

Research Article

Student Population Change in Rural Illinois Schools and Its Implications for School Leaders

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This paper examines rural public school student population change in Illinois and explores the implications of these changes on educational leadership. Secondary analysis of 16 years of data from NCES Common Core of Data Universe Surveys illuminates population change in terms of student enrollment and demographic characteristics. Findings suggest that these changes have occurred over the 16 year period and present potentially considerable challenges for school leaders especially given the broader state climate.

The state of Illinois represents a dynamic context for public education in rural places. Over the last decade, the state has implemented statewide evaluation and accountability measures while vying for competitive grants through the Race to the Top program and to align with its adoption and implementation of the Common Core State Standards. Amidst these policy changes, the state has failed to meet its General State Aid funding obligations with shortfalls in excess of \$500 million during three of the last five reported years and has held its GSA foundation fixed at \$6,119 per pupil since FY 2010 (ISBE, 2016). As a result, property poor districts are faced with continually raising property taxes and levies to keep their school doors open (Wheeler, 2017). In August of 2017, Illinois passed and signed into law SB-1947, which overhauled the existing General State Aid and school funding structure into an evidence-based, or adequacy, funding structure (Invest in Kids Act, 2017). Given the state's recent history of funding shortfalls for its education obligations, it is unclear whether the new funding structure will result in realized changes for the state's public schools. As such, Illinois remains a state in financial turmoil in terms of education funding and, containing the 5th largest total of LEAs and 4th largest total of public schools in the U.S. during the 2013-2014 school year (Glander, 2015b), also remains a state that is critical towards understanding how these contexts influence and shape how leaders and schools function in rural locales.

Amidst this financial turmoil that frames the backdrop of the Illinois education climate, there are other changes at work that may shape and influence public education: population change, particularly

decline. Such changes could place further strain on an already taxed system, especially for rural districts that are typically sparsely populated and property poor (Monk, 2007). While there is some literature that explores the declining population and industry of the rural Midwest (Longworth, 2008), not enough has been explored to clearly connect changes in population with rural public education beyond the oft-researched, in terms of rural interests, consolidation of rural schools and districts. Thus, we seek to explore population change in Illinois rural public schools and how it connects to existing literature and research on education leadership.

Review of Literature

Rural places are highly diverse between communities, owing much of this to the distances that separate them, the sparsely populated communities that comprise them, and the large, geographic areas they occupy across the United States. As such, it is difficult to consider rurality in terms of a singularly constructed culture or way of life while simultaneously considering rural broadly (Howley & Howley, 2014). Yet, there are salient features and characteristics that rural-focused literature suggests are common for many rural schools and communities including: community and school size; fiscal efficiency; leadership, especially isolation (as one or a few administrators in a district); and population migration patterns. Such characteristics allow us to conceptualize and frame research focused around rural school issues broadly, while also recognizing the limits to richness and depth that are afforded to more specific research. In this review of literature, we examine these characteristics in terms of rural

public schools starting with the definition of rurality and ending with population migration. Additionally, we will explore literature on rural school leadership to help frame the current understanding of rural leadership and we will explore literature on population change to frame the economic and social theories and observed phenomena in rural places.

Rural Public Schools

The U.S. Census Bureau's (2015) distance-based definition considers rural to be the absence of a high population density. In terms of public schools, this low population is linked to small school enrollment sizes (Snyder & Dillow, 2015). Research on school size and curriculum has consistently found that schools with small enrollment and class sizes offer a less comprehensive and less specialized curriculum than larger schools (Barker, 1985; Monk & Haller, 1993; Howley, 2004). Small school size is also suggestive of a small instructional staff that is broadly trained to teach a wide range of ages and abilities (Monk, 2007).

Distance is another salient characteristic of rural places. For schools, this is suggestive of disproportionately high transportation costs when compared to schools in urban locales (Howley, Johnson, & Petrie, 2011). Similarly, distance should be expected to influence differences in costs of goods and services, potentially adding in considerable variability when compared to more population-dense region that contain more stable markets (Blauwkamp, Longo, & Anderson, 2011). It also can create barriers to accessing professional development opportunities outside of the district (Preston, Jakubiec, & Kooymans, 2013). Rural public schools also suffer from poor economies of scale (Duncombe & Yinger, 2001).

Rural School Leadership

Similar to the literature on rural schools, there is a small but growing research base on rural leadership. This lack of research serves as an impetus for this study. As with enrollment and staff size, the number of rural school leaders in a school and/or district is proportionally small. With few administrators in the building, the burden of leadership is expected to be shouldered by fewer individuals. Rural principals are also likely expected to perform duties and responsibilities beyond traditional leadership roles, such as "cut the lawn, plant flowers, help with the district banquet, help out with graduation . . . all in

the same day" (as quoted in Cruzeiro & Boone, 2009, p. 6). For rural school principals, research also suggests that distance presents a barrier for establishing networks and collaboration between leaders (Stewart & Matthews, 2015), leaving them in relative isolation. A study by Canales, Tejeda-Delgado, and Slate (2008) and those reported in the literature analysis by Preston, Jakubiec, and Kooymans (2013) suggests that rural school principals and superintendents act as the source of leadership in the school/district and they do so in relative isolation. In other words, rural education literature on school leadership suggests that the leadership capacity and effectiveness in these schools is dependent upon the capacity of the individual leader, who acts autonomously within the constraints of the community and local context. This counters the suggestion of broader leadership research, which claims the reality of educational leadership in schools is one of shared and/or distributed leadership and that the school principal cannot sustain shouldering the sole burden of leadership without risking burnout (Marks & Printy, 2003). In this way, rural leadership can be seen as differing from leadership behaviors and expectations of larger, more urban districts, which have been the predominant focus of educational leadership research (Leitner, 1994). Additional pressure may be put on rural administrators as school populations change over time, which is a key focus of this paper.

Population Change: Out-Migration and In-Migration

This paper conceptualizes rural leaders as being influenced by their surrounding contexts, namely population change through out-migration and in-migration phenomena. Simply put: out-migration is the departure of members of the existing population in an area or community. From an economic perspective, out-migration is likely a byproduct of labor demands and markets. Kuznets (1955) suggests that rural spaces, being largely reliant on agriculture as their primary industry, lack the growth potential of urban spaces in terms of industrial development and income. As such, highly skilled and professional labor is more incentivized to migrate into urban markets (Carr & Kefalas, 2009), with both a larger income potential (USDA, 2016) and market demand, than in rural spaces. Similarly, technological advancements and mechanization have improved

agricultural efficiency, both reducing the size of labor and number of small, family farms (Tieken, 2014).

Public education likely plays a critical role in this phenomenon: individuals with a high level of education attainment are more likely to migrate away from rural communities than those without (Weber, Marre, Fisher, Gibbs, & Cromartie, 2007). Indeed, highly successful and ambitious students may pursue post-secondary pathways (i.e. universities) that set them on a course not to return to their communities, leaving only those who wish to remain or lack the resources and/or ability to leave (Reid, 1989; Howley, 2006). Kuznets's (1955) theory also suggests that lower skilled labor may be comparatively more desirable in rural spaces because of a generally lower cost of living and narrower income distribution among residents which advantages lower-skilled workers by setting a higher floor relative to other works than in places with broader income distribution. Indeed, population in-migration has occurred amidst the larger, population out-migration for both labor demand and the natural decline in population as birth numbers decrease and out-migration occurs (Johnson, 2006). Research suggests that this new population does not generally worsen income inequality or lower the economic outlook of these communities and areas since the labor demand is already established (Parrado & Kandel, 2010); however, the demographic, value, and identity characteristics of this new population and individuals may differ from the existing communities' populations, creating tensions with the communities' existing perceptions of identity and values (Longworth, 2008; Peshkin, 1978). A clear gap that this study seeks to address is connecting population change to leadership in public schools that serve these areas given the challenges that may come with population changes. As such, this study seeks to address the following questions:

- How has the demographic composition of Illinois rural public schools changed over the past 16 years and to what degree can rural out-migration and in-migration explain these changes?
- In what ways may these changes in the composition of Illinois rural schools and districts suggest changing the rural context of schooling?
- Could these changes have important implications for rural leadership practice, the functions of rural schools/districts, and education policy?

Methods

Sample

This study conducts secondary analyses of Illinois state survey data from the Common Core of Data (CCD) collected by the National Center for Educational Statistics (NCES). This includes data from the Public Elementary/Secondary School Universe Survey Data and the Local Education Agency (LEA) Finance Survey (F-33) Data spanning a range from academic years 1997-1998 to 2013-2014. The response data collected from these surveys are appropriate for addressing the research questions for two reasons. First, these data sets include student demographic characteristic variables and school/district characteristic variables that have been consistently defined and reliably collected over several decades with only minor changes. Second, the data is collected from universe surveys that contain (ideally) responses from all public school entities in the United States. The study is also focused on rural leadership and population change in what are commonly viewed as "traditional" schools and LEAs. As such, schools and LEAs included in this study for analysis are those that are categorized by NCES as *regular* (Type I) public schools that report an enrollment of at least one student.

Variable selection

School level variables selected for analysis come from the Public Elementary/Secondary School Universe Survey Data. This survey includes self-reported data on school and student characteristics including locale code, full-time equivalent positions (FTE). Student population characteristic variables selected for analysis include student enrollment tallies and student enrollment by race tallies. These variables are critical for reporting longitudinal trends in student enrollment and other relevant descriptive statistics. For the purpose of this study, only the three largest categories by membership, Black, Latino/a, and White, are used because the remaining membership categories include only a miniscule share of the rural student population in Illinois.

Student poverty. In educational research, student free and reduced-price lunch (FRPL) eligibility status is commonly used as a proxy for socioeconomic status, especially since it is the only income-related variable collected by NCES at the school level (Snyder & Musu-Gillette, 2015). It is

important to note that the enactment of the Community Eligibility Provision (CEP), as a part of the Healthy, Hunger Free Kids Act of 2010, allows LEAs and/or schools with at least 40% of its student population eligible for free lunch to serve free breakfast and lunch to all students and are no longer required to collect eligibility forms (United State Department of Agriculture, 2015). Illinois was designated as one of the initial states for CEP in 2010; however, CEP qualifications still allow FRPL to be used as a general indicator of a school's poverty context because the eligible schools and LEAs already contain a high level of eligible students (Snyder & Musu-Gillette, 2015).

District finance. While LEA finance is not the primary focus of this research, certain variables reported in the LEA Finances Survey (F-33) are included to frame a broader school and LEA context and to further contextualize changes occurring in these schools in terms of leadership practice and the functions of rural schools. The finance variables include: total revenues, general state formula assistance, property tax revenues, total expenses, and total LEA student enrollment. To account for inflation, adjustments to 2017 dollars will be made using the Consumer Price Index Urban (CPI-U) annual averages estimated by the Bureau of Labor Statistics (2017). The annual indices applied are from the first year of the corresponding academic year.

Analytical Approach

The analysis strategy for this study considers two levels: school and LEA. We prepared the school level data across years matching variables over time and merging these data with LEA financial data. The key challenge for our analysis was in defining rural in a way that captured the key issues we cared about.

Defining rural. We must first begin by acknowledging that the definition of *rural* in academic literature is problematic. In general, quantitative education research, the definition of *rural* relies primarily on the U.S. Census Bureau's urban-rural classification system used by NCES. Such a use considers rural in terms of distance or absence of urban, which ignores the messiness and complexity of culture that these diverse settings may possess and that might inform more richly (Howley & Howley, 2014). Even in research by rural scholars, the definition of *rural* lacks consistency and consensus (Arnold, Newman, Gaddy, & Dean, 2005).

Thus, a clear tension exists: the diversity and complexity of the specific and the necessity of the general. We acknowledge the limitations of this research in terms of understanding the cultural complexity of rural spaces; however, we also recognize the need to call attention to the broad trends occurring in these rural schools and communities.

Our rural definition strategy uses the current NCES classification system and then modifies it to both include and exclude locale types that we argue do not consistently reflect nor represent the salient characteristics of rural schools discussed in the review of literature. NCES categorizes schools into 12 locale definitions based on urban-rural definitions used by the U.S. Census Bureau, which defines *rural* as being removed from high-density population centers (U.S. Census Bureau, 2015). The 12 definitions are grouped into four categories: *city*, *suburb*, *town*, and *rural*. Each category has three subcategories. For *city* and *suburb* categories, subcategory definitions are based on size. Both *city* and *suburb* comprise what is considered to be an urbanized area (UA) (Glander, 2015a). For *town* and *rural* categories, the subcategory definitions rely on the size of the community and its distance to UAs. We argue that the use of the NCES definitions without modification is likely to confound the findings of the study. First, NCES changed the way it defines school locales from an 8-category system based on the Office of Management and Budget to its current 12-type (4-category) system beginning with the 2006-07 survey year. Similarly, schools and LEAs can and do change their classification type over time as their proximity to UAs and the population density of their communities change. Thus, the locale type assigned to each school and LEA is inconsistent over the 16-year period. To address this issue and to allow for schools to be consistently defined throughout the 16-year range, we retroactively applied locale definitions based on the 2013-2014 survey data or, if this was not possible, the most recently observed year.

Second, two subcategory classification definitions are problematic: *rural-fringe* and *town-fringe*, which are generally those closest to UAs. Examination of the locale assignments in the CCD data shows that schools designated *rural-fringe* can and do become redefined as *suburb-small* over time. In terms of urban expansion, this makes sense: immigration to the *rural-fringe* is a result of more rural-located residents moving to the city and city

Table 1

Select Comparison Statistics for Illinois Public Schools¹ with NCES Definitions for the 2013–2014 School Year

Category	Suburb	Rural-Fringe	Rural-Distant	Rural-Remote
Mean Enrollment	617.39	448.92	197.80	187.74
Mean % FRPL	44.03	36.22	42.10	50.14
Mean % Non-White	48.53	17.97	7.14	4.50
Mean FTE ²	37.05	27.22	14.48	13.20

¹Includes only schools that are Type I (traditional) public schools that report enrollment of at least 1 student member.

²307 schools did not report FTE FY 2013 – 2014.

Table 2

Select Comparison Statistics for Illinois Public Schools¹ with New Definitions for the 2013–2014 School Year

Category	Suburb (NCES)	Rural-Fringe as Suburb	Rural-Fringe as Rural	Rural ²
Mean Enrollment	617.39	580.63	313.62	196.45
Mean % FRPL	44.03	29.96	38.57	43.18
Mean % Non-White	48.53	22.57	11.04	6.79
Mean FTE ³	37.05	34.10	19.47	14.07

¹Includes only schools that are Type I (traditional) public schools that report enrollment of at least 1 student member.

²Rural includes NCES classified *rural-distant* and *rural-remote* schools.

³307 schools did not report FTE FY 2013 – 2014.

residents escaping urban sprawl to live in commuter communities (Johnson, 2006). Table 1 provides a clear comparison between Illinois suburban and rural public schools.

Schools in the rural-fringe have considerably larger student enrollment, on average, than *distant* and *remote* schools and the other mean characteristics fall between *suburb* and *distant/remote*. Similarly, schools located in these fringe categories can also be a part of LEAs that have either a predominantly UA student enrollment or have a significant share of students coming from UAs.

We then reclassified *town-fringe* and *rural-fringe* as urban based on proximity to UAs or if the LEAs contained predominantly urban students. This was accomplished by aggregating the 2013-2014

student enrollment data to the LEA level and analyzing shares of students in each LEA based on school locale-type. Using this strategy, all *town-fringe* schools were reclassified as an urban locale and 134 out of 218 *rural-fringe* schools were reclassified as an urban locale. We then renamed the *town* category to *town-rural* to reflect its conceptually and contextually similar characteristics, particularly in terms of proximity to UAs and generally low population density. We believe that the results of our modifications to the rural definitions in the CCD create categories that are, on average, much more distinct from one another (see Table 2) and provide for more valid comparisons across rural and non-rural classifications by eliminating some confounding geographic areas and conceptually

Table 3

Illinois Public School¹ Count by Locale for Years 1997 – 1998 to 2013 – 2014

	Years								
	97-98	99-00	01-02	03-04	05-06	07-08	09-10	11-12	13-14
State Total	3,863	3,909	3,913	3,910	3,899	3,916	4,005	3,971	3,890
City	938	949	954	962	971	968	998	995	952
Suburb	1,645	1,690	1,718	1,738	1,757	1,794	1,850	1,848	1,835
Town-Rural	460	454	440	426	420	420	432	422	416
Rural	820	816	801	784	751	734	725	706	687

¹Includes only schools that are Type I (traditional) public schools that report enrollment of at least 1 student member. Total public school count, including those that are not Type I public schools, for year 2013-2014 is 4,204 (Glander, 2015b).

problematic locations from the “rural” classification. Figure 1 shows the final statewide distribution of *rural* and *town-rural* LEAs after the modifications were completed. Even with the reclassification, *rural* and *town-rural* LEAs comprise a considerable portion of the state’s landmass and represent a large share of LEAs in the state.

Findings

Our first cut at the data focuses on simple counts of schools across various locale classifications to identify trends in school numbers during this period. Table 3 suggests that some relatively rapid changes have been occurring in how schools are distributed

across rural and non-rural areas over the past 16 years.

Overall, the Illinois data shows that there was an increase in the total number of schools in the state, which reached its peak in 2009-2010 followed by a decline in the last four survey years. This period immediately followed the start of the Great Recession during which time the state gave back nearly all of these increases, finishing with a net increase of only 27 schools during the 16 years from 1997-2013. *City* and *suburb* schools follow this trend and also show a peak in the 2009-2010 school year. *Town* and *rural* schools do not follow this trend: both show overall declines in school counts (-9.57% and -16.22%

Illinois Rural and Town Public School LEAs 2013 - 2014

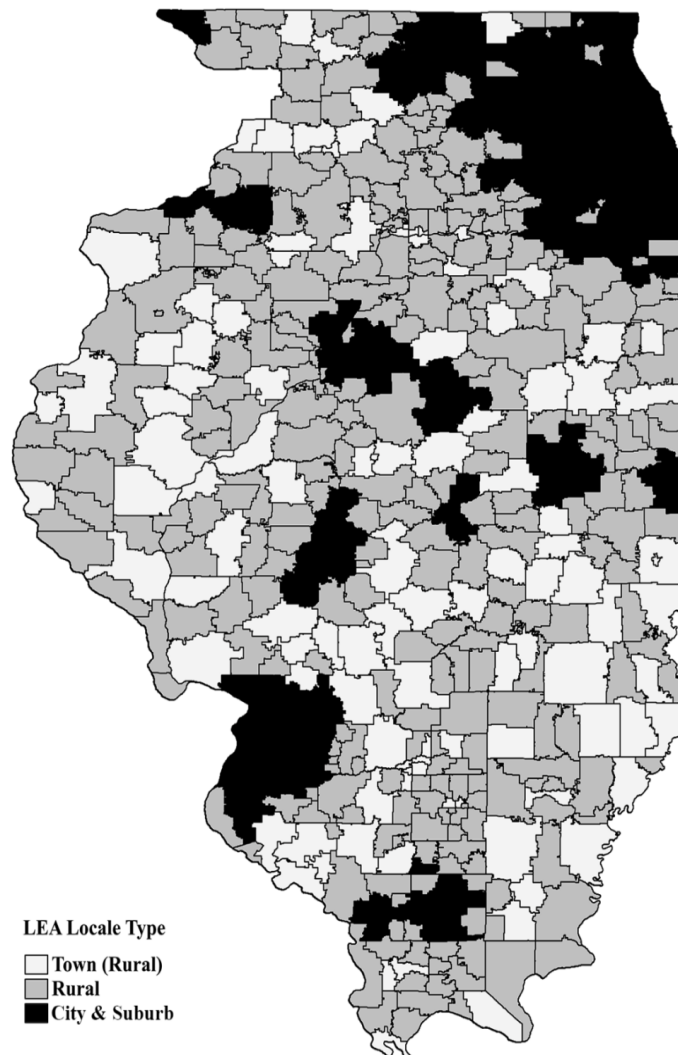


Figure 1. Illinois Town and Rural Public School LEAs FY 2013-2014

respectively) that appear consistent over the 16 year range.

Table 4 reports the findings for LEAs over a 10-year range, which suggests more modest changes as one would expect given the greater implications of losing an entire district. Overall, Illinois has seen a decline of 25 LEAs over the 10-year period (-2.82%); however, the decline in *rural* LEAs (the loss of 22 LEAs or -6.85%) appears to be the main cause of this overall decline – rural losses represent nearly 90% of the net state loss of LEAs.

We then used the figures reported in Tables 3 and 4 to calculate the average LEA size by school year and locale classification. These findings are reported in Table 5 for the 10-year range used in Table 4.

As the table indicates, the average *rural* LEA is expected to contain just over 2 schools and the average *town* LEA is expected to contain 3 schools. This is important because it validates our classification of the differing definitions of rurality, since these different systems appear to have quantifiably distinctive structures.

The final school characteristics estimated was the mean full-time equivalent (FTE) positions by locale classification and school year. These findings

are reported in Table 6. As noted in the table, FTE counts were problematic because of inconsistent reporting by local schools and the state including 9.28% of all school observations failing to report this data in 2013-2014. Similar to the mean number of schools per district, *rural* schools appear to have considerably fewer FTEs per school than any of the other school locale types for all years in the survey range. Given the assumption of smaller school sizes (which will be presented in Table 7), these smaller FTE statistics are not surprising but again validate our classification of rural, as they are consistent with the general findings of the rural schooling literature.

Changes in Student Enrollment and Racial Characteristics

Student enrollment counts, overall and by race, were aggregated by locale classification and reported in Table 7 by survey year. Mean enrollment statistics were calculated using reported enrollment counts and are also reported in the table.

Overall trends in student enrollment show declines in *city* (-4.50%), *town-rural* (-10.43%), and *rural* (-19.57%) schools and show an increase in *suburb* schools (17.19%) over the 16-year range. There appears to be a peak in *suburb* school enrollment during the 2009-2010 school year. Mean enrollment totals by locale reflect these trends;

Table 4
Illinois Public School LEA¹ Count by Locale for Years 2003 – 2004 to 2013 – 2014

	Years					
	03-04	05-06	07-08	09-10	11-12	13-14
State Total	887	873	869	868	866	862
City	30	30	30	30	31	32
Suburb	399	397	396	397	398	398
Town-Rural	137	134	135	135	134	133
Rural	321	312	308	306	303	299

¹Includes only LEAs that have at least one Type I (traditional) public school that reports enrollment of at least 1 student member. Total LEA count, including those that do not include Type I public schools, for year 2013-2014 is 1,079 (Glander, 2015b).

Table 5
Mean Illinois LEA Public School Count by Locale for Years 2003 – 2004 to 2013 – 2014

	Years					
	03-04	05-06	07-08	09-10	11-12	13-14
City ¹	32.07	32.37	32.27	33.27	32.10	29.75
Suburb	4.36	4.43	4.53	4.66	4.64	4.61
Town-Rural	3.11	3.13	3.11	3.20	3.15	3.13
Rural	2.44	2.41	2.38	2.37	2.33	2.30

¹City of Chicago School District skews this statistic since it contains >50% of the schools categorized as *city* schools.

Table 6

Illinois Public School Mean Full-Time Equivalent Positions (FTE)¹ by Locale from 1997 to 2013

	Years								
	97-98	99-00	01-02	03-04	05-06	07-08	09-10	11-12	13-14
City	38.16 ²	38.16 ²	38.41 ²	36.18 ²	42.40 ²	33.85 ²	37.36	36.03	39.20 ²
Suburb	32.61	34.38	35.88	36.14	36.82	33.39	38.27	37.08	36.19 ²
Town-Rural	24.01	25.03	25.68	25.17	25.27	22.43	25.49	25.10	23.92 ²
Rural	14.89	15.36	15.56	15.18	15.16	13.84	15.36	14.96	15.00 ²

¹Schools that did not report FTE statistics were excluded from calculations.

²Notable missing data (>1%) includes: '97-'98, 12 missing city schools; '99-'00, 17 missing city schools; FY 01-02, 17 missing city schools; FY 03-04, 42 missing city schools; FY 05-06, 70 missing city schools, FY 07-08, 29 missing city schools; FY 13-14, 38 missing city schools, 171 missing suburb schools, 34 missing town schools, and 118 missing rural schools.

Table 7

Illinois Public School¹ Enrollment Count by Locale for Years 1997 – 1998 to 2013 – 2014

<i>Total</i>	Years								
	97-98	99-00	01-02	03-04	05-06	07-08	09-10	11-12	13-14
<i>Enrollment</i>									
City	644,516	648,209	657,844	653,977	638,500	619,507	627,436	620,756	615,526
Suburb	946,265	983,891	1,028,546	10,68,788	1,103,963	1,125,408	1,131,563	1,121,421	1,109,025
Town-Rural	181,864	176,602	173,256	170,858	171,010	169,154	167,382	164,782	162,894
Rural	180,046	175,267	169,576	166,558	162,962	160,290	154,064	149,659	144,805
<i>Mean</i>									
<i>Enrollment</i>									
City	687.12	683.04	689.56	679.81	657.57	639.99	628.69	623.88	646.56
Suburb	575.24	582.18	598.69	614.95	628.32	627.32	611.66	606.83	604.37
Town-Rural	395.36	388.99	393.76	401.08	407.17	402.75	387.46	390.48	391.57
Rural	219.57	214.79	211.71	212.45	216.99	218.38	212.50	211.98	210.78
<i>Total Black</i>									
<i>Students</i>									
City	276,445	273,910	273,229	268,332	252,474	233,229	231,524	214,694	202,832
Suburb	120,365	129,372	137,836	148,233	153,898	152,352	150,228	144,612	140,880
Town-Rural	7,374	7,705	8,112	8,666	7,198	6,548	6,392	6,570	6,778
Rural	2,984	2,999	3,082	3,343	2,695	2,570	2,369	2,429	2,329
<i>Total Latino</i>									
<i>Students</i>									
City	155,564	166,639	179,901	188,075	187,009	190,475	205,793	218,402	222,587
Suburb	96,920	115,768	140,468	166,365	189,119	211,433	222,300	254,429	263,647
Town-Rural	5,033	5,568	6,570	7,565	8,071	8,404	8,790	11,336	11,891
Rural	1,925	2,141	2,487	2,969	3,105	3,505	3,724	4,272	4,826
<i>Total White</i>									
<i>Students</i>									
City	184,446	178,564	173,729	165,720	152,414	143,546	143,459	135,477	134,425
Suburb	694,494	701,794	709,370	709,953	696,122	680,540	665,060	632,345	610,321
Town-Rural	168,116	162,034	157,268	153,087	150,748	147,413	143,855	139,540	136,478
Rural	174,417	169,306	163,033	159,023	154,625	150,772	143,151	138,483	132,989

¹Includes only schools that are Type I (traditional) public schools that report enrollment of at least 1 student member.

however, it is important to note the decline in *town-rural* and *rural* schools in Table 4, since the reduction in the number of schools should increase or at least stabilize the mean enrollment figure. Since the per school enrollment figures for rural schools continue to decline, it is clear that the population decreases in rural schools is important and is not stabilized by the closing of rural schools and LEAs.

By race, reported student enrollment figure trends are mixed. The Illinois Black student population appears to reflect trends similar to that of the overall student enrollment trends; although, the decline in *city* schools (-27%) may also reflect an increase in private school choices. *Latino/a* student population trends suggest major increases across the board with *suburb*, *town-rural*, and *rural* schools locales doubling their total, statewide enrollment. Conversely, the White student population appears to have large overall declines in all locales. It is important to note that these large increases in the share of *Latino/a* student enrollment are, in part, due to the relatively low numbers of *Latino/a* students present in rural schools in the first place. That being said, because these locales more than doubled, it is important to consider what these local compositional changes could mean for school leaders.

Changes in Student Poverty Characteristics

Like student enrollment, student poverty characteristics were analyzed by aggregating school

level student FRPL eligibility counts by locale over a 10-year range (Illinois did not report FRPL eligibility counts in 1997-1998 or 1999-2000). These findings are reported in Table 8. For all locale classifications, FRPL eligibility counts increased. *Suburb*, *town-rural*, and *rural* locales saw similar growth rates over time, but it is important that, as of 2013-2014, one-half of the *town-rural* student population is FRPL eligible. Similarly, examining the changes in FRPL eligibility reveals that the 13.81 percentage points increase in FRPL eligibility in *rural* schools over the ten year range represents over 14,000 more students eligible for the program. For *town-rural* schools, their 17.45 percentage point increase represents nearly 18,000 more students. As Figure 2 highlights, these increases are not isolated to any one region in the state. Instead, these large increases in FRPL rates appear to be experienced by nearly all of the state's rural and town LEAs, particularly those not in close proximity to UAs. This is a significant number of children whose needs must be addressed by the schools that serve them.

To show how these increases are distributed in *town-rural* and *rural* schools and how this distribution has changed over time, we calculated the proportion of students FRPL eligible to overall student enrollment. These proportions were then used to categorize schools into decile groups. Table 9 reports this distribution of schools by locale classification and share of FRPL students for the 2003-2004 and 2013-2014 school years.

Table 8
Illinois Public School Free and Reduced-Price Lunch Statistics¹ by Locale for Years 2003 - 2004 to 2013 - 2014

# FRPL Eligible	Years					
	03-04	05-06	07-08	09-10	11-12	13-14
City	418,484	393,981	391,454	406,777	452,203	450,850
Suburb	241,352	269,703	291,936	362,069	417,857	440,208
Town-Rural	59,596	63,362	66,376	73,880	80,425	85,329
Rural	45,270	47,413	48,897	53,795	56,350	59,783
<hr/>						
% FRPL						
City	65.85	65.29	68.48	71.52	73.04	73.37
Suburb	24.09	26.28	27.98	34.01	37.31	40.25
Town-Rural	35.36	37.68	40.00	45.16	48.93	52.81
Rural	27.70	29.85	31.28	35.85	37.73	41.51

¹Excludes schools that have missing FRPL data.

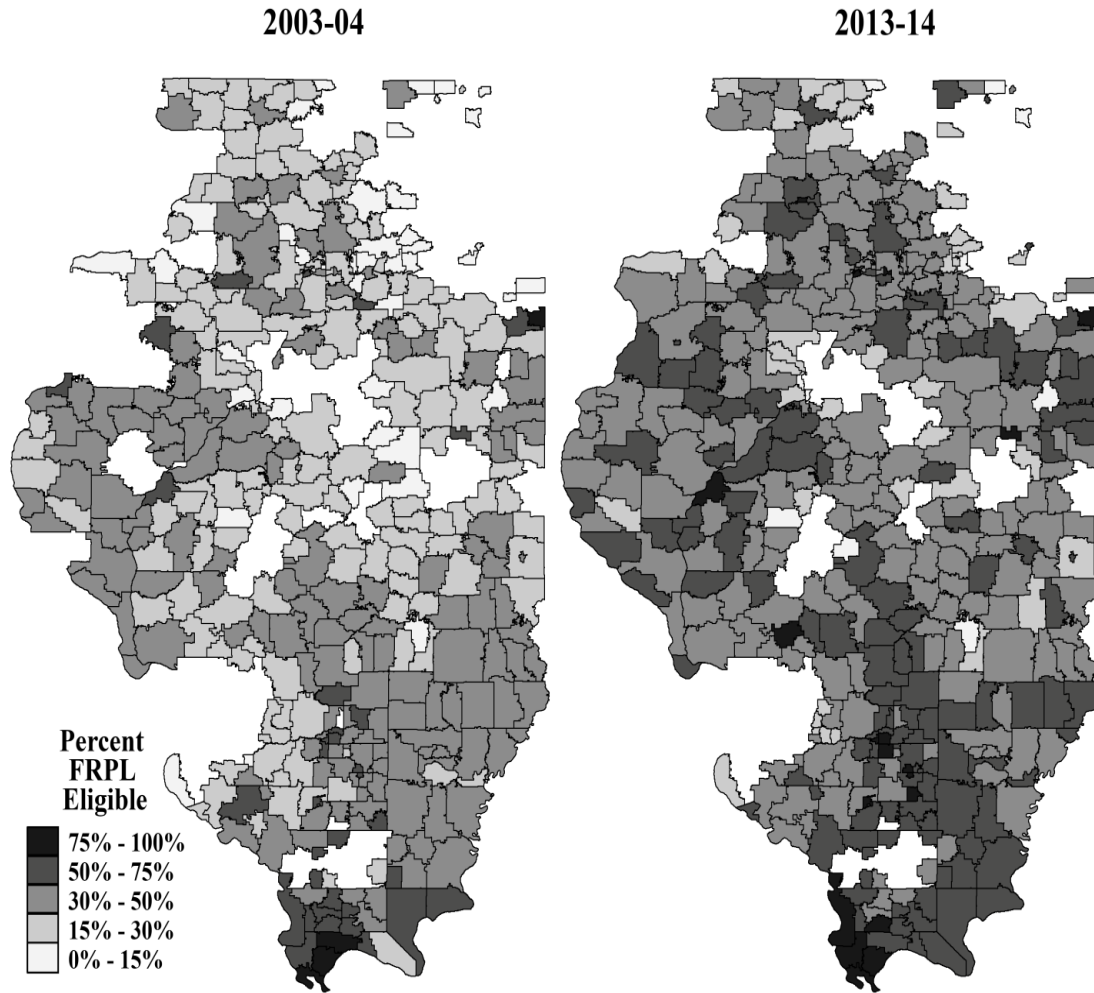


Figure 2. 10-year comparison of the percent of Illinois rural and town school students FRPL eligible by LEA

Table 9
Distribution of Illinois Public Schools¹ by Proportion of Free and Reduced-Price Lunch Eligible Students FY 2003-2004

2003-04	0-10% ²	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%
City	87	27	43	52	45	70	71	94	149	279
Suburb	607	264	197	130	109	99	64	74	55	55
Town-Rural	12	50	96	97	71	53	23	10	4	4
Rural	59	169	220	140	97	56	11	9	7	0
2013-14	0-10% ²	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%
City	35	36	38	38	48	58	63	74	133	427
Suburb	209	256	263	213	142	173	159	132	113	144
Town-Rural	1	7	21	58	100	96	58	34	19	18
Rural	11	40	90	153	177	125	59	13	2	14

¹Excludes schools that have missing FRPL data.

²Range for bins/categories is greater than or equal to the first number and less than the second number.

Table 10

Reported Per Pupil Revenue and Expense Totals in 2017 U.S. Dollars for Illinois Public LEAs FY 2003–2004 to FY 2013–2014¹

Mean Total Revenue (Per Pupil)	Years					
	03–04	05–06	07–08	09–10	11–12	13–14
City	14,475	15,064	16,135	17,210	17,134	17,717
Suburb	13,435	13,467	14,362	15,515	15,787	16,376
Town-Rural	11,224	10,584	11,036	11,615	11,931	12,392
Rural	11,955	11,456	12,134	12,783	13,029	13,901
Mean Total Expenses (Per Pupil)						
City	14,912	14,317	15,387	16,904	16,629	17,381
Suburb	13,853	13,411	14,447	15,535	15,239	15,717
Town-Rural	11,409	10,918	10,878	12,038	12,176	12,353
Rural	12,386	11,620	12,057	13,323	13,476	13,346

Notes: Financial data is inflation adjusted to 2017 dollars using Consumer Price Index tables provided by the Bureau of Labor Statistics (2017).

¹NCES reported corresponding fiscal years: 2004, 2006, 2008, 2010, 2012, and 2014.

The tabulations in Table 9 suggest that schools in all locales have shifted to the right. In 2003–2004, *town-rural* schools appear to be centered around the 30–50% deciles which shifts to around the 40–60% deciles by the 2013–2014 school year; and in 2003–2004, the *rural* distribution appears centered on the 20–30% decile which shifts to the 40–50% decile by the 2013–2014 school year. Notably, both locales also had sizeable increases in the 90–100% decile, which likely reflects participation in CEP. What is also difficult to ignore is the shift in both *city* and *suburb* schools. The number of *suburb* schools with a majority of FRPL eligible students doubled over the 10-year period. Similarly, 80% of *city* schools have half of their enrollment comprised of FRPL eligible students while 59% of *city* schools have at least 80% of their enrollment comprised of FRPL eligible students. This jump, especially to the 90–100% FRPL enrollment category, may reflect the participation of *city* and *suburb* schools in CEP. This suggests that not only have urban schools have also increasingly gotten poorer, but they may also be more likely to take advantage of CEP than *rural* and *town-rural* schools.

Changes in School Financial Characteristics

In addition to analyzing and reporting longitudinal trends in school and student characteristics data, we sought to contextualize these changes in terms of the state's financial environment

for public education. As noted in the introduction, changes in funding policy have recently been made, but it is not clear how this will resolve the funding distribution shortfalls that have existed for nearly a decade. These findings are reported in Table 10.

Examining Table 10, it appears the average *rural* and *town-rural* LEAs had reported expenses greater than reported revenues in 4 out of the 6 survey years examined over the 10-year range. This data is suggestive of the unpredictability of the reductions in state GSA disbursements over the same time period. Using a similar approach, we calculated the mean per pupil state general formula assistance revenues and property tax revenues, which are reported in Table 11.

As Table 11 indicates, state general formula assistance has declined since the 2007–2008 school year for *rural* and *town-rural* LEAs. Fluctuations in the per pupil averages for this category also reflects the fluctuations reported by ISBE in reduced GSA disbursements. Conversely, reported property tax revenues for *rural* and *town* LEAs increased in both locale classifications; although, the *rural* LEA increase from \$4680.53 in 2009–2010 to \$5723.38 in 2011–2012 is most notable. Unlike GSA, which is calculated on a per pupil basis, property taxes are not necessarily beholden to enrollment tallies; however, the final statistic presented, mean property tax revenues, suggests that there is an increase in the overall property tax revenue (19.66%) collected and

Table 11

Select Financial Characteristics for Illinois Public LEAs in 2017 U.S. Dollars FY 2003 – 2004 to FY 2013 – 2014¹

	Years					
<i>Mean State General Formula Assistance (Per Pupil)</i>						
	03–04	05–06	07–08	09–10	11–12	13–14
City	1,540	1,567	1,715	1,432	1,758	1,605
Suburb	1,907	1,970	2,131	1,729	1,941	1,833
Town-Rural	3,577	3,561	3,861	3,151	3,426	2,899
Rural	3,337	3,386	3,659	2,960	2,899	2,448
<i>Mean Property Tax Revenues (Per Pupil)</i>						
City	8,750	9,540	10,033	10,275	10,222	10,469
Suburb	7,907	8,183	8,583	8,997	9,436	9,470
Town-Rural	3,897	3,748	3,989	3,623	4,312	4,423
Rural	4,662	4,686	4,879	4,680	5,723	6,122
<i>Mean Property Tax Revenues</i>						
City	131,435,368	137,257,092	138,757,780	136,935,734	151,235,882	148,017,519
Suburb	21,617,446	23,149,676	24,493,473	25,826,775	26,478,214	26,547,773
Town-Rural	4,998,252	5,083,117	5,160,967	4,765,910	5,504,818	5,658,076
Rural	2,280,964	2,319,968	2,375,723	2,229,280	2,637,613	2,729,350

Notes: Financial data is inflation adjusted to 2017 dollars using Consumer Price Index tables provided by the Bureau of Labor Statistics (2017).

¹NCES reported corresponding fiscal years: 2004, 2006, 2008, 2010, 2012, and 2014.

the per pupil increase is not simply a result of declining enrollment figures.

Discussion

Rural School and District Decline

The findings from this longitudinal analysis highlight several important trends for rural schools and districts. In this discussion, we will focus on these trends and several critical implications for school leadership. The first such trend is the overall decline in the number of and share of rural schools over the 16-year period. As reported in Table 3, the number of Illinois rural public schools declined 16.6% and town public schools declined 9.57% amidst a statewide increase in public schools of 0.70%. Similarly, Illinois rural LEAs declined by 6.85% (or 22 LEAs) over a shorter, 10-year period.

Pressures of consolidation. Rural schools are intrinsically connected to the identity of their communities (Bard, Gardener, & Weiland, 2006; Peshkin, 1978). The loss of a school or district (LEA) can be met with fierce opposition because it signals

the loss of one of the most visible manifestations of the community's identity, which is perceived as threatening the very survival of the community (Bard, Gardener, & Weiland, 2006; Post & Stambach, 1999).

For Illinois rural principals, this research suggests that they are likely to face continued pressures to ensure the survival of their schools amidst population decline and financial uncertainty. Given the findings in other locale types, these pressures would appear to be uniquely situated in rural and town schools and districts. As such, Illinois represents an opportunity for research focused on the community and school dynamics surrounding possible rural school consolidation.

Principal labor market. For rural school principals, school closures and enrollment declines also imply a shrinking labor market with lessening demand for rural principals (see Table 7). Research on educator labor markets suggests that educators prefer to teach in schools close to their hometowns or in communities and locales that are contextual similar to their hometowns (Boyd, Lankford, Loeb, & Wyckoff, 2005; Reininger, 2012). Findings from a

small-scale study on Illinois rural principals suggest that this is also likely the case for rural school administrators with administrators reporting that they seek out contexts that they are comfortable and familiar with (Kinkley, 2016). If this is true, then the supply of existing rural school administrators may exceed the demand within the state with principals less willing to move long distances from their communities to find a better labor market for their services. While this may be the case in Illinois, research from other states also suggest overall shortages in qualified principal candidates for rural school positions (Cruzeiro & Boone, 2009), which could also suggest several explanations that should be examined. First, an economic argument that rural principals, like many others in rural communities, are also moving to urban and suburban areas where there are shortages of qualified principals. In addition, these employment decisions could be reinforced by the fact that rural principal positions may not be stable given the demographic changes in rural schools, making them less desirable from an economic standpoint. Conversely, there could be a social explanation that suggests when positions or schools are eliminated in rural areas, principals from those areas are unwilling to leave their communities and find employment in other rural areas. Or, they may prefer to teach or stay embedded within their communities in another capacity, contributing to a shortage in other areas. Each of these possibilities could explain why there could simultaneously be more rural principals than principal positions and still be a shortage of qualified principals to fill them.

Changes in Student Population

Student migration. From the findings reported in Table 7, it is clear that rural public schools are losing students at a rapid rate (a decline of 19.47% over the 16-year range). Without analysis of private school data, it is unclear if private school tallies in rural areas are stable over time, which may account for some of the enrollment decline; however, it is not likely that this is the case everywhere. The findings in Table 7 also support the literature on in-migration. While not as robust as student enrollment trends in other states, Illinois rural and town schools have reported a more-than doubling of Latino/s student enrollment over the 16-year range. This follows the trends reported in the literature review that suggest an influx of Latino/Hispanic workers and families into these rural communities, which, while not a total

population replacement, buttress rural communities from the effects of outmigration. Combined with the overall population decline, which is primarily due to the decline in White student enrollment, there are several key takeaways from these findings.

First, rural schools are becoming more racially diverse. Because of the decrease in White student population and the increase in Latino/a population, the share of non-White students has increased over time. While the overall share of non-White students has remained relatively low over time, especially when compared to city and suburban schools, the trend is nonetheless suggestive of an increasingly growing rate of new enrollment of Latino/a students. At the school level, this suggests an interesting challenge tied to teacher/principal training and labor preference. Since research suggests teachers prefer to remain in contextually similar settings to where they grew up (Boyd, Lankford, Loeb, & Wyckoff, 2005; Reininger, 2012), it is unclear how this preference will continue to be expressed if the contexts of the community and schools change at a fairly rapid rate. Similarly, Monk (2007) suggests that teachers in rural areas are comfortable with the “rural” lifestyle and the ways in which rural schools and local politics can be navigated. If this comfort and familiarity help to create a quality match and trust between school and personnel, will this continue to be true as the demographics of these schools change? With the contexts of these schools changing in terms of students and community racial composition, there is a clear avenue for future research to explore teacher and principal perceptions of this change.

Second, principals may be increasingly challenged to meet the needs of this new student population. While the CCD does not collect ELL data and thus cannot demonstrate a proportional increase in English Language Learner services (ELL), there is an established national relationship between increases in Latino/a enrollment and a need for ELL services (Artiles, Rueda, Salazar, & Higareda, 2005). In terms of ELL services, principals in these rural schools, which have traditionally been predominantly White or entirely homogeneous, must be able to recognize the needs of this new student population and recognize the trends in population change to anticipate future services. Arguably, this creates a challenge because it is likely that these rural principals have not had to provide these services in the past to the extent that a changing population may necessitate.

Third, changes in the broader community may also signal shifts in community values and even identity. As Peshkin (1978) and Longworth (2008) highlight, rural communities are entrenched in their constructs of community identity. New residents are viewed as outsiders, never fully reaching the same level of status as residents who have lived in the community their entire lives (Peshkin, 1978). Although the new population helps to keep a community afloat, it is unclear how these new residents gain representation in local politics and representation, especially if community values and identity are deeply entrenched. This presents a critical challenge for school leaders. How do they navigate a potentially persisting representation of “old” community values amidst an influx of a new population that may not be represented by those values? Based on the small number of schools and administrators in a LEA, we would expect tight relationships between school principal and both school board and community members. As such, a challenge for principals likely exists; however, more exploration of this phenomenon is needed.

The increase in Latino/a population amidst the decline in overall student enrollment does represent a form of population replacement. Without this population increase, these rural schools are likely to face even greater pressure to consolidate or find ways to survive. For principals, this also suggests a need for continuing professional development on how to address student needs in terms of ELL services and other relevant topics, such as culturally responsive leadership and pedagogy – especially since rural schools have traditionally remained homogenous in terms of student composition. Similarly, training for principals should emphasize these topics, since they appear to be increasingly more valuable for these settings.

Student poverty. Findings from this study also suggest that Illinois rural and town public students are getting poorer. While FRPL eligibility is not a perfect proxy for poverty, especially given CEP participation (Snyder & Musu-Gillette, 2015), examination of Table 9 shows that only 18 town schools and 14 rural schools are between 90% and 100%. The number of schools in this category for the 2013-2014 school year is unexpectedly high given the lack of schools in the same category for the 2003-2004 school year; however, it also suggests that only a small number of town and rural schools participated in the CEP program during the 2013-14 school year

which is interesting and may suggest that rural schools are not taking advantage of this opportunity to the degree that they could. In addition, it also suggests that the 10-year increases in student FRPL eligibility (43.2% for town schools and 32.1% for rural schools) are most likely due to actual contextual events rather than the CEP policy change. While the Great Recession undoubtedly plays a role in labor, it is unclear if it had quite the same effect as in urban areas. The increase in FRPL in rural and town locales appears to be a relatively consistent increase over time. What is also unclear from these findings is how much influence out-migration and in-migration have on these increases. While research suggests that in-migration generally does not diminish the local economy (Parrado & Kandel, 2010), the consistent increase in student FRPL eligibility suggests something is happening in these communities. The degree to which it is related to in-migration or selective out-migration is yet to be understood.

What is striking from these findings is that more than half of all town students and more than 40% of rural students are FRPL eligible. Given Kuznets’s theory (1955), we should expect these trends to stabilize as the economy recovers; however, it is unclear if rural markets will recover to the same degree as urban markets. These changes in FRPL eligibility may represent the new norm for rural schools. For educational leaders, the link between student poverty and achievement is of note (Reardon, 2011). As such, this may gradually change the way in which the school provides services and school curriculum; however, this also signals an avenue for further, more in depth, research into how these leaders act amidst these steady increases in student poverty. Given the financial instability of the state, there also may be considerable challenges in crafting these changes.

Curriculum. A less obvious connection to decreases in student enrollment and increases in diversity are the effects and influences these changes have on the curriculum. As school enrollment declines, there should be an expected decline in FTE positions and capacity for curricular offerings. The findings in Table 6 appear to run counter to this claim; however, there are two reasons why these findings should be interpreted cautiously. First, the population includes both elementary and secondary schools. While elementary schools may lose FTE in response to small class sizes, it is also reasonable to assume that there is a minimum FTE necessary to

meet adequate academic services. In other words, there may be a floor that rural schools are already approaching in terms of FTE size. Similarly, mean FTE appears to be relatively stable over time even though the number of rural schools has declined. As such, the overall FTE is declining in Illinois rural schools.

The loss of student enrollment in secondary schools, especially at the rate of decline Illinois rural schools are experiencing, suggests a threat to these schools' capacities to offer a comprehensive curriculum beyond that necessary to meet minimum state standards. This is likely to place community-valued curricular offerings in direct competition with the state-required curriculum, which creates further threat to community identity (Howley, 2004). Similarly, dwindling class sizes also suggest that course offerings are likely to be general, subject-area courses that include all students in the class (Barker, 1985; Monk & Haller, 1993). While rural teachers are generally trained to handle such class characteristics (Monk, 2007), this narrowing of the curriculum presents an equity issue when compared to the curricula of much larger, urban schools.

Within the last five years, Illinois has also transitioned towards fully implementing the Common Core State Standards. In doing so, the state has changed its evaluation of school and student performance to reflect these changes in content standards (ISBE, 2013). Given the funding inconsistencies and declines in student enrollment, it seems reasonable to assume that rural principals are also under pressure to implement new content standards on a strained and dwindling budget. Indeed, research suggests that rural schools are increasingly engaging in shared services and partnerships as a means of addressing capacity limitations, especially given local resistance to consolidation (Eggers, Snell, Wavra, & Moore, 2005).

LEA and school funding. Findings from the LEA reported financial data suggest that school leaders are struggling to maintain balanced budgets amidst the state financial turmoil and an increasingly poorer student population. While the scope of this study limits causal claims, there does appear to be increases in per pupil property tax revenues that follow the first drop in per pupil GSA disbursements. As mentioned in the findings section, the increase in per pupil property tax revenues is not entirely confounded by the decline in student population, since there is an overall increase in the average total

property tax revenue. This suggests that LEAs are generating more local revenues, likely in response to the uncertainty of GSA funding. This trend would be otherwise unexpected because student FRPL eligibility has consistently increased and overall population has declined, representing a loss of property tax sources.

For school and district leaders, this presents a challenge that is both political and economical. Politically, these leaders must act to raise property taxes and other local revenues to offset shortfalls in state mandated obligations. Given that many rural communities are property poor (Monk, 2007), increases in property taxes are likely to increase the burden on residents. Thus, the capacity for the LEA to raise local revenues will also likely depend on the political will of the community. This also plausibly presents an equity issue, as LEAs in communities that lack the political will to raise property taxes will be forced to reduce expenses and/or seek alternatives such as consolidation – neither outcomes necessarily being options under full funding disbursements by the state. As such, school and district leaders may be acting to preserve a critical component of community identity at the cost of the long term economic outlook.

Illinois GSA formula calculations also present another challenge for rural school and district leaders: an increase in property tax revenues to cover the gaps in GSA disbursements also potentially reduces the GSA a district is eligible to receive, since the increase in local revenues puts the district closer to the GSA foundation level. As noted in the introduction, however, recent changes in state funding structures may address these challenges. Since the new structure relies on an adequacy model that adjusts for regional costs differences, school size, and property tax thresholds (Invest in Kids Act, 2017), property tax levels in rural and town LEAs may decline as state funding returns to these districts; however, it is unclear at this moment how the state will address its current financial capacity to do so, since this new funding system increases spending.

Conclusion

The findings from this study suggest that Illinois rural public schools are undergoing a relatively rapid and comprehensive student population change. While this study cannot causally attribute these findings to economic out-migration, the findings are highly suggestive of the presence of general population out-migration and loss. Similarly, population in-migration findings, through increases in Latino/a

student enrollment, support existing literature on economic in-migration patterns. Amidst changes in racial characteristics, students also appear to be getting poorer as FRPL eligibility continues to increase. As discussed above, these changes represent challenges and opportunities, from major funding shifts to curriculum and instruction, for rural school

leaders who have likely not had to address these changes in their experiences or in these schools. As such, this study also seeks to serve as a call to attention to the changes happening in these oft-overlooked schools and districts to recognize both important gaps for future research and the need for context-responsive educational policy design.

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