difference columns can be considered the effect of open enrollment on segregation, with positive values indicating that open enrollment increases segregation and negative values indicating that interdistrict choice reduces segregation. Results in the district of attendance columns are identical to the results in table 2 but are presented again to facilitate interpretation of the effect of open enrollment.

Open enrollment in Ohio's urban and nonurban areas

Ohio has considerable geographic diversity, including large urban districts—we typically think of Ohio's Big Eight—and their attendant suburbs, as well as many rural and small-town districts. And the state's urban and suburban districts significantly differ from their more rural counterparts. For example, black students account for more than 20 percent of enrollment in the state's urban and suburban districts but only about 2 percent of the enrollment in Ohio's rural and small-town districts. Correspondingly, white students make up about 60 percent of enrollment in cities and suburbs but a whopping 91 percent of enrollment in rural areas and small towns. The racial compositions of these two sets of districts remained quite stable across the six years I studied.

Both urban/suburban and rural/small town districts have about half of their students classified as economically disadvantaged. Both also saw steady growth in the proportion of economically disadvantaged students from 2012–13 to 2017–18 and a corresponding decline in their nondisadvantaged peers.

Given the racial differences between rural districts and their more urban counterparts, interdistrict open enrollment may shape segregation levels—particularly black-white levels—differently across these two sets of districts. More specifically, it seems possible that interdistrict choice would have a much greater effect on black-white segregation in urban and suburban areas than in rural areas or small towns. It is less clear whether open enrollment would affect socioeconomic diversity differently.

To examine whether open enrollment has differential effects by urbanicity, I present exposure- and dissimilarity-index results separately for urban/suburban and rural/small-town districts, as classified by ODE's typology.[8] Table 6 presents those calculations for black-white and socioeconomic segregation in urban and suburban districts, and table 7 does the same for rural and small-town districts. For the latter districts, I only present results for socioeconomic stratification, as the population of black students is so small in these districts—only about 2 percent of enrollment—that any comparisons are substantively meaningless. Black students will attend overwhelmingly white districts regardless of any open-enrollment-driven changes.

The first three columns in the top panel of table 6 show that in urban and suburban districts, open enrollment led to a slight decline in black-white exposure in each of the six years I studied. For example, in 2017–18, the black-white exposure index indicated that the average black student attended school in a district that was 42.1 percent white. Without open enrollment, this number would have risen to a slightly higher 42.9 percent. The dissimilarity-index calculations presented in the bottom panel of table 6 are broadly comparable, indicating that open enrollment increases black-white dissimilarity by about half a percentage point. For example, in 2017–18 that index indicates that open enrollment increased the share of black students who would need to relocate to another district to achieve an even distribution from 62.0 percent to 62.6 percent. Overall, this suggests that open enrollment leads to a slight increase in black-white segregation across urban and suburban districts, though the magnitude of the difference is quite small.

Table 6. Exposure- and dissimilarity-index calculations for students' districts of residence and districts of attendance: urban and suburban districts

Year	Black-white			Poor–not poor		
	District of residence (no OE)	District of attendance (with OE)	Difference (effect of OE)	District of residence (no OE)	District of attendance (with OE)	Difference (effect of OE)
	Exposure index					
2012–13	0.435	0.429	0.006	0.348	0.346	0.002
2013–14	0.435	0.429	0.006	0.331	0.329	0.002
2014–15	0.433	0.426	0.007	0.302	0.299	0.003
2015–16	0.432	0.425	0.007	0.292	0.290	0.002
2016–17	0.431	0.423	0.008	0.266	0.265	0.001
2017–18	0.429	0.421	0.008	0.269	0.269	0.000
	Dissimilarity index					
2012–13	0.630	0.634	0.004	0.525	0.527	0.002
2013–14	0.629	0.634	0.005	0.540	0.542	0.002
2014–15	0.627	0.632	0.005	0.564	0.566	0.002
2015–16	0.624	0.629	0.005	0.574	0.576	0.002
2016–17	0.622	0.627	0.005	0.611	0.610	−0.001
2017–18	0.620	0.626	0.006	0.610	0.610	0.000

Source: Author calculations are from ODE data. **Note**: Results in the difference columns can be considered the effect of open enrollment on segregation, with positive values indicating that open enrollment increases segregation and negative values indicating that interdistrict choice reduces segregation.

The fourth, fifth, and sixth columns in the top panel show that open enrollment has no substantial effect on the exposure of economically disadvantaged students to their more affluent peers—all differences are three-tenths of a percentage point or less. The dissimilarity calculations (bottom panel) tell a similar story, revealing open enrollment to have no meaningful effect on socioeconomic segregation. In the 2017–18 school year, for example, 61.0 percent of economically disadvantaged students would have needed to move to achieve an even spread across districts, regardless of whether or not there was open enrollment.

Table 7. Exposure- and dissimilarity-index calculations for students' districts of residence and districts of attendance: rural and small-town districts

Year	Poor–not poor		
	District of residence (no OE)	District of attendance (with OE)	Difference
	Exposure index		
2012–13	0.491	0.488	0.003
2013–14	0.478	0.474	0.004
2014–15	0.455	0.451	0.004
2015–16	0.450	0.445	0.005
2016–17	0.442	0.437	0.005
2017–18	0.424	0.420	0.004
	Dissimilarity index		
2012–13	0.226	0.231	0.005
2013–14	0.241	0.246	0.005
2014–15	0.263	0.266	0.003
2015–16	0.274	0.278	0.004
2016–17	0.283	0.285	0.002
2017–18	0.314	0.316	0.002

Source: Author calculations are from ODE data.

Table 7 shows how open enrollment affects socioeconomic diversity in rural and small-town districts. The top panel suggests that it reduced the exposure of economically disadvantaged students to their more advantaged peers by about half a percentage point in each of the six years I studied. For example, in 2017–18 the average economically disadvantaged student attended school in a district where 42 percent of students did not carry that classification. Without open enrollment, that number would have been a slightly higher 42.4 percent. Dissimilarity-index results are broadly similar, particularly in the early years, when open enrollment increased dissimilarity by about half a percentage point. In recent years, though, open enrollment appears to have had virtually no effect at all on socioeconomic dissimilarity.

Taken together, the results in tables 6 and 7 indicate that open enrollment affects economic segregation levels only slightly differently in rural and small-town districts versus urban and suburban locales. It has no effect in urban and suburban districts but may slightly increase it in rural areas and small towns. As for black-white segregation, the results provide consistent evidence that open enrollment increases segregation by about half a percentage point in urban and suburban areas (to repeat, I did not examine the effects in rural areas and small towns because these areas are all overwhelmingly white).

A closer look at the effects of open enrollment across districts

Although interdistrict open enrollment did not substantially change overall diversity levels across Ohio school districts, it could make more of a difference in particular districts. To explore this possibility, I perform an analysis where, for each district in the state, I calculate the racial and socioeconomic composition with and without open enrollment in the 2017–18 school year. In particular, I calculate the percentage of white students, the percentage of black students, and the percentage of economically disadvantaged students under the two scenarios; I also calculate the differences between the two scenarios for each of these three demographic characteristics. I present the results of these calculations for each district in tables A1 (racial composition) and A2 (socioeconomic composition) in the appendix and summarize them with the histograms shown in figures 1 and 2 below.

Figures 1a and 1b makes clear that the vast majority of districts experienced little change in their racial composition as a result of open enrollment. Figure 1a shows that more than 95 percent of Ohio districts saw open enrollment generate less than a three-percentage-point change in the percentage of white students. However, there are twenty districts where this form of choice decreased the percentage of white students by more than three percentage points; in only one district did open enrollment increase the white student population by more than three percentage points. In general, the districts that saw substantial declines in the percentage of white students were less white (57 percent, on average) than the typical district in the state (85 percent white, on average).

Figure 1b shows that, for the vast majority of Ohio districts, open enrollment has very little effect on the percentage of black students enrolled in the district. Indeed, open enrollment changed black students' representation by less than two percentage points in more than 95 percent of districts. Again, however, there was a small number of districts where open enrollment did lead to noticeable changes in the percentage of black students. There were nine districts where open enrollment increased the share of black students by more than three percentage points, compared to only one that had at least a three-percentage-point decline. Unsurprisingly, those are mostly the same districts that saw large declines in the percentage of white students. That is, the districts where open enrollment increased the share of black students by at least three percentage points served larger shares of black students and smaller shares of white students, compared to the average Ohio district (see the appendix for a table listing the open-enrollment-induced changes in each district).

Figure 1a. Distribution of Change in Percentage of White Students Due to Open Enrollment
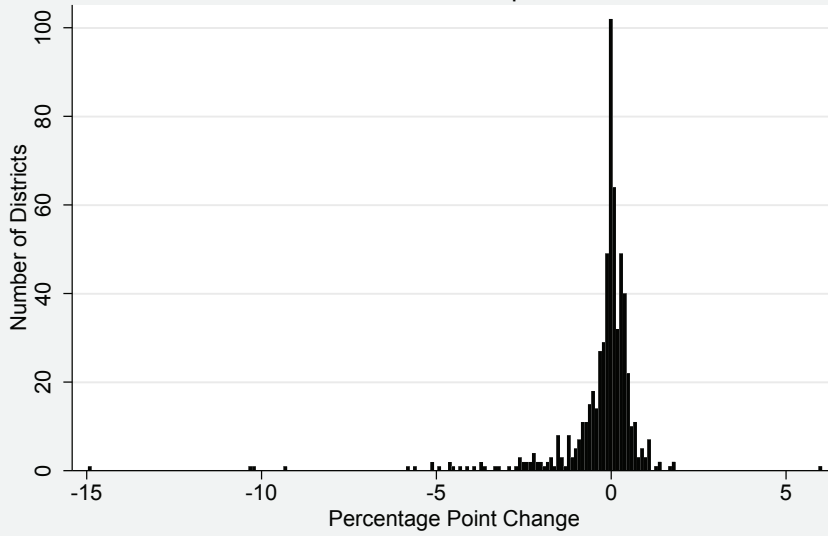
Figure 1b. Distribution of Change in Percentage of Black Students Due to Open Enrollment
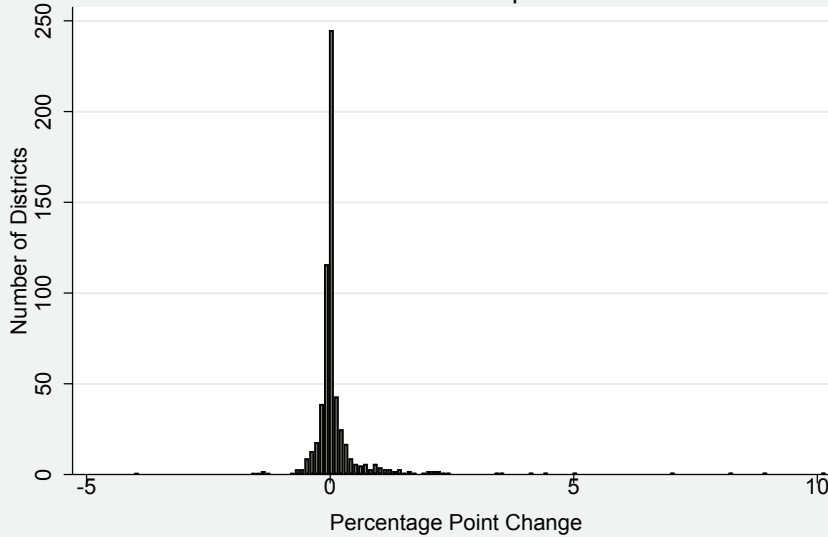
Figure 2 illustrates how open enrollment shaped the socioeconomic composition of Ohio districts in the 2017–18 school year. It shows that, compared to changes in racial composition, interdistrict choice was somewhat more likely to lead to noticeable changes in a district's socioeconomic composition. About 16 percent of districts saw open enrollment change their economically disadvantaged student population by at least three percentage points (in either direction), and about 6 percent of districts underwent a change of at least five percentage points. Of the districts that experienced substantial changes, interdistrict choice increased the population of economically disadvantaged students more often than it reduced it.

Figure 2. Distribution of Change in Percentage of Economically Disadvantaged Students Due to Open Enrollment
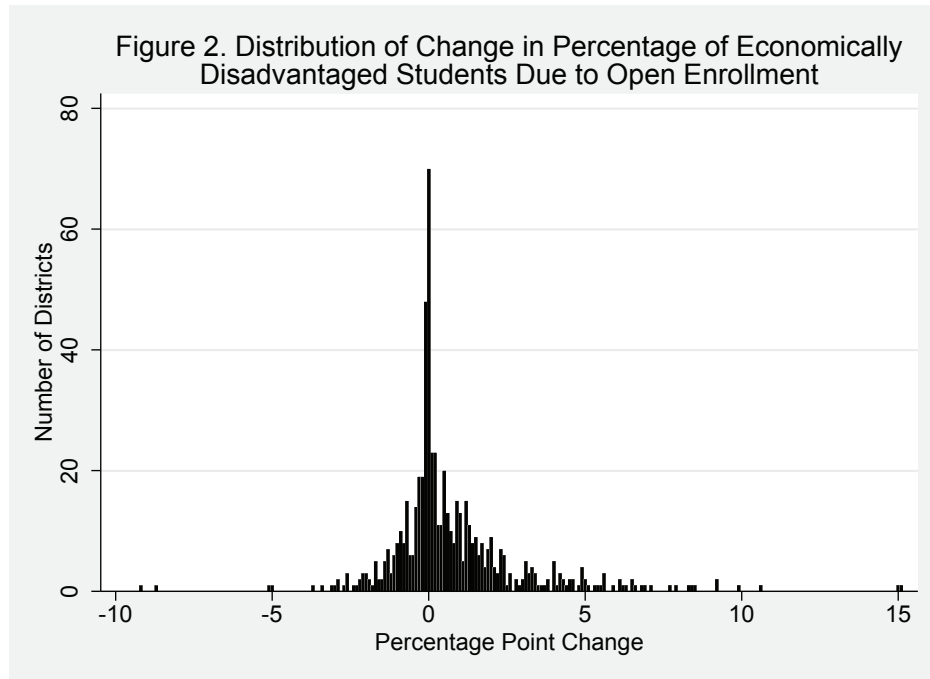
School-level segregation

To this point, we've focused on the role that interdistrict open enrollment plays in shaping segregation at a school-district level. After all, Ohio's interdistrict open enrollment program is designed and administered at the district level. At the end of the day, though, students attend particular schools, not districts. Thus, we are also interested in how interdistrict choice affects school-level diversity, as schools are the unit that matters most for students' day-to-day experiences. Unfortunately, no data exist that record the particular school a student would have attended had they enrolled in their district of residence. This prevents us from directly comparing segregation levels calculated across the schools that students actually attend to the levels that would have resulted if all students attended school in their districts of residence.

Still, I can perform an analysis that provides us with the range of possible levels, as well as the most likely level. The exercise, commonly referred to as Monte Carlo simulation, includes the following steps. First, for a given school year, I randomly assign each open enroller to a school they could have plausibly attended in their district of residence, where I define a plausible school as one that serves the student's grade level. For instance, this rules out the possibility that a third-grade open enroller would have attended a high school in her district of residence. Second, I calculate the cross-school segregation level under that scenario. Third, I repeat this process many more times; I perform this process one thousand times in the analyses that follow. Fourth, I use the resulting set of calculations to get a sense of the minimum possible segregation level, the maximum possible level, and the most likely level that would have resulted from all students attending their resident district in the absence of open enrollment.

The top three rows of table 8 present exposure- and dissimilarity-index calculations for black-white and socioeconomic stratification. Due to the computational demands required to perform the process described above, the table presents results for one year, the 2017–18 school year. However, the remarkable consistency in results across years in the district-level analyses make clear that the school-level results for any of the other five years are unlikely to substantially differ.

Table 8 offers four main takeaways. First, the top three rows make clear that the minimum, maximum, and most likely segregation levels resulting from students attending school in their resident district fall within a narrow range. Across all four calculations, the minimum and maximum possible levels are less than one percentage point apart. Second, the table shows that open enrollment decreases the black-white exposure index calculated at the school level about one percentage point: the average black student attended a school that was 39.6 percent white but without open enrollment would have likely attended a school that was 40.5 percent white. Third, the table makes clear that open enrollment neither increases nor decreases the exposure that the average economically disadvantaged student has to more advantaged peers. Fourth, dissimilarity-index calculations—the measure aligning with the evenness conceptualization of segregation—reveal that open enrollment increases black-white dissimilarity by a substantively small 0.4 percentage points. Overall, this analysis produces conclusions that are remarkably similar to those emerging from the district-level analysis: open enrollment produces a miniscule increase in black-white segregation and has no effect on socioeconomic stratification levels.

Table 8. Exposure- and dissimilarity-index calculations for students' schools of attendance and plausible schools of attendance in their resident districts: 2017–18 school year

	Exposure index		Dissimilarity index	
	Black-white	**Poor–not poor**	**Black-white**	**Poor–not poor**
School in resident district–minimum possible level	0.4049	0.3102	0.7075	0.5212
School in resident district–maximum possible level	0.4054	0.3103	0.7078	0.5216
School in resident district–most likely level	0.4052	0.3102	0.7076	0.5214
School of attendance–actual observed level	0.3960	0.3089	0.7116	0.5214
Difference between school of attendance and				
school in resident district–minimum possible level	0.0089	0.0013	0.0041	0.0002
school in resident district–maximum possible level	0.0094	0.0014	0.0038	−0.0002
school in resident district–most likely level	0.0092	0.0013	0.0040	0.0000

Source: Author calculations are from ODE data.

Conclusions and policy implications

By allowing Ohio students to attend schools in districts other than the ones in which they live, interdistrict open enrollment has the potential to change the racial and socioeconomic composition of schools across the state. Open enrollment skeptics claim that the program exacerbates segregation, allowing affluent, mostly white students to congregate in one set of districts while leaving poorer, disproportionately minority students clustered in a second set. Open enrollment supporters contend that the program doesn't have any substantial segregating effect or could actually serve to reduce stratification by providing students with access to school districts in which they cannot afford to live. In theory, either of these arguments could be accurate—open enrollment could either increase or decrease segregation, depending upon conditions on the ground.

This report brings data to the debate. What do they tell us about open enrollment and student diversity in the Buckeye State? I highlight the main takeaways.

First, open enrollment slightly increases black-white segregation across Ohio school districts, but the magnitude of the effect is not large enough to be policy relevant. For example, the exposure index shows us that in 2017–18, open enrollment decreased the share of white students in the average black student's district from 45.1 percent to 44.4 percent, a difference of less than one percentage point. Effects calculated using the dissimilarity index are even smaller.

Second, open enrollment has no measurable effect on socioeconomic segregation levels. For example, in 2017–18, open enrollment decreased the exposure of economically disadvantaged students to their more advantaged peers by just one-tenth of a percentage point, from 32.6 to 32.5 percent. Dissimilarity-index results are similar.

Third, although open enrollment had no substantial effect on black-white or socioeconomic segregation overall, there were a few districts where it significantly changed the racial or, especially, socioeconomic composition of the student body. About 5.5 percent of districts saw open enrollment change the socioeconomic composition of their student body by at least five percentage points. Of these districts, interdistrict choice increased the population of economically disadvantaged students much more often than it reduced it.

Fourth, the analysis of the effect of open enrollment on school-level segregation yielded similar findings. Open enrollment produces a miniscule increase in black-white segregation and no measurable change in socioeconomic segregation. The bottom line is that none of the effects are large enough to be relevant to policy discussions.

As for implications, these findings primarily demonstrate that, for all the rhetoric and media coverage of open enrollment's potential to worsen segregation, interdistrict choice has had remarkably little impact on overall diversity levels across Ohio schools and districts. This isn't to say that some districts don't see significant changes in its racial or socioeconomic composition due to open enrollment but rather that it neither substantially increases nor decreases overall diversity levels across all districts. As a result, the policy debates surrounding open enrollment

should not revolve around its (de)segregating effects but instead focus on other aspects of the policy, such as whether it is effective at providing educational opportunities to students who would otherwise have few or how it shapes outcomes we care about, such as student achievement and attainment. These sorts of considerations should be the main drivers of the open enrollment policy debate.

Part of the reason that open enrollment has relatively little effect on overall segregation levels stems from the fact that a relatively small proportion of Ohio students—fewer than 10 percent—make use of the policy. Such modest participation levels simply aren't going to result in dramatic changes in diversity levels across Ohio districts. The vast majority of students are going to attend school in the district in which they live, which means that residential decisions will be the main driver of segregation levels; open enrollment will only affect things on the margins, unless student participation levels increase dramatically.

Along with student participation, it is also important to recognize the role that district participation decisions could play in shaping the results presented in this report. Although fewer than 20 percent of Ohio districts refuse to accept students via open enrollment, these districts are disproportionately concentrated in the suburbs surrounding Ohio's Big Eight, which contain a substantial portion of the state's black students. As a result of district (non) participation patterns, black students in Ohio's Big Eight are limited in their ability to make an integrating move via open enrollment. Such limitations may contribute to the slight uptick in racial segregation that open enrollment generates. These district participation patterns could also potentially account for the slight differences in the manner that open enrollment affects segregation levels in rural/small-town districts versus urban/suburban districts.

Discussion of the role that participation patterns, either student or district, might play in shaping segregation outcomes is woefully incomplete without talking about the design of Ohio's open enrollment policy. By providing districts with the ability to opt out—an option taken by a significant number of affluent, largely white districts—and putting transportation responsibilities almost entirely on parents' shoulders, Ohio policymakers have significantly limited open enrollment's ability to increase integration in the state's schools.

At the end of the day, stakeholders in Ohio's education system are right to recognize the potential for open enrollment to change the racial and socioeconomic composition of schools and districts across the state in ways both desirable and less so. This report provides clear evidence that, at least in terms of (de)segregating effects, open enrollment as presently practiced in the Buckeye State is realizing neither the wildest dreams of its proponents nor the worst fears of its skeptics.

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Endnotes

[1] Note that this report focuses exclusively on *inter*district open enrollment, a policy allowing students to transfer between districts. It does not address *intra*district open enrollment, which allows students to transfer schools within a single district, nor does it touch on other forms of school choice such as public charter schools and private school choice.

[2] Deven Carlson and Stéphane Lavertu, Interdistrict Open Enrollment in Ohio: Participation and Student Outcomes (Columbus, OH: Fordham Institute, 2017).

[3] Steven Rivkin, "Desegregation since the Coleman Report: Racial composition of schools and student learning," *Education Next* 16, no. 2 (2016).

[4] Ashton Marra, "Open enrollment may be segregating Ohio's public schools," WOSU Public Media, July 24, 2018, https://radio.wosu.org/post/open-enrollment-may-be-segregating-ohios-public-schools.

[5] For district tuition rates in 2018–19, see http://education.ohio.gov/getattachment/Topics/Finance-and-Funding/Finance-Related-Data/Tuition-Letters-and-Rates/TUITION_RATE_FY19.xlsx.aspx?lang=en-US.

[6] Formally, the exposure index can be written as

$$P_{xy} = \sum_{s=1}^{n} \frac{t_{xs}}{X} * \frac{t_{ys}}{t_s}$$

where the exposure of group x to group y (P_{xy}) is calculated across n Ohio districts in a given school year s. In the calculation, t_{xs} and t_{ys} represent, respectively, the number of students in groups x and y in each district, t_s represents total district enrollment, and X is the statewide population of group x.

[7] Formally, the dissimilarity index can be written as

$$D_{xy} = \frac{1}{2} \sum_{s=1}^{n} \left| \frac{t_{xs}}{X} - \frac{t_{ys}}{Y} \right|$$

where the dissimilarity of group x to group y (D_{xy}) is calculated across n Ohio districts in a given school year s. In the calculation, t_{xs} and t_{ys} represent the number of students in groups x and y in each district, respectively, while X is the total statewide population of group x and Y represents the total statewide population of group y.

[8] The district urbanicity classifications that ODE maintains can be found at http://education.ohio.gov/Topics/Data/Report-Card-Resources/Report-Card-Data-Forms-and-Information/Typology-of-Ohio-School-Districts.

Appendix tables

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	**With-out OE**	**Effect of OE**	**With OE**	**With-out OE**	**Effect of OE**
Ada Exempted Village	92.2	92.4	−0.2	1.8	1.8	−0.1
Adams County Ohio Valley Local	97.2	97.3	−0.1	0.1	0.1	0.0
Adena Local	93.6	93.2	0.4	0.9	1.1	−0.2
Akron City	32.4	35.1	−2.7	46.6	44.5	2.2
Alexander Local	97.4	96.9	0.4	0.5	0.5	−0.1
Allen East Local	95.9	95.6	0.3	1.2	1.2	0.0
Alliance City	69.3	71.7	−2.4	12.4	10.7	1.7
Amanda-Clearcreek Local	96.7	96.4	0.3	0.6	0.7	−0.2
Amherst Exempted Village	80.6	80.4	0.3	2.4	2.7	−0.3
Anna Local	96.4	96.0	0.4	0.1	0.1	0.0
Ansonia Local	96.9	97.6	−0.7	0.0	0.0	0.0
Anthony Wayne Local	93.8	93.8	0.0	1.4	1.3	0.0
Antwerp Local	91.0	91.6	−0.6	0.0	0.0	0.0
Arcadia Local	87.4	91.0	−3.6	1.0	1.4	−0.3
Arcanum-Butler Local	95.7	96.2	−0.5	0.4	0.4	0.0
Archbold-Area Local	77.0	77.5	−0.5	0.8	0.8	0.0
Arlington Local	95.6	95.7	−0.2	0.4	0.4	0.0
Ashland City	91.5	91.6	−0.1	1.1	1.1	0.0
Ashtabula Area City	63.9	66.6	−2.6	7.1	6.3	0.8
Athens City	83.9	83.4	0.5	2.7	2.8	−0.1
Aurora City	85.0	85.0	0.0	3.3	3.4	−0.1
Austintown Local Schools	75.0	80.1	−5.2	13.2	9.7	3.5
Avon Lake City	91.3	91.3	0.0	1.6	1.6	0.0
Avon Local	83.0	82.8	0.2	2.6	2.7	−0.1
Ayersville Local	87.0	85.2	1.8	0.4	0.7	−0.3
Barberton City	75.1	77.1	−2.1	13.5	11.8	1.7
Barnesville Exempted Village	96.7	96.5	0.2	0.2	0.2	0.0
Batavia Local	85.5	85.0	0.5	2.9	3.0	−0.1
Bath Local	86.9	87.6	−0.7	5.5	4.7	0.8
Bay Village City	92.9	92.9	0.0	0.8	0.8	0.0
Beachwood City	53.4	53.4	0.0	19.3	19.3	0.0
Beaver Local	97.2	96.8	0.4	0.5	0.7	−0.2
Beavercreek City	80.9	80.9	0.0	3.7	3.7	0.0
Bedford City	7.7	7.8	−0.1	82.4	82.4	0.1
Bellaire Local	88.7	89.0	−0.3	3.8	3.3	0.4
Bellbrook-Sugarcreek Local	86.5	86.4	0.1	4.2	4.3	0.0
Bellefontaine City	81.5	82.2	−0.7	3.0	2.7	0.3
Bellevue City	90.5	90.4	0.1	0.5	0.6	0.0
Belpre City	90.1	90.7	−0.5	1.4	1.4	0.0
Benjamin Logan Local	93.3	92.9	0.4	0.1	0.2	−0.2

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Benton Carroll Salem Local	92.7	92.7	0.0	0.3	0.4	−0.1
Berea City	74.7	74.6	0.0	5.4	5.5	0.0
Berkshire Local	96.1	96.2	−0.1	0.5	0.3	0.2
Berne Union Local	95.9	95.8	0.1	0.7	0.6	0.1
Bethel Local	93.4	93.5	−0.1	0.7	0.7	0.0
Bethel-Tate Local	96.0	95.8	0.2	0.2	0.3	−0.1
Bexley City	82.2	82.1	0.1	6.6	6.7	−0.1
Big Walnut Local	92.2	92.2	0.0	0.9	0.9	0.0
Black River Local	96.0	96.4	−0.3	0.6	0.3	0.2
Blanchester Local	96.8	96.6	0.1	0.4	0.4	0.0
Bloom-Carroll Local	94.7	94.7	0.0	1.5	1.6	−0.1
Bloomfield-Mespo Local	96.1	96.7	−0.6	0.0	0.0	0.0
Bloom-Vernon Local	98.6	97.6	1.0	0.1	0.5	−0.4
Bluffton Exempted Village	93.6	93.6	0.1	0.7	0.7	0.0
Boardman Local	73.9	74.5	−0.6	8.6	8.5	0.1
Botkins Local	94.9	96.8	−1.9	0.2	0.0	0.2
Bowling Green City School District	78.9	79.3	−0.3	4.7	4.6	0.1
Bradford Exempted Village	99.1	98.1	1.0	0.0	0.0	0.0
Brecksville-Broadview Heights City	83.3	83.3	0.0	2.1	2.1	0.0
Bridgeport Exempted Village	86.0	87.1	−1.1	5.0	4.4	0.6
Bright Local	96.7	96.3	0.4	0.8	0.6	0.2
Bristol Local	97.6	97.2	0.4	0.0	0.3	−0.3
Brookfield Local	91.4	91.3	0.1	1.6	1.7	−0.1
Brooklyn City	60.6	59.9	0.6	7.7	8.1	−0.4
Brookville Local	95.1	95.1	0.0	0.5	0.5	0.0
Brown Local	91.1	92.3	−1.2	2.7	1.9	0.7
Brunswick City	90.5	90.5	0.0	1.4	1.4	0.0
Bryan City	88.5	88.8	−0.3	0.8	0.8	0.0
Buckeye Central Local	92.6	94.1	−1.5	0.2	0.1	0.0
Buckeye Local	87.3	88.1	−0.9	1.1	1.3	−0.2
Buckeye Local	96.2	95.8	0.4	1.0	0.9	0.1
Buckeye Local	92.7	92.8	−0.1	0.9	0.9	0.0
Buckeye Valley Local	92.2	92.2	0.0	0.6	0.7	0.0
Bucyrus City	89.9	90.4	−0.5	1.1	1.4	−0.3
Caldwell Exempted Village	96.8	96.5	0.4	0.0	0.0	0.0
Cambridge City	92.6	92.5	0.1	1.9	1.9	0.1
Campbell City	33.4	37.1	−3.8	28.4	26.2	2.2
Canal Winchester Local	63.2	63.3	−0.1	23.2	23.2	0.0
Canfield Local	90.5	90.7	−0.2	0.8	0.8	0.0
Canton City	40.6	42.1	−1.4	37.1	36.1	1.0
Canton Local	82.5	82.9	−0.5	8.1	7.9	0.2
Cardinal Local	95.6	95.2	0.3	0.6	0.6	0.0
Cardington-Lincoln Local	94.6	94.1	0.5	0.7	0.7	0.0

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Carey Exempted Village Schools	94.2	94.2	0.0	0.4	0.4	0.0
Carlisle Local	94.5	94.5	0.0	0.5	0.4	0.0
Carrollton Exempted Village	95.8	95.5	0.3	0.3	0.3	−0.1
Cedar Cliff Local	87.4	86.8	0.7	2.3	2.1	0.2
Celina City	86.8	87.6	−0.9	0.6	0.6	0.0
Centerburg Local	92.6	92.5	0.1	0.2	0.2	0.0
Centerville City	75.2	75.3	−0.1	7.4	7.4	0.0
Central Local	90.1	90.1	0.0	0.5	0.5	0.0
Chagrin Falls Exempted Village	92.4	92.4	0.0	1.0	0.9	0.0
Champion Local	94.9	94.8	0.1	0.4	0.4	0.0
Chardon Local	92.8	92.8	0.0	0.6	0.6	0.0
Chesapeake Union Exempted Village	95.4	95.3	0.2	0.8	1.0	−0.2
Chillicothe City	80.4	82.7	−2.3	5.3	4.1	1.2
Chippewa Local	95.5	95.4	0.1	0.5	0.6	−0.1
Cincinnati Public Schools	23.7	23.6	0.1	62.1	62.1	0.0
Circleville City	89.7	89.9	−0.1	2.3	2.2	0.1
Clark-Shawnee Local	86.3	87.6	−1.4	3.4	2.9	0.5
Clay Local	94.0	93.1	0.9	0.3	0.2	0.1
Claymont City	93.5	93.8	−0.2	1.1	1.1	0.0
Clear Fork Valley Local	95.0	94.7	0.3	0.2	0.2	0.0
Clearview Local	44.1	49.9	−5.8	12.7	11.6	1.0
Clermont Northeastern Local	94.5	94.8	−0.3	0.6	0.6	0.1
Cleveland Heights–University Heights City	20.7	20.7	0.0	68.6	68.7	−0.1
Cleveland Municipal	14.9	14.8	0.1	63.5	63.6	−0.1
Clinton-Massie Local	95.9	95.6	0.3	0.1	0.1	0.0
Cloverleaf Local	93.8	94.0	−0.2	0.5	0.5	0.0
Clyde–Green Springs Exempted Village	84.6	84.6	0.0	1.3	1.3	0.0
Coldwater Exempted Village	95.2	94.9	0.2	0.3	0.2	0.1
College Corner Local	97.5	97.2	0.3	1.7	1.8	−0.2
Colonel Crawford Local	96.2	96.0	0.3	0.1	0.1	0.0
Columbia Local	92.7	92.7	0.0	0.5	0.5	0.0
Columbiana Exempted Village	92.8	93.6	−0.8	0.4	0.3	0.1
Columbus City School District	22.5	22.6	−0.1	54.1	54.0	0.1
Columbus Grove Local	91.6	91.4	0.2	0.6	0.6	0.0
Conneaut Area City	91.4	91.0	0.4	1.1	1.1	0.0
Conotton Valley Union Local	98.1	98.0	0.2	0.0	0.0	0.0
Continental Local	95.1	95.6	−0.4	0.2	0.2	0.0
Copley-Fairlawn City	74.2	73.9	0.3	13.3	13.7	−0.4
Cory-Rawson Local	90.6	90.4	0.2	4.0	3.7	0.3
Coshocton City	91.1	91.4	−0.3	2.4	2.2	0.2
Coventry Local	86.8	89.1	−2.3	3.9	3.0	0.9
Covington Exempted Village	94.6	94.3	0.3	0.4	0.4	0.0
Crestline Exempted Village	90.7	91.2	−0.5	2.3	1.8	0.5

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Crestview Local	98.5	98.2	0.3	0.1	0.2	−0.1
Crestview Local	96.2	96.3	−0.1	0.5	0.5	0.0
Crestview Local	93.6	94.2	−0.5	0.1	0.3	−0.1
Crestwood Local	95.7	95.7	0.1	0.2	0.3	−0.1
Crooksville Exempted Village	98.1	98.4	−0.3	0.4	0.3	0.0
Cuyahoga Falls City	81.6	82.9	−1.2	4.9	4.2	0.7
Cuyahoga Heights Local	91.7	91.7	0.0	0.6	0.6	0.0
Dalton Local	92.2	91.6	0.5	1.7	1.8	−0.1
Danbury Local	92.5	93.1	−0.6	0.0	0.0	0.0
Danville Local	94.4	94.0	0.4	0.0	0.0	0.0
Dawson-Bryant Local	98.6	98.6	0.0	0.4	0.5	−0.1
Dayton City	26.0	28.3	−2.3	63.4	61.0	2.4
Deer Park Community City	74.8	74.7	0.2	8.6	8.9	−0.3
Defiance City	66.1	67.6	−1.5	6.1	5.7	0.4
Delaware City	80.7	80.9	−0.2	4.3	4.3	0.0
Delphos City	91.7	91.4	0.4	0.6	0.7	−0.1
Dover City	83.9	83.6	0.3	1.5	1.6	−0.1
Dublin City	60.3	60.3	0.0	5.0	5.0	0.0
East Cleveland City School District	0.3	0.4	−0.1	98.9	98.6	0.3
East Clinton Local	95.2	94.8	0.3	0.2	0.3	−0.2
East Guernsey Local	96.9	96.7	0.2	0.0	0.0	0.0
East Holmes Local	97.1	97.1	0.0	0.4	0.4	0.0
East Knox Local	95.8	95.6	0.2	0.6	0.5	0.1
East Liverpool City	85.3	86.5	−1.2	5.8	5.1	0.6
East Muskingum Local	94.8	95.1	−0.2	0.6	0.7	0.0
East Palestine City	94.8	94.9	−0.1	0.8	0.7	0.1
Eastern Local	97.5	97.3	0.3	0.1	0.0	0.1
Eastern Local School District	96.7	96.7	0.0	0.5	0.5	0.1
Eastern Local School District	94.9	95.2	−0.4	1.0	0.7	0.2
Eastwood Local	91.8	91.4	0.4	1.5	1.5	0.0
Eaton Community City	93.1	93.5	−0.4	0.3	0.2	0.1
Edgerton Local	91.1	90.0	1.1	1.3	1.2	0.1
Edgewood City	91.6	91.5	0.1	1.3	1.2	0.0
Edison Local	97.1	96.8	0.3	0.3	0.3	−0.1
Edison Local (formerly Berlin-Milan)	89.5	89.3	0.3	0.5	0.4	0.1
Edon Northwest Local	96.2	96.3	−0.1	0.6	0.6	0.0
Elgin Local	92.9	91.8	1.1	0.1	0.1	0.0
Elida Local	69.6	69.3	0.4	12.9	14.3	−1.4
Elmwood Local	92.2	92.4	−0.2	0.2	0.2	0.0
Elyria City Schools	52.2	54.4	−2.2	21.1	19.6	1.5
Euclid City	6.9	7.1	−0.2	86.1	86.1	0.0
Evergreen Local	91.0	91.3	−0.3	0.3	0.3	0.0
Fairbanks Local	93.4	93.9	−0.5	2.3	2.4	−0.1

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Fairborn City	74.4	74.4	0.0	10.2	10.2	0.0
Fairfield City	57.8	58.1	−0.3	19.6	19.3	0.3
Fairfield Local	95.6	95.4	0.2	0.4	0.5	0.0
Fairfield Union Local	95.5	95.5	0.0	1.0	1.2	−0.1
Fairland Local	96.1	96.2	−0.1	0.6	0.6	0.0
Fairlawn Local	97.1	96.9	0.2	0.0	0.6	−0.6
Fairless Local	95.3	95.5	−0.2	0.5	0.5	0.0
Fairport Harbor Exempted Village	81.3	81.1	0.2	2.3	3.7	−1.4
Fairview Park City	83.1	83.1	0.0	4.4	4.4	0.0
Fayette Local	76.1	75.6	0.5	1.5	1.5	0.1
Fayetteville-Perry Local	96.8	96.2	0.5	0.4	0.4	−0.1
Federal Hocking Local	92.3	93.8	−1.5	3.2	2.3	0.9
Felicity-Franklin Local	96.0	96.1	−0.1	0.0	0.0	0.0
Field Local	90.8	90.1	0.7	2.8	3.4	−0.6
Findlay City	78.2	78.7	−0.5	3.1	2.9	0.2
Finneytown Local	36.4	36.1	0.3	44.0	44.7	−0.7
Firelands Local	91.5	92.4	−1.0	0.4	0.3	0.1
Forest Hills Local	88.5	88.5	0.0	1.8	1.8	0.0
Fort Frye Local	97.5	97.4	0.0	0.3	0.3	0.0
Fort Loramie Local	98.0	98.0	0.0	0.1	0.1	0.0
Fort Recovery Local	95.8	95.7	0.2	0.1	0.1	0.0
Fostoria City	55.2	59.3	−4.1	6.0	4.9	1.0
Franklin City	93.3	93.1	0.2	2.2	2.2	0.0
Franklin Local	96.3	95.9	0.4	0.8	1.0	−0.1
Franklin Monroe Local	94.9	94.3	0.5	0.9	1.0	−0.1
Fredericktown Local	94.8	94.7	0.1	0.2	0.3	0.0
Fremont City	57.0	58.8	−1.8	8.7	8.3	0.4
Frontier Local	96.9	96.6	0.2	0.0	0.0	0.0
Gahanna-Jefferson City	60.2	60.2	0.0	26.1	26.1	0.0
Galion City	94.1	94.0	0.1	0.9	0.9	0.0
Gallia County Local	94.3	94.5	−0.2	2.3	2.4	−0.1
Gallipolis City	89.2	89.3	−0.1	3.7	3.5	0.3
Garaway Local	94.3	94.2	0.1	0.3	0.3	0.0
Garfield Heights City Schools	17.1	17.1	0.0	72.8	72.9	−0.1
Geneva Area City	88.8	88.6	0.3	1.1	1.2	−0.2
Genoa Area Local	88.5	88.5	0.0	0.2	0.2	0.0
Georgetown Exempted Village	94.5	94.5	0.0	1.0	1.0	0.0
Gibsonburg Exempted Village	85.4	85.0	0.4	0.1	0.1	0.0
Girard City School District	82.8	82.0	0.7	6.7	6.8	−0.1
Goshen Local	92.8	92.4	0.4	1.2	1.3	−0.1
Graham Local	94.4	94.3	0.1	0.7	0.7	0.0
Grand Valley Local	95.2	95.4	−0.2	0.5	0.5	0.0
Grandview Heights Schools	91.5	91.4	0.1	1.0	1.0	0.0

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Granville Exempted Village	92.1	92.1	0.0	0.5	0.5	0.0
Green Local	97.4	97.2	0.2	0.0	0.0	0.0
Green Local	91.9	91.8	0.2	2.4	2.5	−0.1
Green Local	93.8	94.0	−0.2	0.9	0.7	0.2
Greeneview Local	94.8	94.0	0.8	0.5	0.6	−0.1
Greenfield Exempted Village	94.6	94.4	0.1	0.3	0.3	0.0
Greenon Local	91.9	91.9	0.0	0.9	0.8	0.1
Greenville City	92.9	93.0	−0.1	0.8	0.7	0.0
Groveport Madison Local	40.5	40.1	0.4	43.1	43.5	−0.5
Hamilton City	65.4	65.4	0.1	12.9	12.9	−0.1
Hamilton Local	74.6	74.5	0.1	11.8	11.9	−0.1
Hardin Northern Local	98.1	98.1	0.0	0.0	0.0	0.0
Hardin-Houston Local	95.7	95.4	0.3	0.0	0.1	−0.1
Harrison Hills City	93.4	94.0	−0.6	1.7	1.6	0.1
Heath City	86.9	87.2	−0.3	2.1	2.4	−0.3
Hicksville Exempted Village	88.8	88.3	0.4	0.1	0.0	0.1
Highland Local	93.9	93.9	0.1	0.3	0.4	0.0
Highland Local	95.3	95.0	0.3	0.2	0.2	0.0
Hilliard City	72.4	72.4	0.0	7.8	7.8	0.0
Hillsboro City	89.0	89.2	−0.3	1.9	1.9	0.1
Hillsdale Local	96.2	95.7	0.5	0.1	0.1	0.0
Holgate Local	82.2	80.5	1.7	0.5	1.0	−0.5
Hopewell-Loudon Local	91.1	92.6	−1.5	0.8	0.3	0.5
Howland Local	87.3	87.1	0.2	3.3	3.3	0.0
Hubbard Exempted Village	88.7	90.9	−2.3	5.2	3.3	2.0
Huber Heights City	59.0	59.5	−0.5	22.6	22.2	0.4
Hudson City	87.2	87.1	0.1	1.2	1.2	0.0
Huntington Local	95.7	95.2	0.5	0.6	0.6	0.1
Huron City Schools	91.2	91.0	0.2	1.3	1.5	−0.2
Independence Local	93.5	93.5	0.0	0.8	0.8	0.0
Indian Creek Local	89.2	87.9	1.3	4.2	5.5	−1.3
Indian Hill Exempted Village	77.5	77.5	0.0	3.0	3.0	0.0
Indian Lake Local	91.7	91.5	0.3	0.5	0.7	−0.2
Indian Valley Local	97.5	97.4	0.1	0.5	0.5	0.0
Ironton City School District	87.4	88.4	−1.0	3.8	3.3	0.5
Jackson Center Local	97.8	97.2	0.7	0.2	0.2	0.0
Jackson City	96.1	96.2	0.0	0.8	0.8	0.0
Jackson Local	86.7	86.7	0.0	2.2	2.2	0.0
Jackson-Milton Local	95.0	95.9	−0.9	0.6	0.6	0.0
James A Garfield Local	97.8	98.1	−0.3	0.4	0.3	0.1
Jefferson Area Local	93.8	93.7	0.2	0.4	0.4	0.1
Jefferson Local	94.6	94.5	0.1	0.8	0.9	−0.1
Jefferson Township Local	13.8	24.0	−10.3	73.4	63.3	10.2

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Jennings Local	97.2	98.5	−1.2	0.0	0.0	0.0
Johnstown-Monroe Local	91.3	91.2	0.1	0.6	0.6	0.0
Jonathan Alder Local	92.4	91.9	0.6	0.4	0.5	−0.1
Joseph Badger Local	96.1	96.7	−0.6	0.1	0.1	0.0
Kalida Local	99.7	99.6	0.0	0.0	0.0	0.0
Kelleys Island Local	100.0	100.0	0.0	0.0	0.0	0.0
Kenston Local	88.8	89.0	−0.2	3.5	3.4	0.1
Kent City	73.3	72.7	0.5	12.5	12.5	0.0
Kenton City	92.2	92.3	−0.1	1.0	1.0	0.0
Kettering City School District	80.6	80.6	0.0	5.9	5.8	0.0
Keystone Local	93.0	92.5	0.5	0.3	0.3	0.1
Kings Local	83.7	83.6	0.0	2.4	2.4	0.0
Kirtland Local	95.4	95.4	0.0	0.4	0.4	0.0
LaBrae Local	87.9	89.5	−1.6	3.7	2.3	1.4
Lake Local	94.3	94.3	0.0	0.4	0.4	0.0
Lake Local	84.1	84.6	−0.5	2.4	2.6	−0.2
Lakeview Local	91.8	91.3	0.5	1.4	1.7	−0.3
Lakewood City	71.9	71.9	0.0	8.0	8.0	0.0
Lakewood Local	92.8	92.7	0.1	0.5	0.5	0.0
Lakota Local	67.9	68.3	−0.4	11.4	11.1	0.3
Lakota Local	92.4	92.8	−0.4	0.1	0.1	0.0
Lancaster City	91.1	91.3	−0.3	2.7	2.5	0.1
Lebanon City	87.3	87.4	−0.1	1.6	1.6	0.0
Leetonia Exempted Village	97.6	97.3	0.3	0.1	0.1	0.0
Leipsic Local	47.3	51.0	−3.7	0.6	0.6	0.0
Lexington Local	89.1	89.1	0.0	1.4	1.6	−0.2
Liberty Center Local	91.2	91.3	−0.1	0.3	0.3	0.0
Liberty Local	49.1	59.4	−10.3	35.5	27.3	8.3
Liberty Union–Thurston Local	94.6	94.2	0.4	0.9	0.9	0.0
Liberty-Benton Local	87.8	88.1	−0.3	1.0	1.1	−0.1
Licking Heights Local	52.5	52.3	0.2	28.5	28.7	−0.2
Licking Valley Local	95.9	95.9	0.0	0.5	0.4	0.1
Lima City	35.8	40.2	−4.4	41.1	37.6	3.4
Lincolnview Local	96.4	96.4	0.0	0.0	0.0	0.0
Lisbon Exempted Village	96.0	96.2	−0.2	0.8	0.5	0.3
Little Miami Local	89.2	89.4	−0.3	2.1	2.1	0.0
Lockland Local	36.1	41.8	−5.7	44.4	39.4	5.0
Logan Elm Local	96.8	96.6	0.2	0.7	0.7	−0.1
Logan-Hocking Local	95.9	95.8	0.0	0.4	0.5	0.0
London City	87.1	87.3	−0.2	4.1	3.8	0.2
Lorain City	22.0	24.3	−2.4	26.6	25.0	1.6
Lordstown Local	91.3	93.0	−1.7	4.0	2.5	1.5
Loudonville-Perrysville Exempted Village	96.8	96.5	0.3	0.4	0.4	0.0

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Louisville City	96.5	96.5	0.0	0.2	0.2	0.0
Loveland City	89.2	89.2	0.0	2.0	2.0	0.0
Lowellville Local	88.0	92.5	−4.5	2.8	1.7	1.1
Lucas Local	95.5	95.8	−0.2	0.2	0.2	0.0
Lynchburg-Clay Local	96.0	95.7	0.3	0.4	0.5	−0.1
Mad River Local	74.9	74.9	0.0	9.5	9.4	0.1
Madeira City	88.4	88.4	0.0	1.2	1.3	−0.1
Madison Local	95.8	95.4	0.4	0.6	0.9	−0.2
Madison Local	88.4	88.2	0.2	1.0	1.1	0.0
Madison Local	85.2	85.5	−0.3	5.0	4.9	0.1
Madison-Plains Local	93.4	94.0	−0.5	0.5	0.5	0.0
Manchester Local	97.8	97.4	0.3	0.2	0.2	0.0
Manchester Local	95.8	95.4	0.4	0.7	0.7	0.0
Mansfield City	51.4	54.8	−3.4	30.3	28.0	2.3
Maple Heights City	2.0	2.1	0.0	92.0	91.9	0.0
Mapleton Local	96.8	96.8	0.0	0.1	0.1	0.0
Maplewood Local	96.4	96.1	0.3	0.0	0.0	0.0
Margaretta Local	92.5	94.3	−1.8	0.2	0.2	0.0
Mariemont City	91.2	90.9	0.3	1.2	1.2	−0.1
Marietta City	91.7	91.6	0.1	1.2	1.3	−0.1
Marion City	77.2	79.4	−2.1	7.5	6.7	0.8
Marion Local	99.0	99.0	0.1	0.5	0.5	0.0
Marlington Local	89.3	88.4	0.9	1.6	2.3	−0.7
Martins Ferry City	83.2	83.0	0.2	6.0	6.3	−0.3
Marysville Exempted Village	89.1	89.2	−0.1	1.5	1.4	0.0
Mason City	60.3	59.8	0.5	3.9	4.0	−0.1
Massillon City	70.5	72.0	−1.5	11.3	10.4	0.9
Mathews Local	96.4	96.3	0.1	0.6	0.7	−0.1
Maumee City	76.8	76.5	0.3	8.0	8.2	−0.2
Mayfield City	66.4	66.5	−0.1	14.3	14.3	0.0
Maysville Local	92.9	93.3	−0.5	1.4	1.0	0.3
McComb Local	85.1	85.9	−0.8	0.7	0.7	0.0
McDonald Local	90.9	92.7	−1.8	1.3	1.0	0.3
Mechanicsburg Exempted Village	93.8	93.5	0.3	0.4	0.5	−0.2
Medina City SD	88.7	88.7	0.0	3.3	3.3	0.0
Meigs Local	95.7	95.6	0.1	0.5	0.4	0.1
Mentor Exempted Village	88.4	88.4	0.0	2.5	2.5	0.0
Miami East Local	96.9	96.4	0.5	0.4	0.6	−0.2
Miami Trace Local	90.3	90.4	−0.1	0.7	0.7	0.1
Miamisburg City	80.5	80.5	0.0	7.7	7.7	−0.1
Middletown City	57.0	57.8	−0.8	18.1	17.6	0.4
Midview Local	87.4	88.0	−0.6	2.8	3.1	−0.3
Milford Exempted Village	89.2	89.1	0.0	2.1	2.1	0.0

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Millcreek-West Unity Local	92.0	92.8	−0.7	0.5	0.6	−0.1
Miller City–New Cleveland Local	98.0	98.0	−0.1	0.2	0.2	0.0
Milton-Union Exempted Village	94.3	94.6	−0.3	0.7	0.8	0.0
Minerva Local	95.3	95.3	0.0	0.8	0.8	0.0
Minford Local	97.4	97.3	0.1	0.9	0.9	0.0
Minster Local	95.7	96.0	−0.2	0.8	0.8	0.0
Mississinawa Valley Local	86.5	87.7	−1.2	0.6	0.6	0.0
Mogadore Local	98.0	98.8	−0.8	0.1	0.2	0.0
Mohawk Local	97.9	97.7	0.2	1.1	1.2	−0.1
Monroe Local	80.4	80.2	0.3	3.9	4.2	−0.3
Monroeville Local	95.7	95.4	0.4	0.2	0.2	0.0
Montpelier Exempted Village	92.9	92.4	0.5	0.4	0.6	−0.2
Morgan Local	88.4	89.3	−0.9	3.7	3.4	0.3
Mount Gilead Exempted Village	93.7	94.5	−0.8	0.2	0.2	0.0
Mount Vernon City	89.2	89.4	−0.2	1.2	1.1	0.0
Mt Healthy City	13.4	14.1	−0.7	70.7	70.3	0.3
Napoleon Area City	83.9	84.4	−0.5	1.2	1.2	0.0
National Trail Local	95.6	95.3	0.3	0.4	0.5	−0.1
Nelsonville-York City	93.6	93.6	0.0	1.1	1.3	−0.1
New Albany–Plain Local	68.5	68.6	0.0	8.5	8.5	0.0
New Boston Local	91.0	90.3	0.7	0.0	0.6	−0.6
New Bremen Local	96.9	96.9	0.0	0.5	0.3	0.3
New Knoxville Local	95.1	94.5	0.6	1.5	2.1	−0.6
New Lebanon Local School District	94.1	94.0	0.1	0.4	0.4	−0.1
New Lexington School District	96.8	96.6	0.3	0.2	0.2	−0.1
New London Local	95.4	95.4	0.0	1.3	1.1	0.1
New Miami Local	88.5	88.5	−0.1	2.4	2.3	0.1
New Philadelphia City	81.9	82.2	−0.3	1.3	1.2	0.1
New Richmond Exempted Village	95.1	94.7	0.4	0.4	0.5	−0.1
New Riegel Local	95.3	94.9	0.4	0.0	0.0	0.0
Newark City	84.5	84.8	−0.4	3.5	3.3	0.2
Newbury Local	89.6	90.9	−1.2	3.5	3.5	0.0
Newcomerstown Exempted Village	92.0	92.8	−0.8	0.8	0.7	0.1
Newton Falls Exempted Village	95.5	95.4	0.1	0.4	0.4	0.0
Newton Local	95.1	95.2	−0.1	1.2	1.4	−0.3
Niles City	83.6	83.5	0.0	5.3	5.2	0.1
Noble Local	97.7	98.3	−0.6	0.0	0.0	0.0
Nordonia Hills City	77.8	77.8	0.0	11.5	11.6	0.0
North Baltimore Local	87.0	86.4	0.6	0.5	0.8	−0.3
North Canton City	90.1	90.1	0.0	2.4	2.4	0.0
North Central Local	88.0	89.2	−1.2	0.4	0.3	0.0
North College Hill City	8.6	9.3	−0.7	78.7	77.9	0.7
North Fork Local	96.8	96.4	0.4	0.8	0.9	−0.2

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
North Olmsted City	82.9	82.9	0.0	4.1	4.1	0.0
North Ridgeville City	88.7	88.5	0.2	2.2	2.4	−0.2
North Royalton City	83.9	83.9	0.0	2.0	2.0	0.0
North Union Local School District	96.0	96.3	−0.3	0.2	0.1	0.1
Northeastern Local	90.5	89.4	1.1	1.8	2.1	−0.3
Northeastern Local	88.8	87.8	1.0	1.3	1.5	−0.2
Northern Local	97.8	97.8	0.0	0.1	0.1	0.0
Northmont City	67.1	67.5	−0.3	22.3	22.0	0.3
Northmor Local	95.5	96.0	−0.5	0.5	0.4	0.1
Northridge Local	94.0	94.3	−0.3	0.0	0.0	0.0
Northridge Local	67.2	68.6	−1.4	22.1	20.1	2.0
Northwest Local	52.4	52.3	0.0	28.8	29.1	−0.3
Northwest Local	97.9	97.6	0.3	0.1	0.1	0.0
Northwest Local	95.8	96.0	−0.1	1.4	1.4	0.0
Northwestern Local	91.7	91.4	0.3	0.8	0.9	0.0
Northwestern Local	94.4	94.1	0.3	0.2	0.1	0.1
Northwood Local Schools	79.4	82.0	−2.6	1.2	0.8	0.4
Norton City	92.9	94.0	−1.1	2.1	1.2	0.9
Norwalk City	79.0	79.5	−0.5	1.2	1.1	0.1
Norwayne Local	95.4	95.6	−0.2	0.3	0.2	0.1
Norwood City	67.6	67.0	0.6	14.3	14.8	−0.5
Oak Hill Union Local	97.9	97.9	−0.1	0.2	0.3	−0.1
Oak Hills Local	87.6	87.6	0.1	3.9	4.1	−0.1
Oakwood City	84.1	84.1	0.0	1.1	1.2	0.0
Oberlin City Schools	49.2	51.8	−2.6	20.8	20.1	0.7
Old Fort Local	88.7	88.3	0.4	1.3	1.0	0.3
Olentangy Local	74.6	74.6	0.0	4.2	4.2	0.0
Olmsted Falls City	91.6	91.6	0.0	2.4	2.4	0.0
Ontario Local	82.9	82.1	0.8	4.7	4.7	0.0
Orange City	67.7	67.7	0.0	17.2	17.2	0.0
Oregon City	80.3	80.5	−0.2	2.2	2.2	0.0
Orrville City	73.0	74.0	−1.0	4.1	4.0	0.1
Osnaburg Local	92.7	93.0	−0.2	1.7	1.7	0.0
Otsego Local	91.2	91.8	−0.6	0.5	0.4	0.1
Ottawa Hills Local	78.2	78.2	0.1	1.0	1.1	−0.1
Ottawa-Glandorf Local	86.0	85.6	0.4	0.4	0.3	0.1
Ottoville Local	98.6	98.5	0.1	0.2	0.2	0.0
Painesville City Local	19.5	23.4	−3.9	18.5	17.4	1.1
Paint Valley Local	95.8	96.3	−0.6	0.4	0.5	−0.1
Pandora-Gilboa Local	95.0	94.9	0.0	0.0	0.0	0.0
Parkway Local	96.8	96.6	0.2	0.6	0.7	0.0
Parma City	77.9	77.6	0.4	5.8	6.0	−0.3
Patrick Henry Local	89.2	88.7	0.5	0.4	0.1	0.2

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Paulding Exempted Village	90.0	90.6	−0.6	0.6	0.6	0.0
Perkins Local	79.3	80.1	−0.8	4.5	6.1	−1.6
Perry Local	58.9	73.8	−15.0	24.6	15.7	8.9
Perry Local	83.6	83.6	0.0	2.0	2.0	0.0
Perry Local	87.7	87.5	0.2	3.2	3.3	−0.1
Perrysburg Exempted Village	83.4	83.4	0.0	2.2	2.2	0.0
Pettisville Local	85.0	84.3	0.7	0.6	0.3	0.3
Pickerington Local	58.7	58.8	−0.1	24.5	24.4	0.0
Pike-Delta-York Local	91.0	90.1	0.9	0.9	0.8	0.0
Piqua City	85.5	85.5	0.0	2.9	2.9	0.1
Plain Local	72.1	72.2	−0.1	15.6	15.5	0.1
Pleasant Local	92.4	91.9	0.5	1.2	0.9	0.3
Plymouth-Shiloh Local	91.9	91.5	0.4	0.9	0.3	0.5
Poland Local	91.9	91.8	0.1	0.7	0.7	0.0
Port Clinton City	78.0	78.4	−0.4	1.9	1.6	0.2
Portsmouth City	74.9	79.5	−4.6	6.7	5.2	1.5
Preble Shawnee Local	98.3	98.2	0.1	0.1	0.2	−0.1
Princeton City	23.3	23.9	−0.6	39.0	38.7	0.4
Put-In-Bay Local	96.9	96.9	0.0	1.6	1.6	0.0
Pymatuning Valley Local	95.1	94.9	0.2	0.3	0.3	0.0
Ravenna City	73.7	75.7	−2.0	11.3	10.4	0.9
Reading Community City	81.1	80.9	0.2	8.8	8.4	0.3
Revere Local	85.4	85.4	0.1	2.0	2.0	0.0
Reynoldsburg City	35.4	36.3	−0.9	38.6	37.3	1.2
Richmond Heights Local	4.3	5.3	−1.1	88.0	87.0	1.0
Ridgedale Local	94.7	93.4	1.2	0.0	0.2	−0.2
Ridgemont Local	93.9	93.2	0.7	0.6	0.7	−0.1
Ridgewood Local	95.9	95.6	0.4	0.3	0.3	0.0
Ripley-Union-Lewis-Huntington Local	90.2	90.8	−0.6	2.0	2.0	0.1
Rittman Exempted Village	94.6	94.5	0.0	0.4	0.5	−0.1
River Valley Local	91.0	90.3	0.7	1.8	2.2	−0.4
River View Local	94.7	94.9	−0.2	1.7	1.7	0.1
Riverdale Local	94.9	95.1	−0.3	0.6	0.6	0.0
Riverside Local	83.7	83.3	0.4	2.9	2.8	0.0
Riverside Local	93.8	95.2	−1.4	0.7	0.5	0.2
Rock Hill Local	97.4	96.3	1.1	0.4	0.7	−0.3
Rocky River City	89.6	89.6	0.0	1.5	1.5	0.0
Rolling Hills Local	94.8	95.1	−0.4	0.5	0.3	0.2
Rootstown Local	93.1	92.5	0.5	1.8	2.0	−0.2
Ross Local	97.2	97.2	0.0	0.1	0.1	0.0
Rossford Exempted Village	78.3	79.8	−1.5	1.6	1.8	−0.1
Russia Local	96.7	96.8	−0.1	0.5	0.6	−0.1
Salem City	87.7	88.3	−0.6	0.6	0.7	−0.1

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Sandusky City	38.9	43.5	−4.6	35.9	31.5	4.4
Sandy Valley Local	96.4	96.7	−0.2	0.8	0.6	0.2
Scioto Valley Local	97.0	96.7	0.4	0.3	0.3	0.0
Sebring Local	94.3	95.3	−1.0	0.9	0.6	0.3
Seneca East Local	94.3	94.1	0.2	0.0	0.0	0.0
Shadyside Local	94.3	93.3	1.1	0.4	0.5	−0.1
Shaker Heights City	41.3	41.0	0.3	43.6	44.1	−0.4
Shawnee Local	83.6	83.3	0.4	5.2	5.6	−0.4
Sheffield–Sheffield Lake City	81.0	80.8	0.1	2.5	2.8	−0.2
Shelby City	94.8	94.6	0.3	0.6	0.7	−0.1
Sidney City	80.8	82.6	−1.8	4.6	4.1	0.5
Solon City	56.8	56.8	−0.1	14.9	14.9	0.0
South Central Local	94.8	95.3	−0.5	0.8	0.9	0.0
South Euclid–Lyndhurst City	18.7	19.3	−0.7	69.7	69.2	0.5
South Point Local	85.6	86.6	−1.0	6.0	5.4	0.6
South Range Local	96.5	96.0	0.5	0.0	0.0	0.0
Southeast Local	96.0	95.5	0.5	1.1	1.2	−0.1
Southeast Local	95.5	95.2	0.3	0.6	0.7	−0.1
Southeastern Local	94.4	94.9	−0.5	0.9	0.9	0.0
Southeastern Local	94.9	95.3	−0.4	1.0	1.1	−0.1
Southern Local	93.1	93.3	−0.1	0.6	0.9	−0.3
Southern Local	96.6	96.6	0.0	0.3	0.4	−0.1
Southern Local	96.2	96.3	−0.2	0.5	0.4	0.0
Southington Local	94.2	94.4	−0.2	0.0	0.2	−0.2
Southwest Licking Local	86.9	86.9	0.0	2.9	3.0	−0.1
Southwest Local	92.3	92.5	−0.1	0.6	0.6	0.0
South-Western City	59.5	59.6	−0.1	15.2	15.2	0.0
Spencerville Local	94.1	94.1	0.0	1.1	1.1	0.0
Springboro Community City	91.8	91.8	−0.1	1.8	1.8	0.0
Springfield City School District	54.1	56.1	−2.1	23.7	22.4	1.2
Springfield Local	62.2	61.8	0.3	18.2	18.9	−0.6
Springfield Local	92.8	92.9	−0.1	0.1	0.1	0.0
Springfield Local	87.8	89.3	−1.5	3.3	3.2	0.1
St. Bernard–Elmwood Place City	49.9	54.8	−4.9	34.3	30.1	4.1
St. Clairsville-Richland City	91.1	90.9	0.1	0.7	1.1	−0.3
St. Henry Consolidated Local	95.9	96.2	−0.3	0.0	0.0	0.0
St. Marys City	93.4	93.4	0.0	0.6	0.6	0.0
Steubenville City	61.2	55.3	6.0	24.9	28.9	−4.0
Stow–Munroe Falls City School District	86.0	86.0	0.0	4.5	4.5	0.0
Strasburg-Franklin Local	93.5	94.1	−0.6	0.0	0.0	0.0
Streetsboro City	74.9	75.4	−0.5	15.5	14.8	0.7
Strongsville City	82.4	82.5	0.0	2.8	2.9	0.0
Struthers City	79.6	82.1	−2.5	6.5	5.1	1.4

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Stryker Local	84.7	86.2	−1.5	1.1	1.1	−0.1
Swanton Local	88.1	88.5	−0.5	1.4	1.3	0.2
Switzerland of Ohio Local	97.3	97.4	−0.1	0.5	0.5	0.0
Sycamore Community City	62.9	62.9	0.0	7.6	7.6	0.0
Sylvania Schools	81.6	81.5	0.1	4.9	5.1	−0.1
Symmes Valley Local	99.3	99.4	−0.1	0.0	0.0	0.0
Talawanda City	90.8	90.9	−0.1	1.7	1.7	0.0
Tallmadge City	86.2	85.4	0.8	4.5	4.9	−0.4
Teays Valley Local	93.4	93.4	0.0	1.1	1.0	0.1
Tecumseh Local	80.8	80.7	0.1	0.7	0.5	0.2
Three Rivers Local	91.8	92.1	−0.3	1.0	0.9	0.0
Tiffin City	88.7	89.1	−0.4	1.1	1.1	0.0
Tipp City Exempted Village	93.4	93.1	0.3	0.4	0.4	0.0
Toledo City	34.2	34.9	−0.7	43.4	42.5	0.9
Toronto City	90.0	89.4	0.7	1.4	1.6	−0.2
Triad Local	92.9	92.6	0.3	0.5	0.5	0.0
Tri-County North Local	95.8	96.0	−0.2	0.1	0.1	0.0
Trimble Local	96.2	96.3	−0.1	0.6	0.7	0.0
Tri-Valley Local	92.8	92.4	0.4	1.0	1.4	−0.5
Tri-Village Local	97.3	98.1	−0.8	0.3	0.0	0.3
Triway Local	94.3	94.0	0.3	0.7	0.8	−0.1
Trotwood-Madison City	5.7	8.2	−2.5	88.3	85.9	2.4
Troy City	82.3	83.0	−0.7	4.4	4.1	0.2
Tuscarawas Valley Local	96.0	96.7	−0.7	0.5	0.5	0.0
Tuslaw Local	96.7	96.8	−0.1	0.9	1.0	−0.1
Twin Valley Community Local	97.4	97.2	0.2	0.2	0.3	0.0
Twinsburg City	58.1	58.1	−0.1	24.0	23.9	0.0
Union Local	98.1	98.0	0.1	0.3	0.3	0.0
Union-Scioto Local	89.3	87.6	1.7	1.4	2.9	−1.5
United Local	96.9	96.8	0.1	0.4	0.5	0.0
Upper Arlington City	83.0	83.0	0.0	0.9	0.9	0.0
Upper Sandusky Exempted Village	90.1	90.2	−0.1	0.5	0.5	0.0
Upper Scioto Valley Local	93.6	93.9	−0.3	0.3	0.2	0.1
Urbana City	83.9	84.8	−0.9	3.3	3.0	0.4
Valley Local	94.2	95.3	−1.2	0.5	0.4	0.1
Valley View Local	93.9	93.9	0.1	1.3	1.3	0.0
Van Buren Local	88.9	88.0	0.9	0.5	0.8	−0.3
Van Wert City	88.8	89.5	−0.7	1.2	1.0	0.2
Vandalia-Butler City	79.7	79.7	0.0	8.2	8.2	0.0
Vanlue Local	91.0	92.0	−1.0	1.4	1.2	0.2
Vermilion Local	90.1	89.7	0.3	0.5	0.6	−0.1
Versailles Exempted Village	98.6	98.5	0.2	0.4	0.4	0.0
Vinton County Local	97.0	96.7	0.3	0.3	0.2	0.0

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	With-out OE	Effect of OE	With OE	With-out OE	Effect of OE
Wadsworth City	93.4	93.5	0.0	0.7	0.7	0.0
Walnut Township Local	94.2	94.1	0.1	2.2	2.1	0.2
Wapakoneta City	95.7	95.1	0.6	0.2	0.3	−0.1
Warren City	41.3	44.2	−2.9	40.7	38.6	2.1
Warren Local	95.7	95.0	0.7	0.9	1.1	−0.2
Warrensville Heights City	1.0	1.0	0.0	96.3	96.4	−0.1
Washington Court House City	86.3	85.9	0.3	3.0	3.0	0.0
Washington Local	68.1	67.8	0.3	9.6	10.0	−0.3
Washington-Nile Local	94.8	94.9	−0.1	0.2	0.2	0.0
Waterloo Local	95.3	95.2	0.1	0.3	0.2	0.1
Wauseon Exempted Village	74.7	74.3	0.5	0.6	0.6	0.0
Waverly City	93.4	93.4	0.0	1.9	2.0	−0.1
Wayne Local	93.7	93.4	0.3	0.3	0.4	0.0
Wayne Trace Local	95.6	95.3	0.3	0.2	0.1	0.1
Waynesfield-Goshen Local	95.4	95.2	0.3	1.8	1.6	0.1
Weathersfield Local	91.1	90.8	0.4	1.0	1.4	−0.4
Wellington Exempted Village	92.4	92.4	−0.1	1.0	0.9	0.0
Wellston City	97.1	97.2	−0.1	0.1	0.1	0.0
Wellsville Local	87.2	88.0	−0.8	3.8	3.5	0.3
West Branch Local	95.4	95.8	−0.3	0.4	0.5	−0.1
West Carrollton City	64.4	64.7	−0.4	18.0	17.4	0.6
West Clermont Local	89.1	89.6	−0.5	2.1	2.0	0.1
West Geauga Local	94.3	95.1	−0.8	1.3	0.6	0.7
West Holmes Local	95.4	95.4	0.0	0.4	0.3	0.1
West Liberty–Salem Local	94.0	94.2	−0.2	0.3	0.4	−0.2
West Muskingum Local	88.9	87.6	1.4	3.9	4.2	−0.3
Western Brown Local	97.0	97.0	0.1	0.2	0.2	0.0
Western Local	97.6	97.9	−0.3	0.6	0.6	0.0
Western Reserve Local	97.4	96.7	0.6	0.2	0.3	−0.1
Western Reserve Local	96.5	96.5	0.1	0.2	0.2	−0.1
Westerville City	55.5	55.5	0.0	25.1	25.2	−0.1
Westfall Local	95.5	95.6	−0.2	1.7	1.6	0.1
Westlake City	80.5	80.5	0.0	2.3	2.3	−0.1
Wheelersburg Local	93.0	93.0	0.0	0.4	0.2	0.2
Whitehall City	25.6	25.5	0.1	41.6	42.1	−0.5
Wickliffe City	78.9	78.9	−0.1	9.6	9.5	0.0
Willard City	65.0	67.2	−2.2	0.3	0.4	0.0
Williamsburg Local	94.3	94.7	−0.4	1.3	1.4	−0.1
Willoughby-Eastlake City	79.6	79.5	0.1	9.9	10.0	−0.1
Wilmington City	83.6	84.4	−0.8	3.2	3.1	0.1
Windham Exempted Village	81.6	84.9	−3.3	8.4	7.3	1.2
Winton Woods City	10.6	11.3	−0.7	55.5	54.1	1.3
Wolf Creek Local	97.7	97.7	0.0	0.3	0.4	−0.1

Table A1. Racial composition of school districts with and without open enrollment: 2017–18 school year

District	Percent white			Percent black		
	With OE	Without OE	Effect of OE	With OE	Without OE	Effect of OE
Woodmore Local	86.9	87.3	−0.4	0.5	0.6	−0.1
Woodridge Local	64.2	63.1	1.1	21.3	21.8	−0.4
Wooster City	84.7	85.1	−0.3	2.6	2.6	0.1
Worthington City	68.0	68.0	0.0	9.5	9.5	0.0
Wynford Local	96.1	96.5	−0.4	0.9	0.3	0.5
Wyoming City	75.5	75.5	0.0	10.7	10.7	0.0
Xenia Community City	73.8	74.7	−1.0	11.9	11.4	0.5
Yellow Springs Exempted Village	69.0	67.9	1.1	6.9	6.2	0.7
Youngstown City	14.7	24.0	−9.3	58.0	51.1	7.0
Zane Trace Local	95.5	95.6	−0.1	0.7	0.6	0.1
Zanesville City	68.9	74.0	−5.1	10.0	8.0	2.0

Source: Author calculations are from ODE data.

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	Without OE	Effect of OE
Ada Exempted Village	36.7	37.1	−0.4
Adams County Ohio Valley Local	63.4	64.7	−1.3
Adena Local	49.0	49.6	−0.7
Akron City	100.0	99.9	0.1
Alexander Local	44.9	44.4	0.5
Allen East Local	32.3	30.6	1.7
Alliance City	100.0	100.0	0.0
Amanda-Clearcreek Local	40.1	39.7	0.4
Amherst Exempted Village	21.7	23.1	−1.4
Anna Local	12.2	12.0	0.2
Ansonia Local	30.5	31.7	−1.2
Anthony Wayne Local	11.0	11.1	0.0
Antwerp Local	32.9	34.0	−1.1
Arcadia Local	40.0	34.5	5.5
Arcanum-Butler Local	25.4	25.7	−0.3
Archbold-Area Local	26.2	25.5	0.7
Arlington Local	21.6	22.4	−0.8
Ashland City	29.0	30.0	−1.0
Ashtabula Area City	100.0	99.9	0.1
Athens City	41.4	40.5	1.0
Aurora City	8.3	8.4	−0.1
Austintown Local Schools	53.3	45.4	7.9
Avon Lake City	10.5	10.6	−0.1

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Avon Local	11.8	12.0	−0.2
Ayersville Local	31.1	31.9	−0.9
Barberton City	77.3	73.8	3.5
Barnesville Exempted Village	38.8	39.8	−1.0
Batavia Local	44.8	46.4	−1.6
Bath Local	44.7	41.6	3.2
Bay Village City	7.8	7.8	0.0
Beachwood City	11.3	11.3	0.0
Beaver Local	46.0	48.2	−2.2
Beavercreek City	15.3	15.3	−0.1
Bedford City	67.7	67.8	−0.2
Bellaire Local	54.6	53.3	1.4
Bellbrook-Sugarcreek Local	14.4	14.3	0.1
Bellefontaine City	48.7	47.8	0.9
Bellevue City	39.1	38.6	0.5
Belpre City	56.8	55.5	1.3
Benjamin Logan Local	21.6	22.5	−0.9
Benton Carroll Salem Local	38.7	37.9	0.8
Berea City	35.4	35.4	0.0
Berkshire Local	22.3	22.4	−0.2
Berne Union Local	53.1	52.2	0.9
Bethel Local	24.6	24.9	−0.3
Bethel-Tate Local	36.7	37.6	−0.9
Bexley City	9.4	9.5	−0.1
Big Walnut Local	14.3	14.4	−0.1
Black River Local	38.0	36.1	1.9
Blanchester Local	47.8	49.7	−1.9
Bloom-Carroll Local	18.0	18.0	−0.1
Bloomfield-Mespo Local	57.6	57.7	−0.1
Bloom-Vernon Local	52.4	47.3	5.1
Bluffton Exempted Village	18.7	18.8	0.0
Boardman Local	41.9	41.9	0.0
Botkins Local	18.9	19.3	−0.3
Bowling Green City School District	42.0	41.9	0.1
Bradford Exempted Village	46.5	43.3	3.1
Brecksville–Broadview Heights City	13.8	13.9	0.0
Bridgeport Exempted Village	61.6	57.9	3.7
Bright Local	59.6	57.1	2.4
Bristol Local	42.8	38.0	4.9
Brookfield Local	52.2	50.9	1.3
Brooklyn City	60.5	61.1	−0.6
Brookville Local	28.8	28.8	0.0
Brown Local	56.8	57.8	−1.0

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Brunswick City	21.2	21.3	−0.1
Bryan City	44.3	45.3	−1.1
Buckeye Central Local	43.7	42.3	1.4
Buckeye Local	58.1	53.2	4.9
Buckeye Local	61.5	60.6	0.8
Buckeye Local	24.0	22.9	1.0
Buckeye Valley Local	21.4	22.3	−1.0
Bucyrus City	68.0	63.2	4.8
Caldwell Exempted Village	45.4	46.9	−1.5
Cambridge City	56.0	57.3	−1.3
Campbell City	85.9	81.8	4.0
Canal Winchester Local	33.5	33.3	0.2
Canfield Local	11.0	11.4	−0.4
Canton City	100.0	100.0	0.0
Canton Local	86.0	85.8	0.2
Cardinal Local	42.6	41.6	1.0
Cardington-Lincoln Local	42.9	41.8	1.2
Carey Exempted Village Schools	30.1	31.8	−1.7
Carlisle Local	33.3	32.4	0.9
Carrollton Exempted Village	52.3	51.7	0.6
Cedar Cliff Local	26.6	22.5	4.2
Celina City	43.6	42.0	1.6
Centerburg Local	21.5	22.1	−0.6
Centerville City	17.1	17.1	0.0
Central Local	36.2	34.8	1.3
Chagrin Falls Exempted Village	5.3	5.3	0.0
Champion Local	30.9	31.6	−0.7
Chardon Local	17.3	17.2	0.0
Chesapeake Union Exempted Village	66.1	65.5	0.6
Chillicothe City	99.9	99.7	0.2
Chippewa Local	29.3	29.0	0.3
Cincinnati Public Schools	83.6	84.1	−0.5
Circleville City	79.0	77.7	1.3
Clark-Shawnee Local	47.1	40.3	6.8
Clay Local	62.1	52.9	9.2
Claymont City	98.4	93.8	4.5
Clear Fork Valley Local	35.1	34.9	0.2
Clearview Local	100.0	100.0	0.0
Clermont Northeastern Local	40.7	39.1	1.6
Cleveland Heights–University Heights City	99.5	99.5	0.0
Cleveland Municipal	100.0	100.0	0.0
Clinton-Massie Local	23.1	23.8	−0.8
Cloverleaf Local	27.4	27.1	0.2
Clyde–Green Springs Exempted Village	43.7	43.1	0.6

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	Without OE	Effect of OE
Coldwater Exempted Village	17.6	17.8	−0.2
College Corner Local	50.4	54.1	−3.7
Colonel Crawford Local	38.5	39.9	−1.3
Columbia Local	28.4	28.1	0.3
Columbiana Exempted Village	28.6	29.5	−0.9
Columbus City School District	100.0	100.0	0.0
Columbus Grove Local	25.3	24.7	0.5
Conneaut Area City	61.1	61.3	−0.2
Conotton Valley Union Local	55.2	54.4	0.7
Continental Local	35.0	32.0	3.0
Copley-Fairlawn City	17.2	18.9	−1.7
Cory-Rawson Local	37.2	34.9	2.3
Coshocton City	99.2	95.9	3.3
Coventry Local	59.0	43.8	15.1
Covington Exempted Village	36.7	36.7	0.0
Crestline Exempted Village	97.2	86.6	10.6
Crestview Local	39.0	40.7	−1.7
Crestview Local	42.5	42.6	−0.1
Crestview Local	38.1	36.1	2.0
Crestwood Local	35.3	34.9	0.4
Crooksville Exempted Village	100.0	100.0	0.0
Cuyahoga Falls City	48.2	43.2	5.0
Cuyahoga Heights Local	19.8	19.9	−0.1
Dalton Local	25.7	25.8	−0.2
Danbury Local	32.5	32.8	−0.3
Danville Local	50.0	53.0	−3.0
Dawson-Bryant Local	98.9	98.0	0.8
Dayton City	92.0	91.5	0.5
Deer Park Community City	40.7	41.3	−0.7
Defiance City	54.3	53.6	0.7
Delaware City	35.8	35.6	0.2
Delphos City	44.3	43.4	0.9
Dover City	38.1	38.5	−0.4
Dublin City	12.3	12.3	0.0
East Cleveland City School District	98.4	98.4	0.0
East Clinton Local	56.1	55.9	0.2
East Guernsey Local	48.6	47.4	1.2
East Holmes Local	30.2	29.6	0.6
East Knox Local	39.3	35.1	4.2
East Liverpool City	93.0	88.4	4.6
East Muskingum Local	31.7	33.0	−1.3
East Palestine City	55.8	51.9	4.0
Eastern Local	52.1	55.5	−3.4

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Eastern Local School District	52.2	51.1	1.1
Eastern Local School District	100.0	100.0	0.0
Eastwood Local	23.4	24.4	−1.0
Eaton Community City	42.7	42.9	−0.1
Edgerton Local	39.4	37.7	1.7
Edgewood City	41.2	41.4	−0.3
Edison Local	52.2	54.3	−2.1
Edison Local (formerly Berlin-Milan)	34.1	33.9	0.2
Edon Northwest Local	43.2	42.8	0.4
Elgin Local	55.4	51.2	4.3
Elida Local	51.8	49.8	2.0
Elmwood Local	43.3	42.5	0.8
Elyria City Schools	73.1	71.9	1.2
Euclid City	96.9	96.9	−0.1
Evergreen Local	26.3	26.5	−0.2
Fairbanks Local	14.9	14.4	0.5
Fairborn City	73.4	73.4	0.0
Fairfield City	42.7	42.3	0.4
Fairfield Local	35.9	38.2	−2.3
Fairfield Union Local	37.3	36.6	0.7
Fairland Local	53.4	55.5	−2.1
Fairlawn Local	26.6	35.9	−9.2
Fairless Local	45.3	43.5	1.8
Fairport Harbor Exempted Village	56.2	47.9	8.3
Fairview Park City	27.1	27.1	0.0
Fayette Local	55.0	53.5	1.4
Fayetteville-Perry Local	42.8	42.6	0.3
Federal Hocking Local	99.6	99.3	0.3
Felicity-Franklin Local	55.9	56.0	−0.1
Field Local	32.9	28.9	4.0
Findlay City	39.2	38.9	0.2
Finneytown Local	51.7	52.3	−0.6
Firelands Local	34.0	32.2	1.7
Forest Hills Local	8.9	9.1	−0.1
Fort Frye Local	48.7	50.4	−1.7
Fort Loramie Local	6.5	6.6	0.0
Fort Recovery Local	8.2	8.2	0.0
Fostoria City	78.0	73.0	5.0
Franklin City	65.7	65.1	0.5
Franklin Local	51.4	54.0	−2.6
Franklin Monroe Local	20.8	23.3	−2.4
Fredericktown Local	38.2	38.9	−0.7
Fremont City	75.6	74.9	0.7

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Frontier Local	42.4	43.2	−0.8
Gahanna-Jefferson City	27.6	27.6	−0.1
Galion City	62.5	61.2	1.3
Gallia County Local	99.0	96.9	2.0
Gallipolis City	59.2	61.2	−2.0
Garaway Local	34.0	36.6	−2.6
Garfield Heights City Schools	75.0	75.2	−0.3
Geneva Area City	56.2	52.9	3.3
Genoa Area Local	31.1	29.8	1.3
Georgetown Exempted Village	56.3	58.2	−1.9
Gibsonburg Exempted Village	42.6	40.2	2.4
Girard City School District	59.3	61.1	−1.8
Goshen Local	51.8	52.9	−1.1
Graham Local	35.9	34.2	1.7
Grand Valley Local	48.6	47.4	1.2
Grandview Heights Schools	7.6	7.6	0.0
Granville Exempted Village	5.0	4.9	0.0
Green Local	55.2	51.6	3.6
Green Local	19.6	20.5	−0.9
Green Local	27.4	26.4	1.0
Greeneview Local	38.4	37.1	1.3
Greenfield Exempted Village	61.0	60.8	0.1
Greenon Local	39.5	37.8	1.7
Greenville City	52.6	50.2	2.4
Groveport Madison Local	67.1	67.2	−0.1
Hamilton City	68.8	68.9	−0.1
Hamilton Local	63.2	63.4	−0.1
Hardin Northern Local	42.7	39.4	3.3
Hardin-Houston Local	32.4	30.1	2.3
Harrison Hills City	52.5	51.4	1.0
Heath City	41.6	42.2	−0.7
Hicksville Exempted Village	38.2	39.3	−1.1
Highland Local	6.6	6.7	−0.1
Highland Local	37.5	37.2	0.2
Hilliard City	26.8	26.9	0.0
Hillsboro City	63.6	63.4	0.2
Hillsdale Local	35.1	33.6	1.5
Holgate Local	36.1	35.0	1.1
Hopewell-Loudon Local	26.5	25.8	0.7
Howland Local	43.1	44.3	−1.3
Hubbard Exempted Village	41.0	41.0	0.1
Huber Heights City	53.8	53.4	0.4
Hudson City	5.8	5.9	−0.1

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Huntington Local	99.7	99.7	0.0
Huron City Schools	29.4	28.3	1.2
Independence Local	9.2	9.2	0.0
Indian Creek Local	51.9	60.5	−8.7
Indian Hill Exempted Village	5.3	5.4	−0.1
Indian Lake Local	47.8	47.5	0.4
Indian Valley Local	49.6	52.3	−2.7
Ironton City School District	94.2	94.2	0.1
Jackson Center Local	27.8	27.3	0.5
Jackson City	55.0	56.4	−1.4
Jackson Local	17.5	17.9	−0.5
Jackson-Milton Local	43.3	40.9	2.3
James A Garfield Local	41.1	35.8	5.3
Jefferson Area Local	45.1	43.9	1.2
Jefferson Local	45.1	45.8	−0.7
Jefferson Township Local	97.5	96.9	0.6
Jennings Local	19.9	18.5	1.5
Johnstown-Monroe Local	21.4	21.0	0.3
Jonathan Alder Local	23.7	23.8	−0.1
Joseph Badger Local	45.1	44.5	0.7
Kalida Local	9.2	9.1	0.2
Kelleys Island Local	0.0	0.0	0.0
Kenston Local	10.1	10.3	−0.2
Kent City	46.8	46.3	0.4
Kenton City	62.7	63.4	−0.7
Kettering City School District	42.5	42.5	0.0
Keystone Local	27.7	28.4	−0.7
Kings Local	19.8	20.0	−0.2
Kirtland Local	10.6	10.6	0.0
LaBrae Local	65.1	67.3	−2.2
Lake Local	17.4	17.8	−0.4
Lake Local	33.6	32.9	0.7
Lakeview Local	29.4	30.5	−1.1
Lakewood City	46.2	46.4	−0.2
Lakewood Local	48.0	46.8	1.2
Lakota Local	22.9	22.4	0.5
Lakota Local	44.5	42.9	1.6
Lancaster City	57.4	56.7	0.7
Lebanon City	21.5	21.4	0.1
Leetonia Exempted Village	65.9	62.1	3.8
Leipsic Local	53.7	51.4	2.3
Lexington Local	26.5	27.2	−0.8
Liberty Center Local	26.4	25.8	0.5

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	Without OE	Effect of OE
Liberty Local	69.8	61.4	8.4
Liberty Union–Thurston Local	37.4	38.3	−1.0
Liberty-Benton Local	20.8	19.9	0.9
Licking Heights Local	40.9	41.1	−0.2
Licking Valley Local	38.2	37.8	0.5
Lima City	100.0	100.0	0.0
Lincolnview Local	32.2	26.0	6.2
Lisbon Exempted Village	57.7	59.7	−2.0
Little Miami Local	17.7	17.6	0.1
Lockland Local	97.9	95.7	2.2
Logan Elm Local	47.0	46.9	0.1
Logan-Hocking Local	73.7	73.5	0.2
London City	40.6	40.7	−0.1
Lorain City	97.0	95.5	1.5
Lordstown Local	33.2	30.6	2.6
Loudonville-Perrysville Exempted Village	41.6	41.5	0.1
Louisville City	34.2	33.9	0.3
Loveland City	14.0	14.2	−0.1
Lowellville Local	48.5	33.5	15.0
Lucas Local	30.0	30.9	−0.9
Lynchburg-Clay Local	45.6	46.6	−1.0
Mad River Local	61.6	60.0	1.6
Madeira City	7.5	7.7	−0.1
Madison Local	36.8	36.7	0.1
Madison Local	38.9	38.9	0.0
Madison Local	64.5	63.4	1.1
Madison-Plains Local	49.1	46.9	2.2
Manchester Local	97.5	96.6	1.0
Manchester Local	23.9	25.0	−1.1
Mansfield City	84.2	82.3	1.9
Maple Heights City	93.3	93.5	−0.1
Mapleton Local	42.7	41.6	1.1
Maplewood Local	39.5	40.1	−0.7
Margaretta Local	36.1	29.8	6.3
Mariemont City	12.0	12.4	−0.4
Marietta City	51.9	51.4	0.5
Marion City	99.8	93.3	6.5
Marion Local	4.2	3.9	0.3
Marlington Local	50.0	45.1	4.9
Martins Ferry City	63.6	64.0	−0.4
Marysville Exempted Village	23.5	23.2	0.3
Mason City	9.6	9.8	−0.2
Massillon City	100.0	100.0	0.0

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Mathews Local	41.3	38.9	2.4
Maumee City	34.1	34.8	−0.7
Mayfield City	27.4	27.4	0.0
Maysville Local	98.6	97.2	1.4
McComb Local	37.5	35.4	2.1
McDonald Local	34.7	31.7	3.1
Mechanicsburg Exempted Village	31.4	32.4	−1.0
Medina City SD	19.6	19.9	−0.3
Meigs Local	99.0	93.1	5.9
Mentor Exempted Village	28.6	28.7	−0.1
Miami East Local	20.1	20.7	−0.6
Miami Trace Local	48.5	47.6	0.9
Miamisburg City	34.4	34.7	−0.3
Middletown City	100.0	99.8	0.2
Midview Local	36.6	35.4	1.2
Milford Exempted Village	22.6	22.7	−0.1
Millcreek–West Unity Local	46.6	42.8	3.8
Miller City–New Cleveland Local	9.8	11.2	−1.4
Milton-Union Exempted Village	41.3	41.4	0.0
Minerva Local	48.7	48.6	0.1
Minford Local	52.6	48.3	4.3
Minster Local	12.3	11.9	0.4
Mississinawa Valley Local	55.2	53.8	1.5
Mogadore Local	37.2	34.9	2.3
Mohawk Local	31.3	29.7	1.7
Monroe Local	31.5	31.0	0.5
Monroeville Local	32.4	32.9	−0.4
Montpelier Exempted Village	46.8	48.3	−1.4
Morgan Local	100.0	100.0	0.0
Mount Gilead Exempted Village	51.8	53.1	−1.3
Mount Vernon City	50.3	51.1	−0.8
Mt Healthy City	95.3	93.8	1.5
Napoleon Area City	40.3	40.0	0.3
National Trail Local	45.3	45.6	−0.3
Nelsonville-York City	67.6	68.0	−0.3
New Albany–Plain Local	7.6	7.6	0.0
New Boston Local	98.8	92.2	6.6
New Bremen Local	7.6	8.9	−1.3
New Knoxville Local	14.3	13.4	0.9
New Lebanon Local School District	52.2	49.8	2.4
New Lexington School District	100.0	99.9	0.1
New London Local	43.2	44.7	−1.6
New Miami Local	100.0	95.5	4.5

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
New Philadelphia City	47.6	48.2	−0.6
New Richmond Exempted Village	41.6	44.2	−2.6
New Riegel Local	25.0	26.2	−1.2
Newark City	57.9	58.0	0.0
Newbury Local	36.2	30.6	5.6
Newcomerstown Exempted Village	83.6	82.9	0.6
Newton Falls Exempted Village	58.7	57.3	1.4
Newton Local	18.9	18.0	0.9
Niles City	78.4	77.9	0.5
Noble Local	46.9	42.8	4.1
Nordonia Hills City	16.1	16.2	0.0
North Baltimore Local	54.6	53.6	1.0
North Canton City	20.6	20.7	−0.2
North Central Local	45.2	44.3	0.9
North College Hill City	79.1	79.3	−0.1
North Fork Local	42.0	40.9	1.1
North Olmsted City	39.5	39.5	0.0
North Ridgeville City	21.5	21.6	−0.1
North Royalton City	18.3	18.4	0.0
North Union Local School District	38.7	39.3	−0.7
Northeastern Local	34.8	31.5	3.3
Northeastern Local	23.4	23.3	0.1
Northern Local	35.9	36.2	−0.3
Northmont City	36.3	36.2	0.0
Northmor Local	44.3	43.4	0.9
Northridge Local	31.4	29.1	2.3
Northridge Local	99.6	99.5	0.1
Northwest Local	55.6	55.4	0.2
Northwest Local	79.1	74.9	4.2
Northwest Local	32.6	30.9	1.7
Northwestern Local	32.7	32.3	0.4
Northwestern Local	40.7	41.5	−0.8
Northwood Local Schools	53.7	47.3	6.5
Norton City	40.5	34.9	5.6
Norwalk City	49.3	49.4	−0.1
Norwayne Local	29.9	31.9	−2.0
Norwood City	74.6	74.6	0.0
Oak Hill Union Local	77.3	72.3	4.9
Oak Hills Local	21.5	21.7	−0.2
Oakwood City	4.3	4.3	0.0
Oberlin City Schools	73.8	71.9	1.9
Old Fort Local	41.6	38.1	3.4
Olentangy Local	7.1	7.2	0.0

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Olmsted Falls City	17.9	18.0	−0.2
Ontario Local	38.8	36.5	2.3
Orange City	13.1	13.1	0.0
Oregon City	34.1	33.6	0.5
Orrville City	52.1	51.3	0.8
Osnaburg Local	49.8	46.9	2.9
Otsego Local	24.4	24.5	−0.1
Ottawa Hills Local	1.3	1.4	−0.1
Ottawa-Glandorf Local	20.1	20.6	−0.5
Ottoville Local	12.4	13.5	−1.2
Painesville City Local	99.4	99.1	0.3
Paint Valley Local	99.0	93.6	5.5
Pandora-Gilboa Local	19.8	17.8	2.0
Parkway Local	28.3	29.3	−0.9
Parma City	46.3	46.7	−0.4
Patrick Henry Local	30.8	30.4	0.4
Paulding Exempted Village	48.5	46.5	2.0
Perkins Local	43.0	35.2	7.8
Perry Local	99.6	89.7	9.9
Perry Local	29.6	29.9	−0.3
Perry Local	42.2	40.2	1.9
Perrysburg Exempted Village	11.7	11.8	−0.1
Pettisville Local	24.1	23.1	1.0
Pickerington Local	26.2	26.3	−0.1
Pike-Delta-York Local	39.3	37.5	1.9
Piqua City	53.3	53.4	−0.1
Plain Local	47.4	47.3	0.1
Pleasant Local	33.7	38.6	−5.0
Plymouth-Shiloh Local	59.6	62.7	−3.1
Poland Local	14.0	14.4	−0.4
Port Clinton City	47.1	46.1	1.0
Portsmouth City	97.9	97.0	1.0
Preble Shawnee Local	53.4	52.0	1.4
Princeton City	70.8	70.9	−0.1
Put-In-Bay Local	3.1	3.1	0.0
Pymatuning Valley Local	65.1	64.8	0.4
Ravenna City	100.0	100.0	0.0
Reading Community City	61.5	60.3	1.2
Revere Local	4.5	5.3	−0.9
Reynoldsburg City	62.1	60.0	2.1
Richmond Heights Local	64.3	64.3	−0.1
Ridgedale Local	53.8	46.9	6.9
Ridgemont Local	29.9	26.8	3.1

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Ridgewood Local	56.7	56.6	0.2
Ripley-Union-Lewis-Huntington Local	63.7	62.6	1.2
Rittman Exempted Village	48.7	48.0	0.8
River Valley Local	41.4	42.3	−0.9
River View Local	57.8	56.9	0.9
Riverdale Local	36.8	36.3	0.5
Riverside Local	31.4	31.3	0.1
Riverside Local	45.9	42.8	3.1
Rock Hill Local	98.7	97.5	1.2
Rocky River City	13.8	13.8	0.0
Rolling Hills Local	75.2	72.0	3.1
Rootstown Local	27.9	26.0	1.9
Ross Local	25.0	25.4	−0.3
Rossford Exempted Village	43.4	40.9	2.6
Russia Local	9.0	9.1	−0.1
Salem City	55.0	54.3	0.7
Sandusky City	98.9	98.8	0.1
Sandy Valley Local	52.1	50.2	1.9
Scioto Valley Local	99.2	98.6	0.6
Sebring Local	98.7	89.5	9.2
Seneca East Local	27.9	28.6	−0.6
Shadyside Local	31.5	32.4	−0.9
Shaker Heights City	32.0	32.5	−0.5
Shawnee Local	31.2	28.6	2.6
Sheffield–Sheffield Lake City	42.7	42.8	−0.1
Shelby City	49.8	50.1	−0.3
Sidney City	61.9	57.3	4.6
Solon City	12.0	11.9	0.0
South Central Local	48.8	49.2	−0.4
South Euclid–Lyndhurst City	61.4	61.3	0.1
South Point Local	97.5	94.7	2.8
South Range Local	25.3	22.8	2.5
Southeast Local	45.6	44.3	1.2
Southeast Local	40.6	40.1	0.6
Southeastern Local	34.3	33.0	1.4
Southeastern Local	59.1	56.9	2.2
Southern Local	99.0	92.9	6.1
Southern Local	61.1	64.0	−2.9
Southern Local	100.0	100.0	0.0
Southington Local	50.7	47.5	3.2
Southwest Licking Local	30.1	30.2	−0.1
Southwest Local	41.7	41.7	−0.1
South-Western City	60.3	60.3	0.0

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Spencerville Local	39.3	42.2	−2.9
Springboro Community City	7.6	7.7	−0.1
Springfield City School District	99.9	99.9	0.0
Springfield Local	47.6	48.3	−0.7
Springfield Local	29.3	29.5	−0.3
Springfield Local	58.6	52.4	6.1
St. Bernard–Elmwood Place City	85.7	83.7	2.1
St. Clairsville-Richland City	26.9	27.8	−0.8
St. Henry Consolidated Local	11.1	10.9	0.2
St. Marys City	51.2	49.4	1.8
Steubenville City	99.3	97.7	1.5
Stow–Munroe Falls City School District	24.6	23.7	0.9
Strasburg-Franklin Local	33.3	32.7	0.5
Streetsboro City	40.0	39.7	0.2
Strongsville City	20.6	20.6	0.0
Struthers City	69.1	65.0	4.0
Stryker Local	47.4	45.4	2.0
Swanton Local	43.9	43.0	0.9
Switzerland of Ohio Local	60.7	58.2	2.4
Sycamore Community City	15.9	15.9	0.0
Sylvania Schools	23.8	24.2	−0.4
Symmes Valley Local	97.8	97.0	0.8
Talawanda City	32.3	32.8	−0.5
Tallmadge City	22.8	24.2	−1.5
Teays Valley Local	30.4	30.5	−0.1
Tecumseh Local	63.7	64.3	−0.5
Three Rivers Local	37.4	36.2	1.2
Tiffin City	42.6	42.3	0.2
Tipp City Exempted Village	14.9	15.2	−0.3
Toledo City	93.2	92.6	0.6
Toronto City	56.3	61.4	−5.1
Triad Local	38.5	35.3	3.2
Tri-County North Local	42.1	42.5	−0.3
Trimble Local	99.5	96.1	3.4
Tri-Valley Local	40.5	42.6	−2.1
Tri-Village Local	42.7	41.4	1.3
Triway Local	39.4	37.9	1.5
Trotwood-Madison City	98.7	97.6	1.0
Troy City	37.6	36.4	1.2
Tuscarawas Valley Local	31.4	29.9	1.5
Tuslaw Local	35.2	31.2	4.0
Twin Valley Community Local	47.7	45.8	1.8
Twinsburg City	17.6	17.6	−0.1

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Union Local	35.4	36.0	−0.6
Union-Scioto Local	58.8	56.0	2.8
United Local	41.6	40.9	0.7
Upper Arlington City	3.9	3.9	0.0
Upper Sandusky Exempted Village	37.2	37.0	0.1
Upper Scioto Valley Local	59.4	50.9	8.5
Urbana City	54.2	52.6	1.6
Valley Local	52.5	52.9	−0.4
Valley View Local	33.6	33.8	−0.2
Van Buren Local	12.8	12.8	0.0
Van Wert City	48.3	48.4	−0.1
Vandalia-Butler City	30.3	30.7	−0.3
Vanlue Local	41.9	34.8	7.1
Vermilion Local	39.4	38.8	0.5
Versailles Exempted Village	13.2	12.9	0.3
Vinton County Local	97.6	96.4	1.3
Wadsworth City	24.3	24.5	−0.3
Walnut Township Local	56.4	55.0	1.3
Wapakoneta City	41.3	40.3	1.0
Warren City	99.1	96.1	3.0
Warren Local	38.2	38.1	0.1
Warrensville Heights City	99.3	99.3	0.0
Washington Court House City	60.3	61.0	−0.7
Washington Local	58.7	59.1	−0.4
Washington-Nile Local	82.4	81.1	1.3
Waterloo Local	37.2	35.2	2.1
Wauseon Exempted Village	37.0	37.6	−0.7
Waverly City	99.8	99.7	0.1
Wayne Local	19.0	18.3	0.7
Wayne Trace Local	37.9	38.2	−0.4
Waynesfield-Goshen Local	27.4	27.3	0.1
Weathersfield Local	53.9	53.8	0.1
Wellington Exempted Village	38.4	37.5	0.9
Wellston City	98.4	95.0	3.4
Wellsville Local	98.9	97.3	1.6
West Branch Local	42.0	40.1	2.0
West Carrollton City	62.1	61.6	0.5
West Clermont Local	40.3	39.1	1.2
West Geauga Local	10.3	10.3	0.0
West Holmes Local	44.5	44.3	0.2
West Liberty-Salem Local	21.1	22.8	−1.7
West Muskingum Local	44.0	43.2	0.8
Western Brown Local	54.5	53.8	0.6

Table A2. Percent of economically disadvantaged students in school districts with and without open enrollment: 2017–18 school year

District	Economic disadvantage		
	With OE	**Without OE**	**Effect of OE**
Western Local	98.6	98.8	−0.2
Western Reserve Local	46.9	45.1	1.8
Western Reserve Local	29.1	30.5	−1.4
Westerville City	36.9	37.0	−0.1
Westfall Local	44.9	43.5	1.4
Westlake City	20.6	20.7	−0.1
Wheelersburg Local	39.4	39.7	−0.2
Whitehall City	95.8	95.7	0.2
Wickliffe City	40.3	40.4	0.0
Willard City	63.0	61.0	2.0
Williamsburg Local	41.1	40.9	0.2
Willoughby-Eastlake City	35.8	35.9	−0.1
Wilmington City	51.5	49.8	1.7
Windham Exempted Village	100.0	100.0	0.0
Winton Woods City	72.2	71.2	1.0
Wolf Creek Local	38.5	38.0	0.5
Woodmore Local	23.8	22.9	0.9
Woodridge Local	43.0	43.8	−0.8
Wooster City	44.7	44.8	0.0
Worthington City	25.2	25.3	0.0
Wynford Local	37.0	36.4	0.6
Wyoming City	6.5	6.5	0.0
Xenia Community City	85.9	85.4	0.5
Yellow Springs Exempted Village	39.7	34.1	5.6
Youngstown City	98.1	96.0	2.0
Zane Trace Local	47.3	45.9	1.5
Zanesville City	95.1	90.7	4.4

Source: Author calculations from ODE data.