Principal Stability and the Rural Divide

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This article examines the unique features of the rural school context and how these features are associated with the stability of principals in these schools. Given the small but growing literature on the characteristics of rural principals, this study presents an exploratory analysis of principal stability across schools located in different geographic locales. We use longitudinal data covering all certified education positions in Texas over an eight-year period and employ logistic regression models to examine the ways in which individual and school characteristics influence five-year retention rates for all principals as well as for rural principals. Broadly, our data show that rural principals, on average, leave their positions earlier than non-rural principals and have lower levels of stability. Our results further suggest that while rural principals exhibit less gender and racial diversity, they do not exhibit shorter spells of employment as a principal after controlling for personal and school characteristics. Rural female principals are more stable than rural male principals. In addition, we find that principals with more teaching experience are more stable while those with more assistant principal experience are less stable.

Research has long demonstrated that principals exert significant influence on student outcomes (Dhuey & Smith, 2014; Leithwood, Harris, & Hopkins, 2008; Leithwood & Jantzi, 2008; Seashore Louis, Leithwood, Wahlstrom, & Anderson, 2010; Supovitz, Sirinides, & May, 2010). These effects are often exercised through several "avenues of influence," whereby school leaders facilitate organizational, social, and personnel patterns that allow teachers and students to maximize interactions and development (Johnson, 2006; Kelley, Thornton, & Daugherty, 2005; Price, 2012; Robinson, Lloyd, & Rowe, 2008). As a result, when a principal leaves a school, there is often a negative effect on student and school outcomes due to disruptions in organizational culture, information structures, interpersonal trust, and faculty agency (Coelli & Green, 2012; Eberts & Stone, 1988; Fuller & Hollingworth, 2014; Fuller, Young, & Baker, 2007; Loeb, Kalogrides, & Horng, 2010; Supovitz et al., 2010). Extant research suggests these changes in leadership often require several years of stable leadership for the school to reconstruct the organizational and social components necessary to support student achievement and growth (Coelli & Green, 2012; Miller, 2013). Thus, understanding the factors surrounding stable principal employment patterns is critical to improving student outcomes.

While several studies have begun to establish the features that impact principal stability, the bulk of these studies have focused on the influence of individual and organizational characteristics. Few studies have investigated the differential normative and professional milieus that principals in different social and spatial settings face. Indeed, we could not identify any published studies that examine the nature or causes of principal turnover across schools located in different geographic locales. Principals are often one of the main agents of mediation between the external environment and the school (Abrams & Gibbs, 2000; Holme, Diem, & Welton, 2014; Land, 2002; Seashore Louis & Robinson, 2012; Sheldon, 2005), and research has indicated that rural principals face different sets of challenges, pressures, and perceived social roles than their urban counterparts (Budge, 2006; Farmer, 2009; Preston, Jakubiec, & Kooymans, 2013). By overlooking the differences in the expectations and incentive structures of rural principals, efforts to stem

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turnover may systematically underserve rural communities, leaders, and students (Townsell, 2007).

As a result, the purpose of the present study is to add to the existing literature on rural leadership by examining school-level principal stability across schools located in different geographic locales. Given that the majority of the literature on rural principals relies on small samples and in-depth descriptions, our goal is to examine and extend the factors that lead to principals staying in a given school long enough to enact meaningful change ("stability") using five -year school retention rates (Deal & Peterson, 1999; Fullan, 2001). To do so, we employ robust quantitative analyses of a large longitudinal data set of principals in the state with the most rural students in the country, Texas. Specifically, using data from the Texas Education Agency that includes all principals in Texas public schools from 1995 to 2012, we employ logistic regression analysis to estimate the most influential factors associated with principal stability for all schools, as well as specifically for schools located in rural communities. We commence the remainder of this article with a review of the literature on principal turnover and then a discussion of the differing school contexts that includes an examination of the differences in working conditions and social expectations related to principals in schools located in different geographic locales. Subsequently, we discuss our data and methods before presenting our findings. We conclude the article with our conclusions and discussions of the implications of our study.

Importance of Principal Stability

While a significant body of research has brought to light the importance of principal quality, there has been considerably less emphasis on the importance of principal stability and how it differentially affects schools and districts. Any transfer of leadership authority disrupts the social and affective gestalt of the organization, altering network structures, information sources, informal relationships, along with institutional goals, means, and norms (Grusky, 1960, 1963). As such, organizations that experience frequent leadership turnover—even with quality personnel—undergo a period of instability distributed across the institution (Meier & Hicklin, 2008; Rowe, Cannella, Rankin, & Gorman, 2005). For schools, this phenomenon can manifest in multiple administrative and organizational disruptions surrounding breaks in institutional memory, issue interpretation, resource allocation, and program scaling (Coburn, Toure, & Yamashita, 2009; Huber, 1991; Klingner, Boardman, & McMaster, 2013). Social features such as trust, agency, and access are further disrupted among staff and require time and repeated interactions to reform (Coelli & Green, 2012; Fuller & Hollingworth, 2014; Fuller et al., 2007). Studies on turnover have found that when a principal leaves a school it can take between five and seven years to return to a state where directed and meaningful change in school culture can be enacted (Fullan, 1991, 2002). Furthermore it can take at least five years for academic performance to return to its prior level (Miller, 2013). High levels of turnover during a student's school attendance have also shown to reduce high school graduation rates in New York (Weinstein, Jacobowitz, Ely, Landon, & Schwartz, 2009). Therefore, principal instability is particularly disruptive for schools lacking the administrative structures, personnel, and resources to handle succession. This feature—as will be discussed later—is uniquely prevalent in rural schools (Arnold, Newman, Gaddy, & Dean, 2005).

Research has further shown high rates of principal turnover are a present and concerning issue. Studies of newly hired principals have shown that only about one-half stay at the same school for more than four years (Fuller et al., 2007; Gates et al., 2006; Papa, 2007; Weinstein et al., 2009). Battle and Gruber (2010), using a nationally representative sample, found that over 20% of principals in public schools leave each year, a finding echoed by Cullen and Mazzeo (2008).

Importantly, principal turnover is not evenly distributed across types of schools. Specifically, high rates of principal turnover systematically plague schools serving high percentages of students of color and limited English-proficient students (Gates et al., 2006; Papa, 2007), those with high levels of uncertified teachers (Fuller & Young, 2009), schools with economically disadvantaged students (Gates et al., 2006), and low performing schools (Cullen & Mazzeo, 2008; Fuller et al., 2007; Loeb et al., 2010; Partlow, 2007). Furthermore, research has shown that those schools likely to have the most principal instability are also the most likely to hire the least qualified replacements, who in turn, often transfer to lower-needs schools when they have gained requisite experience (Branch, Hanushek, & Rivkin, 2012; Papa, 2007). In short, those schools most in need of stable principals are the least likely to have them, with instability contributing to a continuous cycle of turnover and low achievement (Branch et al., 2012; Fuller & Young, 2009).
Research suggests, however, that student characteristics are often not the primary driver of instability, but the discord between internal and external expectations brought on by the profession. Indeed, high-needs schools present challenging environments that may increase feelings of inadequate preparation (Papa, Lankford, & Wyckoff, 2002), social and workplace pressure and disrespect (Battle & Gruber, 2010; Goldring, Taie, & Owens, 2014; Tekniepe, 2015), and disconnectedness (Battle & Gruber, 2010; Pinto, 2015). These features may further be exacerbated by accountability standards seen as unreasonable or unreachable (Ingersoll, 2003; Ingersoll, Merrill, & May, 2012; Pinto, 2015).

Apart from these features, a principal's background experiences also have significant bearing on how long he or she will remain in the same school. Those with greater years of experience teaching, as well as those with administrative experience, have shown to stay in leadership positions longer (Battle & Gruber, 2010; Fuller et al., 2007; Gates, Ringel, Santibañez, & Chung, 2003), as well as those principals that came from more selective preparation programs (Baker & Cooper, 2005). Of particular interest however, is that educators tend to find more satisfaction in schools that match their own schooling or preparation experiences (Boyd, Hamilton, Loeb, & Wyckoff, 2013; Boyd, Lankford, Loeb, & Wyckoff, 2005). This notion of cultural homophily forwards that sociocultural match may moderate the negative effects of difficult-to-staff, high-needs schools. For example, research has shown that principals of color or urban principals tend to stay longer in highly diverse or urban districts (Gates et al., 2006; Papa et al., 2002).

Finally, several personal characteristics of principals are associated with an increased likelihood of remaining as a leader in the same school. With respect to gender, female leaders tend have greater stability at the same school (Baker et al., 2010; Branch et al., 2012; Fuller & Young, 2009; Gates et al., 2006; Papa et al., 2002). Additionally, middle-aged principals have generally shown to be more stable, with younger principals transferring or exiting more frequently, and older principals moving to central office or retiring (Akiba & Reichardt, 2004; DeAngelis & White, 2011; Loeb et al., 2010; Tekleselassie & Villarreal, 2011). The relationship between a principal's race/ethnicity and greater stability is mixed. While most studies find either no relationship or a very weak relationship between race/ethnicity and stability at the same school, a few studies conclude that principals of color tend to have slightly lower stability rates than their White counterparts (Baker et al., 2010; Branch et al., 2012; Fuller & Young, 2009; Gates et al., 2006; Papa et al., 2002). Disentangling the relationship between a principal's personal characteristics and the characteristics of schools, however, is often difficult and complicates efforts to identify the independent effect of personal characteristics apart from student and other school characteristics.

Differences in the Rural Context

The broad literature on leadership turnover has often been conducted without specific attention to the rural context (Arnold et al., 2005). Research has largely focused on turnover in urban and high-needs schools, thus either overlooking the specific features of rural conditions or assuming that constructs of poverty or minority status hold the same affective and sociological status across geographic locales. Concomitant with the paucity of research on principal turnover by locale has been a growing body of research that explores the ways in which the role of the principal vastly differs by geographic locale. Pertinent to our study, differences in what it means to be a principal across socio-spatial contexts may lead to systematic differences in retention and attrition. Further, not only does the rural context possibly attract a specific type of applicant, but schools in rural contexts feature different incentives, barriers, and draws than the urban and suburban contexts.

Hiring and applicant sorting practices. To begin, certain mechanisms of attracting and hiring candidates may systematically sort the type of individuals that enter a rural principalship, resulting in differences in career behavior patterns. The issue of academic and sociocultural match between a prospective candidate and a school has emerged as a significant issue in the literature on the teacher and principal application process, emphasizing that not only do applicants sort toward schools that match their own backgrounds and experiences (Boyd et al., 2013; Boyd, Lankford, Loeb, Ronfeldt, & Wyckoff, 2011), but also geographic locations (Engel & Cannata, 2015; Engel, Jacob, & Curran, 2014) and preparation characteristics (Goldhaber, Krieg, & Theobald, 2014; Krieg, Theobald, & Goldhaber, 2016). On the other side of the equation, hiring committees and superintendents often select applicants that match their own characteristics and experiences rather than optimum criteria (Ballou, 1996). This notion of academic and cultural homophily has been addressed in the literature on rural leadership and principal preparation programs, although in a less analytic nature than with respect to the literature on the cultural homophily of graduates of teacher preparation programs (Browne-Ferrigno & Allen, 2006; Townsell, 2007; Versland, 2013). In general, rural preparatory and hiring practices have often emphasized "grow your own" programs, whereby developing teachers within the district to be leaders is seen as the primary method for acquiring principals who fit in to the dominant sociocultural context (Wood, Finch, & Mirecki, 2013). Two barriers specific to the recruitment of leaders for schools in rural communities lead to the impetus behind the reliance on "grown your own" programs: difficulty in attracting outside leadership, and community pressures for local and familiar individuals (Browne-Ferrigno & Allen, 2006; Budge, 2006; Wood et al., 2013).

Difficulty in attracting individuals to lead rural schools is well established in the literature. For example, in their study of applicants for administrative openings, Pijanowski, Hewitt, and Brady (2009) found rural schools were at a "distinct disadvantage" to suburban and urban schools in terms of the number of applicants (p. 85). Indeed, the authors found that rural districts received less than one-half of the number of applications for leadership positions

than neighboring larger districts. These recruitment disadvantages are said to stem from both eroding tax bases in rural areas that in turn lead to restricted budgets that limit salaries as well as geographic isolation and sociocultural differences (Arnold, 2004; Browne-Ferrigno & Maynard, 2005; Fusarelli & Militello, 2012; Lowe, 2006; Novak, Green, & Gottschall, 2008). While sociocultural fit and geographic isolation may lead to less principal turnover, limited resources or poor fit may lead to more.

In addition, the personal preferences of individuals further sort the type of principals that are hired in schools across various locales. Studies have frequently shown that hiring and retention are influenced by an individual's personal and historical link to an area. For example, in a study conducted on selection methods for principals in rural Nebraska and Texas, interviews with superintendents repeatedly emphasized that candidates who could "fit in" with the sociopolitical context of the school were highly valued, particularly if their spouse and family could also fit in with the community (Cruzeiro & Boone, 2009). Such ties to the community were shown to impact hiring decisions in a similar study that focused specifically on rural Nebraska (Montgomery, 2010). Under these conditions, rural districts have used "grow your own" preparation programs that use partnerships with local universities to prepare and transition teachers in a local school to administrative roles (Browne-Ferrigno & Maynard, 2005; Institute for Educational Leadership, 2005). Given that background and practicum in rural areas help to facilitate networking and social skills that underpin retention (Rosenkoetter, Irwin, & Saceda, 2004), these programs offer an attractive means for rural schools to groom potential leaders several years in advance of an anticipated shortage (Roza, 2003). As such, the mechanisms of preparation and hiring for rural leadership are heavily weighted to encourage cultural match and local experience, meaning that labor market forces may systematically sort leaders along different tracks from their urban counterparts and place them in positions with differential incentives to stay in a school or leave.

Working conditions. Beyond hiring characteristics, the patterns of leadership turnover may differ given that the expectations of the position itself differ by locale. Professionally, rural principals are often stretched between multiple roles while faced with considerably less administrative support than their urban counterparts. Often without assistant principals or curriculum specialists, the organization of state and federal programs, professional development, and teacher mentorship rests on the rural principal (Bard, Gardener, & Wieland, 2006; Canales, Tejeda-Delgado, & Slate, 2008; Cruzeiro & Boone, 2009; Masumoto & Brown-Welty, 2009). These duties have precipitously increased with the push for more accountability and specialized instruction in recent years (Barley & Beesley, 2007; Starr & White, 2008). In addition, some rural principals are charged with teaching or covering courses—often across multiple grades and even across campuses (Grady, 1990; Howley, Howley, Hendrickson, Belcher, & Howley, 2012; Starr & White, 2008). These additional burdens often take place with lower levels of professional development and support—a feature shown to increase workplace satisfaction (Chan, Webb, & Bowen, 2003; Goldring et al., 2014). Further, rural principals are less likely to have access to consistent networking opportunities given locational and organizational barriers (Clarke & Stevens, 2006; Howley, Chadwick, & Howley, 2002), which in turn reduces access to information, problem-solving, and collaboration activities (Hite, Reynolds, & Hite, 2010). A host of literature has emphasized the ways in which rural principals, given their extended duties and particular circumstances, require targeted forms of professional development that are currently overlooked in traditional preparation programs (Arnold, 2004; Budge, 2006; Chance & Lingren, 1989; Harmon & Schafft, 2009; Howley et al., 2002; Salazar, 2007; Williams & Nierengarten, 2011).

Social expectations. The rural principal also faces distinct differences in terms of social role and position. Research suggests that rural leaders face a broadened set of community expectations that may differentially influence job fit and satisfaction (Tekniepe, 2015). Rural principals, in fact, are often expected to be community leaders and role models in addition to the traditional school leaders (Clarke & Stevens, 2006; Harmon & Schafft, 2009; Masumoto & Brown-Welty, 2009). Hence, many rural principals are thought of as public figures who are responsible to the community with respect to both educational and parochial needs (Budge, 2006). This expectation requires considerable time fostering school-community relations to engender legitimacy and trust between the school and local population, including regular interactions in social settings and active visibility around town (Barley & Beesley, 2007; Chance & Segura, 2009). As such, rural principals must recognize the highly symbolic nature of the school as the vanguard of local and spatial identity (Budge, 2006; Harmon & Schafft, 2009).

Given the symbolic nature of the position in the rural community, school leaders are seen as personally responsible for the welfare of the school and the identity of the area. This perception can lead to high levels of respect and prestige but can also be subject to ingroup-outgroup posturing and rigid role definitions. For example, leaders who do not fit in with the dominant sociocultural norms or who do not have a known history in the area may be viewed as illegitimate or untrustworthy by the community (Browne-Ferrigno & Allen, 2006; Keddie & Miesche, 2012). Principals in rural schools are less likely to be persons of color and less likely to be female. With respect to gender, research suggests

female principals are disadvantaged in the hiring process and outnumbered as much as six to one in rural high schools (Harmon, 2003; Hollingworth & Dude, 2009; Papa et al., 2002; Reynolds, White, Brayman, & Moore, 2011). These features reflect trends in research that have emphasized ways in which rural communities perceive leadership as a male trait (Hyndman, 2009). As a result, rural communities may be more accepting of male decisions and actions (Eagly, 2005; Johanson, 2008; Skrla, 2003).

Beyond personal characteristics, the notion of a single leader as responsible for the school may induce additional pressures in terms of accountability, achievement, and public scrutiny (Barley & Beesley, 2007; Clarke & Stevens, 2006; Howley, Howley, & Larson, 1999). Principals are placed in a precarious position of implementing top-down mandates in a community that may see them as externally imposed and in tension with local values (Farmer, 2009). This asymmetrical reliance on the school leader as singular responsible agent has led many principals to consider community values themselves to be barriers to improvement, as parental involvement may be difficult to engage beyond parochial roles (Arnold, 2004; Budge, 2006; Larson et al., 2006).

Gaps in the Literature

Research, thus, has established that the rural principalship is qualitatively distinct in its roles, expectations, and demands from the principalship in other settings (Preston et al., 2013). Indeed, the rural principalship faces a unique set of social features while concomitantly offering particular professional challenges that require specialized skill sets. Under these conditions, research treating principal stability as a monolithic construct across schools may be overlooking systematic differences in patterns of turnover, considering a specific set of conditions that may facilitate job dissatisfaction and/or external attraction.

Prior research that has differentiated between urban and rural locales has suggested some trends in principal stability characteristics. Using the nationally representative Schools and Staffing Survey, Battle and Gruber (2010) demonstrated that rural principals moved more often than principals in other types of locales and had the second-highest percentage of those leaving the profession. These results echoed the findings of Gates and her colleagues (2006), who had earlier found that rural principals were more likely to exit the system as well as transfer to other administrative positions than principals in schools in other locales. Further, in a study on principal career intentions, Tekleselassie and Villarereal (2011) found that rural principals had higher levels of intentions to leave the profession than suburban principals but suggested that these results may have been mediated by working conditions. While the rural/urban divide was not the focus of these studies, they do present insight into the need to better understand the features and mechanisms specific to the rural context. As such, this study intends to add to the current body of literature by specifically examining the characteristics of principal stability in rural areas.

Data

To identify the characteristics of rural principal stability, this study uses data collected from the Texas Education Agency (TEA) covering a population of 12,989 principals from 1995 to 2012. These longitudinal data include the employment status of each educator in Texas, including the type of position in which employed as well as the school and district employing the individual. Thus, these data include any employment through which an individual was employed in a certified position for a district, including as a teacher, assistant principal, or central office employee.

In addition to employment indicators, the data have been combined with other data available from TEA to include individual personal characteristics such as gender, race, age, and salary, as well as school characteristics such as student demographics and student achievement. The student demographic variables included information on the percentages of students from various racial/ethnic groups, percentages of students participating in the federal free-/reduced-price lunch program, percentages of students identified as limited English proficiency (LEP), and percentages of students identified as participating in special education programs. School-level student achievement was captured by an indicator of the percentage of all students passing all state-mandated tests as well as an indicator of the state school accountability rating for the school. In addition, the data also included the total student enrollment of each school. The data also included the salary of each individual. Because salaries may differ across labor markets due to the cost of living and competitive wage differences, we adjusted the salaries using the Comparative Wage Index (CWI) from the National Center for Education Statistics (Taylor, Glander, Fowler, & Johnson, 2007), which has been updated and maintained by Taylor (2016). The CWI indicates the ratio of the average wage for those with college degrees who are not educators and is intended to capture the degree to which an educator's salary is competitive with the general market of similarly educated individuals. Including a control for the ratio of educators' salaries to comparative out-of-industry salaries allows us to more accurately identify the relationship between salary and stability because using the CWI removes the influence of local labor markets on an individual's absolute salary.

Most importantly, we rely on the geographic locale from TEA rather than NCES. The Texas identification of

locales was designed collaboratively between TEA, the Texas Legislature, and researchers. The identifier is an eight-item categorical indicator that includes urban, rural, and suburban.[1] We chose to use the TEA designations for three reasons. First, we found that the Texas locale identifications were far more stable than the locales included in NCES data. Indeed, we identified a substantial number of schools with rapidly changing NCES locales. For example, a school could be identified as rural in one year, then as a small suburban school the next year, and then a rural school in the third year. Second, we found the Texas geographic locale information to be more accurate. For example, in a number of instances, NCES designated schools in a district contiguous to a major urban district as rural. However, the districts in question had large student enrollments, were relatively affluent, and were clearly suburbs for people working in the large metro area. Third, NCES locale designations were completely reconfigured in 2007, and this reconfiguration makes comparisons across years rather difficult.

Indeed, Texas represents a strong case for identifying rural patterns, given it has the largest rural student enrollment in the nation, with above-average rates of low-income students, students of color, and English-language learners (Showalter, Klein, Johnson, & Hartman, 2017). Furthermore, its funding structure is considered highly inequitable with low per-pupil spending (Showalter et al., 2017). Consequentially, Texas offers considerable variance along several established features related to principal stability, while offering the largest state population from which to sample. However, given that Texas is one of a handful of states supporting alternative certification pathways and has a specific set of policies regarding certification (e.g., it does not require a master's degree in educational administration), generalizations on principal behaviors should be taken with caution.

Our dependent variable of stability represents individuals who were principals in the same school for at least five years. This measure was chosen for both methodological and substantive reasons. Due to the prospective wave format of the data, this method allows us to estimate the stability of a principal while controlling for time-censored observations and reducing sources of bias. Principals who began their employment prior to the first wave of the sample, or those who were still principals after the last wave, cannot be accurately observed and may therefore introduce systematic bias. To account for this issue, the sampling window was restricted to those principals who were newly hired principals between 1999 and 2007. Such a restriction allows us to capture prior employment experiences as teachers and assistant principals as well as ensure that those principals who were still active at the most recent wave of the data (2012) were not systematically truncated. As such, this method allows us to estimate the stability of employment for those principals whose career arc at a given school is observed without projecting beyond what is known. The restricted time window still allowed for a robust set of 8,245 principals, with 1,103 employed in rural districts, covering 29,242 and 4,625 employment years respectively. Substantively, the five-year mark demonstrates that a principal has been stable for a full cohort of students with reasonable time for development. Additionally, a five-year length of tenure is what researchers suggest is the minimum amount of time necessary to enact meaningful school change (Deal & Peterson, 1999; Fullan, 2001). The detrimental effects of shorter periods of stability on student and school performance were discussed earlier (Coelli & Green, 2012; Eberts & Stone, 1988; Fuller & Hollingworth, 2014; Fuller et al., 2007; Miller, 2013; Supovitz et al., 2010). Using the five-year minimum length of time suggested by the research thereby provides the most conservative estimate of "stable" principal differences by distinguishing stable principals from unstable principals along the least restrictive criteria. Given the emerging state of the literature on this topic, this measure is meant to provide a starting point by which further investigations may be conducted on principals who remain for longer periods of time.

Given that the purpose of this study is to investigate the properties and antecedents to rural principal stability, it is prudent to gain an understanding of the composition of rural principals as compared to their suburban and urban counterparts. To illustrate the differences, Table 1 reports principal characteristics for the full sample of newly hired principals in Texas, followed by districts designated as rural, suburban, and urban. Other designations, such as independent town, non-metropolitan fast growing, or central city suburban are not reported here to maintain a focus on the unique characteristics of rural principals.

An examination of the characteristics across locale initially demonstrates that female principals constitute a much smaller percentage of rural principals as compared their suburban and urban counterparts, with rural districts having 34% fewer women principals on average. The differences in the racial/ethnic composition of newly hired principals in rural districts stand out as well. Specifically, 90% of rural principals were White, compared to a state average of 68%, with rural areas having higher concentrations of White principals than even suburban districts. In terms of salary, rural principals earned roughly $16,000 less annually than the average for all newly hired principals in the state and lag further behind suburban and urban districts by nearly $25,000 a year. Rural principals tend to teach for longer spells than average, yet also spend less time employed

[1]Categories include: independent town, major suburban, major urban, non-metropolitan fast growing, non-metropolitan stable, other central city, other central city suburban, and rural.

as assistant principal. In this sense, our analysis suggests rural principals are unique in terms of their characteristics, particularly in comparison to urban principals.

We also examine the characteristics of schools in rural and urban locales. Table 2 documents the student composition of rural and urban schools for the sample. As shown, rural schools exhibit significant differences from the general body of Texas schools across all locales. Specifically, rural schools have greater percentages of White students and, concomitantly, significantly lower percentages of African American and Hispanic students. This feature, combined with the demographic composition of the rural principal body, shows that rural principals tend to racially match the majority of their student body more frequently than do their counterparts in other locales.

Furthermore, rural schools have lower percentages of students identified as economically disadvantaged (eligible for participation in the federal free-/reduced-price meal program), as well as students identified as limited English proficient, yet they report slightly higher concentrations of students identified for special education services. It should also be noted that the distribution of schools by school level is quite different. A greater percentage of schools in rural areas have combined grade levels that cross the traditional grade spans for elementary schools, middle schools, and high schools. This situation is not surprising given that rural schools tend to enroll fewer students, thus often combine elementary, middle, and high school students in one building. While rural schools may be smaller in general, many rural principals are leading schools with grade configurations that include a wide range of student ages, thus making the duties of the principal more complex.

With respect to indicators of principal retention and attrition, Table 3 demonstrates the total average years as a principal for rural, suburban, and urban schools alongside stability ratios. As compared to the full sample, rural principals exhibit the shortest career length, with an average of 5.29 years at a given school. Furthermore, in looking at stability, we see that 28% of rural principals stay at a given school for five or more years, as compared to around 50% for their suburban and urban counterparts. This result is similar to earlier results from Texas (Fuller & Young, 2009). To get a better idea of the nature of a rural principal's career, Figure 1 plots the average yearly percentage of principal employment by rural, suburban, and urban groupings. Both suburban and urban principals demonstrate a roughly flat rate of stability for the first eight years, hovering around 10% and precipitously declining around the ninth year. However, rural principals show more consistent decline over time, which results in a higher proportion of principals with lower durations of employment, and vice versa. Undoubtedly, these trends suggest that the mechanisms of principal turnover do indeed systematically vary by locale.

Method

To gain a better understanding of the characteristics and antecedents to rural principal turnover, logistic regression analysis models was employed for all newly hired principals, followed by models restricted to newly hired principals in rural, suburban, and urban designations. These models were expressed using the following general equation, whereby the log odds of staying five years are a function of the intercept α, and the slope β of characteristic value x for individual (1), school (2), and locale (3):

$$\ln\left[\frac{p\,(stability)}{1-p(stability)}\right] = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon$$

These models indicate the likelihood of staying at a particular school for at least five years, with averaged school and individual characteristics across the time in which they were employed. As a result, individual and school characteristics are site specific for the duration of a principals stay. Some variables were highly correlated, given that certain features—such as school racial composition—are non-independent. Others, such as racial composition and limited English proficiency are often also interrelated. Diagnostics for the introduction of bias yielded no significant influence, and the large sample size further mitigates these issues (Allison, 2006; O'Brien, 2007).[2] The highly-correlated measures included school racial composition, economically disadvantaged students, and proportion of limited English proficient students, given that these features are generally not independent of one another. Results are presented below in Table 4, with both logistic regression coefficients and odds ratios reported for an omnibus model of all Texas, followed by restricted models for rural, suburban, and urban schools. Each coefficient indicates the effect of the predictor on the outcome variable (stability), relative to the baseline category (White, male, elementary, and suburban) while holding all other predictors constant. Results indicate the direction of the estimated effect and whether it is statistically significantly different from zero.

Broadly, Table 4 demonstrates a general consistency in the characteristics that explain principal stability in rural settings, but it also demonstrates some interesting differences. Model 1, covering all of Texas, includes all TEA indicators for locale and compares them to the largest

[2]Multicollinearity was assessed with variance inflation (VIF) tests for each model. Mean VIF was at 1.74 with no individual coefficient above 3, far below the oft-used rule of thumb that VIF should not exceed 10 (O'Brien, 2007). See Appendix A for details. Furthermore, cluster-adjusted standard errors were used by district to control for within-cluster correlation due to administrative and student compositions. Fixed effects by district, while yielding identical substantive results, offer a less appropriate means for the rural context, given that some rural districts only have one principal per school level, or even less for combined school situations.

Table 1
Principal Characteristics by Locale

	All Texas	Rural	Suburban	Urban
Female	59.96%	37.45%	71.14%	71.48%
White	68.41%	90.15%	71.34%	39.33%
Hispanic	19.00%	7.21%	12.82%	32.78%
African American	11.02%	1.16%	14.12%	26.16%
Native American	1.00%	0.84%	0.96%	1.38%
Asian	0.15%	0.19%	0.27%	0.17%
Avg. Age	43.55	42.17	43.73	44.20
Avg. Salary	$66,196.94	$50,600.23	$75,731.69	$75,879.35
Avg. Years as Teacher	7.49	10.42	6.39	6.02
Avg. Years as Assist Principal	3.04	1.32	3.96	3.60
Avg. School Achievement	69.10	69.72	73.63	62.59
Racial Match	69.00%	77.80%	62.32%	57.62%
Observations	7,251	781	1,646	1,092

Table 2
School Characteristics by Locale

	All Texas	Rural	Suburban	Urban
Non-White Average	54.93%	35.73%	54.44%	82.36%
White	42.76%	63.59%	40.02%	15.38%
African American	13.68%	6.27%	16.52%	22.88%
Hispanic	41.25%	29.46%	37.92%	59.48%
Avg. School Size	580.74	203.61	799.89	755.78
School LEP	14.27%	5.42%	16.06%	26.39%
School FRL	55.93%	53.67%	46.32%	73.61%
School SPED Services	11.89%	14.59%	10.58%	10.05%
Elementary	54.48%	29.34%	63.20%	71.36%
Middle School	17.59%	30.50%	11.36%	10.41%
High School	22.73%	13.58%	24.90%	18.06%
Combined	5.21%	26.58%	0.54%	0.17%
Rural	12.90%	-	-	-
Suburban	21.64%	-	-	-
Urban	14.44%	-	-	-
Observations	7,251	781	1,646	1,092

Table 3
Principal Stability by Locale

Locale	Observations	Average Tenure	5-Year Stability
All Texas	7251	5.97	41.04%
Rural	781	5.29	28.01%
Suburban	1646	6.39	50.29%
Urban	1092	6.33	47.09%

Note. All locale averages are significantly different from All Texas, two-tailed, $p < 0.05$

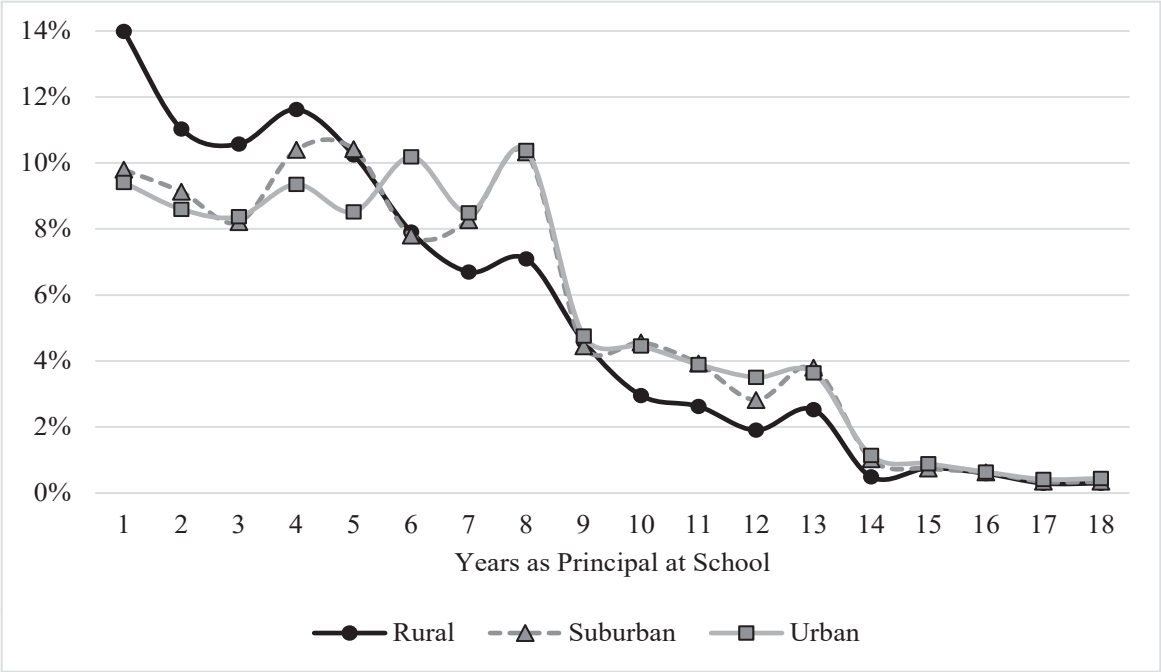

Figure 1. Proportion of principals by duration of employment.

subgroup, suburban schools. The significant coefficient for rural principals near the bottom row demonstrates that rural schools are indeed distinct in their relationship with principal stability, even after controlling for all other factors. Therefore, while urban districts do not significantly differ from suburban districts, rural districts have a nearly 34% lower odds of having a stable principal.

Models 2, 3, and 4 are restricted to rural, suburban, and urban schools, respectively, so that within-locale features can be identified and compared. Overall, these models show that rural stability is contingent on different factors than suburban or urban stability. Initially, rural female principals have 34% higher odds of staying than male principals, a finding that does not hold true for suburban urban principals. Indeed, the stability of rural female principals is even higher than the state aggregate. Given the earlier demonstration that there were significantly fewer female principals in rural areas, our findings suggest that lower percentages of female principals do not necessarily result in shorter terms of employment in the same school.

With respect to race/ethnicity, principals of color were not significantly different from White principals in terms of stability, although there were no observations of American Indian or Asian principals completing five years in the same school in rural districts. Furthermore, the indicator of cultural homiliphy, which indicated if the principal was of the same racial category as the majority body of students, yielded no significant results. This finding—that rural principals of color are no different in terms of stability—is interesting, considering the aforementioned emphasis on

Table 4
Characteristics Influencing 5-Year Principal Stability by Locale

	Model 1: All Texas		Model 2: Rural		Model 3: Suburban		Model 4: Urban	
Individual	Coefficient	Odds Ratio	Coefficient	Odds Ratio	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Female	0.230***	1.259***	0.294*	1.341*	0.142	1.153	0.168	1.183
	(0.058)	(0.073)	(0.171)	(0.230)	(0.130)	(0.150)	(0.152)	(0.180)
Race								
African American	-0.124	0.883	-0.284	0.753	-0.145	0.865	-0.187	0.830
	(0.090)	(0.079)	(0.656)	(0.494)	(0.173)	(0.150)	(0.215)	(0.178)
Hispanic	-0.069	0.933	-0.563	0.570	-0.072	0.930	-0.086	0.917
	(0.088)	(0.082)	(0.428)	(0.244)	(0.191)	(0.178)	(0.247)	(0.227)
Native American	0.065	1.067	-0.916	0.400	0.331	1.392	-0.008	0.992
	(0.244)	(0.261)	(1.250)	(0.500)	(0.669)	(0.931)	(0.553)	(0.549)
Asian	0.450	1.568	-	-	0.720	2.055	-	-
	(0.670)	(1.051)			(1.055)	(2.168)		
Cultural Match	0.037	1.038	0.331	1.392	0.139	1.149	0.101	1.106
	(0.066)	(0.069)	(0.262)	(0.365)	(0.138)	(0.159)	(0.180)	(0.199)
Age at Hiring								
Younger (< 38)	-0.325***	0.722***	-0.358*	0.699*	-0.416***	0.660***	-0.241	0.786
	(0.064)	(0.046)	(0.199)	(0.139)	(0.136)	(0.090)	(0.173)	(0.136)
Older (> 50)	-0.197***	0.821***	-0.459*	0.632*	-0.437***	0.646***	-0.179	0.836
	(0.067)	(0.055)	(0.236)	(0.149)	(0.145)	(0.094)	(0.165)	(0.138)
Years as Teacher								
Lower (< 3)	-0.356***	0.701***	-0.990***	0.372***	-0.337*	0.714*	-0.389**	0.678**
	(0.084)	(0.059)	(0.341)	(0.127)	(0.173)	(0.123)	(0.195)	(0.132)
Higher (> 10)	-0.028	0.973	0.002	1.002	-0.117	0.889	-0.144	0.866
	(0.063)	(0.061)	(0.189)	(0.189)	(0.142)	(0.126)	(0.174)	(0.150)
Years as Assist Principal								
Lower (0)	0.321***	1.379***	0.668***	1.950***	-0.221	0.801	-0.333	0.717
	(0.075)	(0.104)	(0.169)	(0.330)	(0.290)	(0.232)	(0.230)	(0.165)
Higher (> 5)	-0.072	0.930	-0.691*	0.501*	-0.166	0.847	-0.295**	0.744**
	(0.061)	(0.056)	(0.353)	(0.177)	(0.119)	(0.101)	(0.146)	(0.109)
Salary	0.000***	1.000***	0.000***	1.000***	0.000***	1.000***	0.000***	1.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Comparative Wage Index	-0.689***	0.502***	0.142	1.153	0.541	1.719	-2.561***	0.077***
	(0.236)	(0.119)	(0.668)	(0.770)	(0.788)	(1.355)	(0.804)	(0.062)
School Achievement	0.006***	1.006***	0.012**	1.012**	0.000	1.000	0.005	1.005
	(0.002)	(0.002)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
% Non-White	-0.006***	0.994***	-0.000	1.000	-0.007	0.993	0.002	1.002
	(0.002)	(0.002)	(0.006)	(0.006)	(0.005)	(0.005)	(0.009)	(0.009)
School Size	-0.000	1.000	0.002**	1.002**	0.000	1.000	0.000	1.000
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)

Table 4 (continued)
Characteristics Influencing 5-Year Principal Stability by Locale

	Model 1: All Texas		Model 2: Rural		Model 3: Suburban		Model 4: Urban	
% LEP	0.004*	1.004*	0.014	1.015	-0.001	0.999	-0.005	0.995
	(0.002)	(0.002)	(0.012)	(0.013)	(0.005)	(0.005)	(0.005)	(0.005)
% Economic Disadvantage	-0.001	0.999	0.004	1.004	0.001	1.001	-0.004	0.996
	(0.002)	(0.002)	(0.006)	(0.006)	(0.005)	(0.005)	(0.007)	(0.007)
% Special Ed Services	-0.005	0.995	0.015	1.015	0.009	1.009	-0.037**	0.964**
	(0.006)	(0.006)	(0.016)	(0.016)	(0.018)	(0.018)	(0.018)	(0.017)
Level (Elementary as Baseline)								
Middle School	-0.515***	0.598***	-0.052	0.950	-1.486***	0.226***	-1.535***	0.215***
	(0.100)	(0.060)	(0.258)	(0.245)	(0.259)	(0.059)	(0.356)	(0.077)
High School	-0.390***	0.677***	-0.051	0.950	-0.907***	0.404***	-0.696***	0.499***
	(0.073)	(0.050)	(0.272)	(0.259)	(0.165)	(0.067)	(0.216)	(0.108)
Combined	-0.582***	0.559***	-0.590***	0.555***	-0.571	0.565	-	-
	(0.158)	(0.089)	(0.218)	(0.121)	(0.980)	(0.554)		
Locale (Suburban as Baseline)								
Charter	-0.705***	0.494***						
	(0.178)	(0.088)						
Independent Town	-0.072	0.931						
	(0.139)	(0.129)						
Major Urban	-0.006	0.994						
	(0.086)	(0.086)						
Non-Metro Growing	-0.463*	0.629*						
	(0.264)	(0.166)						
Non-Metro Stable	-0.317***	0.728***						
	(0.119)	(0.087)						
Other Central City	0.149	1.161						
	(0.096)	(0.111)						
Other Suburban	-0.156	0.856						
	(0.096)	(0.082)						
Rural	-0.414***	0.661***						
	(0.148)	(0.098)						
Constant	-1.568***	0.209***	-3.798***	0.022***	-5.005***	0.007***	-1.149	0.317
	(0.412)	(0.086)	(1.115)	(0.025)	(1.217)	(0.008)	(1.267)	(0.402)
N	7,251	7,251	781	781	1,646	1,646	1,092	1,092
AIC	8942.097		966.8631		2002.465		1394.639	

Note. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

cultural "fit" and the high concentration of majority-White schools and communities in rural areas.

Age and experience, two features that would seem to be central in the notion of rural community fit and traditional parochial leadership (Budge, 2006; Cruzeiro & Boone, 2009; Harmon & Schafft, 2009), demonstrated patterns similar in line with the rest of the state, although somewhat more intensely than suburban and urban locales. To assess these features, measures of age and experience were categorized into terciles, with the lower and upper groupings representing the bottom and top 25% of the distribution of all principals in the sample. Younger principals were less likely to be stable, a finding that comports with the extant literature on early movers and high attrition rates (Akiba & Reichardt, 2004; DeAngelis & White, 2011; Loeb et al., 2010; Tekleselassie & Villarreal, 2011). Older principals were as well, but given that the age of the top 25% of the distribution is 50 years old and up, this result is likely an indicator of retirement rather than traditional forms of attrition. Those principals without teaching experience were even less likely to be stable principals, although in the rural context, these principals had over 62% lower odds of stability than those with between one and four years' experience. While the significance of the finding holds across locale context, the magnitude is much more severe than in suburban or urban contexts, suggesting the importance of time spent as an educator for rural communities. However, such a relationship is nonlinear and does not hold for those with high levels of teaching experience, coinciding with the notion that experience as an educator is a threshold-based legitimation factor that is more pronounced in rural communities (Barley & Beesley, 2007; Budge, 2006). Interestingly, the level of experience as an assistant principal demonstrated an opposite effect. Principals with little assistant principal experience were more likely to be stable, but only in the rural context. This trend may coincide with research findings that suggest that many assistant principals do not aspire to the principalship (Chan et al., 2003), but perhaps feel more pressure to eventually move up in rural schools with a smaller pool of alternative candidates. Alternatively, those who do aspire to the principalship place high value on opportunities for professional development (Walker & Kwan, 2009), which may be less available in the rural context. While the mechanism is outside the scope of this investigation, it certainly merits further inquiry.

The influence of salary was consistent across all models, a finding that complies with previous research (Baker, Punswick, & Belt, 2010). Specifically, higher absolute salaries increase the likelihood of stability, although the magnitude of the effect is small. However, across all of Texas, as well as in urban schools, greater private sector wages were associated with lower odds of remaining, as shown by the Comparative Wage Index. This comports with the notion that principals may be drawn away from the position if competitive wages were available and accessible, even when holding absolute wages constant. In contrast, rural areas do not exhibit this wage draw. In other words, market wages do not significantly influence levels of stability for rural principals, perhaps due to limited opportunities for high-skill leadership positions or because of the altered nature of the rural principalship itself as a more social and community-embedded position. However, this finding should not be taken as an indication that principal wages are not important in rural contexts. Indeed, higher wages do lead to greater principal stability, even while increased competition does not necessarily lead to less principal stability.

Student characteristics had little to do with principal stability in rural schools—aside from achievement, which is well supported in the literature. This finding may indicate that although rural principals often have less resource and administrative support to help students requiring special education, economic, or language assistance, these features did not systematically influence their stability at a school. What did demonstrate significant influence was the school level. As compared to suburban and urban locales, rural principal stability is relatively homogenous across traditional elementary, middle, and high school contexts. However, given the high concentration of combined-level schools, it is interesting that these principals demonstrated 45% lower odds of five-year stability than elementary principals, with other conditions remaining the same. Given the expanded duties of leadership across a wider range of age groups, these positions may be considerably more challenging for a host of reasons.

Discussion and Conclusions

In this study, we have employed logistic regression analysis to examine principal stability at the same school across geographic locales using a large, longitudinal data set from Texas. We have set out to establish that the rural context is indeed unique in terms of the principal labor market, as well as to support and assess previous literature on the ways in which the rural principalship differs. Our results suggest that, after controlling for personal characteristics and student characteristics, rural principals have among the shortest school-level stability (Fuller & Young, 2009). Given that principal turnover is both frequent and problematic (Baker et al., 2010; Miller, 2013), these results extend such concerns specifically to the rural context. Indeed, with less than one third of principals staying on for five years or more, a rural principal is unlikely to see a single cohort of students complete all grades in an elementary or high school.

The literature on the rural context has emphasized the more traditional influence of gender roles, and our results

show that the rural principalship is a profession dominated by White males. However, despite the low percentages of female rural principals, there is still a significant effect of gender on stability which contradicts what may be expected given the literature. Specifically, while small in numbers, female principals exhibit significantly greater school-level stability than their male peers in rural districts. Thus, while rural districts appear to be less likely to hire female candidates for principal positions, those female candidates who are hired tend to stay in their position longer.

With respect to efforts to increase the diversity of rural school principals, our results suggest employing a principal of color is not associated with differential rates of stability. As research documents the increasing rate of ethnoracial diversification among rural communities (Lichter, 2012, 2013), racial mismatch between the principal and the student body is likely to increase, alongside increasing changes in the social and normative gestalt. As such, our results are promising for rural districts looking to balance diversity with leadership stability both now and in the future, particularly given the conventional wisdom about ensuring that candidates fit in to the dominant sociocultural context (Cruzeiro & Boone, 2009).

The influence of salary was shown to be consistent across all types of locale. Indeed, rural principals with higher salaries are likely to stay at a school for a meaningful amount of time. However, rural principals were less influenced by the comparative wages of equivalent private-sphere opportunities than their urban counterparts. This finding helps to demonstrate the unique space in which rural principals exist, both in terms of the qualitative nature of the position and the economic milieu. Rural principals may be faced with reduced external opportunities due to distance and limited demand for high-skill jobs. As such, they may be more stable given fewer viable alternatives. Conversely, external wages may be less influential given that the rural principal is a more community-bound position. The extension of the job as a social leader may buffer rural principals from eternal wage draw, given considerations of influence and prestige. While determining such motivations is beyond the scope of the present research, these results do call for further investigations into the reasons why rural principals decide to stay or leave.

The findings surrounding age and experience demonstrate that timing is highly important for identifying potentially stable principals. The most stable rural principals are between 38 and 50 years old, with more than three years of teaching experience and little or no experience as an assistant principal. With the emphasis on "grow your own" programs and policies for rural districts (Browne-Ferrigno & Maynard, 2005; Institute for Educational Leadership, 2005), timing and preparation may be more acutely observed in conjunction with an individual's age if retention is of primary importance. Furthermore, while a position as an assistant principal is often a stepping stone to the principalship, significant time spent in that position may reduce the amount of time an individual remains a principal (Papa et al., 2002). These considerations may be important for superintendents and other school leaders in identifying and evaluating potential candidates.

Unfortunately, our study cannot identify the particular motivations that truly inform an individual's career decisions. Certain factors, such as personal history, sociocultural fit, or workplace expectations identified in prior literature cannot be accessed through state-collected data. Thus, while we can document stability rates, we cannot fully understand the underlying factors that thoroughly explain why rural principals stay or leave a position. These results are therefore diagnostic rather than explanatory. Research on attitudinal and behavioral factors specific to the rural context is needed to supplement and deepen our understanding of attrition and retention decisions among our rural school leaders.

Despite the limitations of our study, certain policy implications can be drawn from the findings. First, our results echo and broaden the extant literature calling for more specific attention to the rural principalship. Specifically, we demonstrate that the rural context exhibits significant influence on principal stability, holding personal and student features constant. District leaders who have expressed concern regarding the difficulties of attracting and hiring lasting principals may be further bolstered by our study's findings regarding lower average employment spells, along with racial and gender representations (Arnold, 2004; Browne-Ferrigno & Allen, 2006; Browne-Ferrigno & Maynard, 2005; Cruzeiro & Boone, 2009; Farmer, 2009; Preston et al., 2013). Importantly, our findings suggest that efforts to diversify the rural principalship will not influence stability in instances of ethnoracial mismatch and may additionally provide opportunities to broaden conceptions of leadership identities among homogenous populations (Pijanowski et al., 2009; Preston et al., 2013). Second, our study finds that while rural principal salaries may not be as embedded in labor market competition, they are still instrumental in keeping an individual in the job. Salaries may be lower on average from their urban counterparts, but they nonetheless are a significant factor in principal stability relative to a given labor market and, as such, should be carefully adjusted to attract and retain strong candidates. Third, district leaders looking to tap existing faculty for school leadership positions should carefully consider the timing and amount of experience possessed by a prospective candidate. Those with relatively fewer years of teaching experience may not stay as long, and those with greater levels of classroom experience may have developed the deeper connections necessary to maintain a robust leadership career. Previous research has emphasized that

rural superintendents may often prefer the candidate with the most experience and, therefore, should be cognizant of the type of experience they are cultivating (Pijanowski et al., 2009).

In sum, this study aimed to provide a broad scope analysis of the trends and conditions surrounding principal stability in rural districts. Results encourage further investigation into the motivations and behaviors surrounding principal attrition and retention in an oft-overlooked setting. The study bolsters and expands upon generalizations drawn from earlier research as well as informs discussions surrounding hiring and policy mechanisms that may increase the odds of principal stability. Thus, state and district policymakers, along with superintendents with a strong understanding of the unique position and characteristics of rural principals, may be better positioned to make sound policy and hiring decisions.

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Appendix A: Multicollinearity Diagnostics

Variable	VIF^2	VIF	Tolerance	R^2	Eigenvalue	Conditional Index
5 Year Stability	1.16	1.08	0.864	0.136	13.773	1.000
Gender	1.13	1.06	0.883	0.117	1.341	3.205
Race	1.67	1.29	0.601	0.400	1.097	3.544
Age	1.02	1.01	0.985	0.015	0.657	4.579
Teach Experience	1.06	1.03	0.943	0.057	0.529	5.100
AP Experience	1.04	1.02	0.965	0.035	0.479	5.362
Salary	1.73	1.32	0.577	0.423	0.397	5.890
Comp Wage	1.7	1.3	0.589	0.411	0.320	6.559
School Achieve	1.44	1.2	0.695	0.305	0.258	7.309
Cultural Match	1.26	1.12	0.796	0.204	0.202	8.252
% Non-White	4.97	2.23	0.201	0.799	0.185	8.622
School Size	1.42	1.19	0.705	0.295	0.167	9.085
% LEP	2.02	1.42	0.496	0.504	0.165	9.134
% FRL	4.24	2.06	0.236	0.764	0.141	9.886
% SPED	1.26	1.12	0.792	0.208	0.107	11.344
School Level	1.36	1.16	0.738	0.262	0.096	12.006
Rural	1.46	1.21	0.685	0.315	0.035	19.885
Suburban	1.65	1.28	0.608	0.393	0.028	22.233
Urban	1.51	1.23	0.661	0.339	0.020	26.249
Mean VIF	1.74					