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Working Paper: Take Me Home Country Roads? Exploring the College Attendance Patterns of Rural Youth

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National estimates suggest that rural students attend college at lower rates than non-rural students. However, the sources of this gap are unknown. This paper examines two potential explanations: 1) economic and information constraints and 2) community or family expectations that deter college attendance and persistence. This paper uses a longitudinal data set to follow a nationally representative group of students beginning in 10th grade and following them over 10 years. The results suggest that there is a significant rural/non-rural gap in bachelor's degree attainment but the gap disappears when we expand the definition of college to include associate and other certificates less than a bachelor's degree. There are meaningful differences between rural students and non-rural students in terms of their expectations for college completion as 12th graders and their access to college preparatory coursework. However, there was little evidence to support meaningful differences in other community and family expectations. When considered together, the observable economic constraints and family expectations did not eliminate the bachelor's degree attainment gap.

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• INTRODUCTION •

Attending college has long-term benefits for individuals and society. College graduates earn, on average, more than \$400,000 more in a lifetime than those who finish only high school (Barrow and Rouse, 2005). In addition to individual benefits, communities likely benefit from externalities that accrue to a more educated population, such as greater tax revenue from higher earnings (Rouse, 2005), reduced crime (Lochner, 2004, 2011), and greater citizen involvement in community governance (Lochner, 2004). While some of the relationship we observe between college and these benefits may be due to characteristics of the types of people who attend college and not necessarily because of their additional education, the available evidence suggests that there are causal benefits that accrue because of education. Thus, researchers and policymakers agree that encouraging more students to attend college is key to economic prosperity and security.

Rural areas have historically had lower college attainment rates than suburban or rural areas. Recent estimates identify a 10-percentage-point gap in college attainment between rural students and the national average, despite rural student having higher average high school graduation rates and scoring higher on math and reading achievement tests than students in cities or towns (Aud et al., 2013). This gap is puzzling, and it suggests that something other than academic aptitude contributes to the college-going patterns of rural youth.

Recent estimates identify a 10-percentage-point gap in college attainment between rural students and the national average, despite rural student having higher average high school graduation rates and scoring higher on math and reading achievement tests than students in cities or towns .

Two theories that focus on the conditions facing rural youth provide potential explanations for this puzzle. The first is that rural youth have similar preferences for attending college as non-rural youth, but they are resource-constrained in terms of economics and/or information. According to this theory, the college attendance gap reflects the socioeconomic conditions of rural areas rather than cultural differences in the expectations of rural youth.

The second theory hypothesizes that rural youth have less desire to attend college than do non-rural youth because of social and cultural expectations that exist in rural areas. According to this theory, the college completion gap is largely a result of the preferences and/or expectations of youth and their families. Thus, the observed college attainment gaps arise due to unique conditions facing rural youth and are therefore different from gaps that might be observed simply by focusing on economic conditions.

In practice, these two theories are not mutually exclusive and the gap could be a product of both. Furthermore, the theories might not be nearly as separable and distinct as they have been described; economic constraints and social/cultural conditions could be mutually reinforcing. However, for simplicity they are described and examined separately here.

• RURAL COLLEGE GAP AS A SOCIOECONOMIC GAP •

One obvious potential explanation for the college attendance gap is the constraints facing rural students. This would suggest that the gap results from factors that are not inherently rural but instead happen to be more concentrated in rural areas.

ACADEMIC GAP

As cited above, prior research has found that rural students score higher on the National Assessment of Educational Progress (NAEP), on average, than non-rural students (Aud et al., 2013). However, the NAEP may not accurately reflect the type of academic rigor needed for a student to feel prepared for college. It is possible, then, that students in rural areas are less prepared for college because they have not benefitted from academically rigorous courses as high school students. Lacking college preparatory coursework, rural students may feel less confident about their ability to succeed in college courses. Such a gap would not be inherently rural, but instead may simply reflect fewer opportunities to prepare effectively for the scholastic demands of college.

ECONOMIC GAP

The economic realities experienced by rural youth and their families may influence their decisions to attend college. For example, prior research suggests that the costs of college paired with lower returns on college education in rural areas negatively influenced the college aspirations of students in rural Ohio (Ohio Appalachian Center for Higher

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Education, 2008). In this research, economic constraints were the largest factor students cited for not planning to attend college. Other research in West Virginia found that perceptions of the economic and general relevance of education were negatively related to rural students' decisions to drop out of school (Chenoweth and Galliher, 2004). On the other hand, if students viewed college as an economic boon they were more likely to attend. However, due to the structure of labor markets in rural areas, rural students may see fewer opportunities to parlay a college degree into economic advantage.

INFORMATION GAP

Regardless of urbanicity, low-income students attend college at lower rates than middle- or high-income students (Muraskin and Lee, 2004). Although there are likely many factors that contribute to this reality, this economic divide may partly reflect an information gap. For example, low-income students and their families may have inaccurate perceptions about the cost of college or the amount of available aid. For example, the Free Application for Federal Student Aid (FAFSA) is notoriously difficult to navigate; consequently, students may underestimate the amount of financial aid for which they are eligible (Dynarski and Scott-Clayton, 2006). Indeed, recent experimental estimates suggest that professional assistance with filling out the complex FAFSA forms yields positive effects on college enrollment (Bettinger, Long, Oreopoulos, and Sanbonmatsu, 2012). These findings suggest that part of the effect of low income on rural students' college attendance gap may stem from lack of information about how to obtain aid intended for low-income students.

Access to more general information about the college application process may also explain gaps in college enrollment. Some have suggested that deficiencies in access to college counselors may explain enrollment gaps (Perna et al., 2008). Though the research has not explored the availability of college counselors in rural schools, Perna and her fellow researchers suggest that lower-income students have less access to college counselors and may also experience a greater need for college counselors; non-college-educated parents may be less helpful in navigating the nuances of college applications than are college-educated parents with firsthand experience.

• RURAL COLLEGE GAP AS A CULTURAL EXPECTATIONS GAP •

While some of the low rural college enrollment and completion gap may be explained as a reflection of the income gap between rural and non-rural areas, there may be aspects culture in rural communities that depress college going and completion independent of income gaps. Specifically, rural youth may be less prone to attend college for a variety of reasons or may have lower aspirations for college attainment due to pressures or expectations in their communities. Similarly, they may place greater value on lifestyle decisions, such as marriage or family, that are not directly influenced by college attendance.

Parents exert an obvious influence on a youth's decision to attend college (Yang, 1981). If parents in rural areas are less likely to place an emphasis on higher education, or perhaps even dissuade children from attending college, this may explain some of the rural college gap. Some have hypothesized that youth in rural areas face family pressure to stay in the community in which they were raised as a way of ensuring the vitality of the community. If a family views college as a potential draw away from the rural community (Gibbs, 1995, 2000), the family may discourage children from attending college. Likewise, rural families may view the traditions of a liberal education with suspicion and as being at odds with rural values. Finally, in agrarian rural communities parents may want children to stay to help maintain a family farm.

If parents in rural areas are less likely to place an emphasis on higher education, or perhaps even dissuade children from attending college, this may explain some of the rural college gap.

All of these present possible explanations for the types of college-going patterns that are observed among rural youth. The purpose of this paper is to analyze a nationally representative data set that followed rural and non-rural youth through the ages at which young people typically transition to college, and through this analysis determine whether there is evidence of economic and/or

expectation gaps between rural and non-rural youth. I then use these potential explanatory factors to examine whether accounting for the differences between rural and non-rural youth might explain some of the gaps in college attendance patterns.

METHOD

This paper uses the Educational Longitudinal Study (ELS 2002–2012) to follow a nationally representative sample of roughly 13,000 rural and non-rural youth for 10 years, beginning when they were in 10th grade. The ELS surveyed students as 10th graders (base year, 2002); two years after the base year, when most were high school seniors (first follow-up, 2004); two years after first follow-up (second follow-up, 2006); and six years after the second follow-up (third follow-up, 2012). Thus, we are able to observe their college aspirations for two years while they were still in high school and then observe their realized college enrollment and completion. For the purposes of this analysis I restrict the sample to students who are attending public high schools (roughly 80 percent of the unweighted sample).

I present descriptive statistics throughout the 10 years of observation to track the aims of rural and non-rural youth in an attempt to identify the places in the pipeline in which a rural/non-rural gap is observed: college aspirations as high schoolers, college matriculation, and college completion. I also explore the potential explanations described above to see whether rural and non-rural youth face different constraints and/or social and cultural pressures. All statistics presented in this report are weighted to make them nationally representative of public school students.

For the purposes of this report, I use the urban-centric locale codes derived from the U.S. Census Bureau that divide schools into four mutually exclusive categories: Urban, Suburban, Town, and Rural. Town and rural schools were further subdivided into fringe, distant, and remote depending on their distance from urban centers (“Common Core of Data [CCD],” n.d.). Because these codes

were not introduced until after the base year of ELS, I use the designations as of the NCES Common Core of Data from 2007 to code schools from the base year of ELS. For simplicity, I report separately the remote town, fringe rural, distant rural, and remote rural, and aggregate all other schools into a general “non-rural” category.

This paper focuses primarily on college attainment. However, attainment could be separated further into college attendance (whether a student ever enrolls in college) and college persistence (whether the student completes college after having started it). Attainment is the intersection of those measures; students must enroll and persist in college in order to attain a degree. Indeed, deconstructing college attainment into these two measures is an instructive analysis that will be examined in future research to try to understand the structure of the gap. Although this analysis is focused on college attainment, I do examine attendance and persistence separately in a few instances where the distinction is particularly critical.

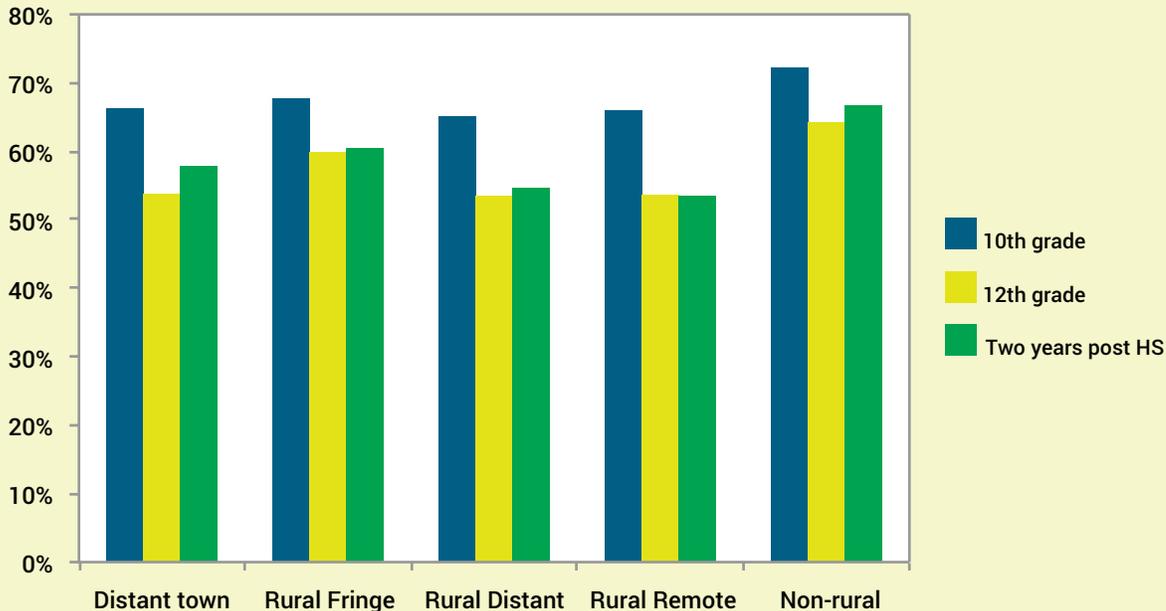
RESULTS

In the first three waves of the survey (10th grade, 12th grade, and two years post-high school) respondents were asked how much college they expected to complete. There were significant differences in the expectations of finishing at least a bachelor’s degree (BA) between rural students and non-rural students at each wave of the survey (**Figure 1**). Notably, all respondents were more sanguine about their chances of completing a BA as 10th graders than they were later in the survey. However, rural students saw a larger drop-off in expectations between 10th and 12th grade than did non-rural students. Taken together, rural students had lower baseline expectations as 10th graders than non-rural students, and they experienced a larger drop in expectations between 10th and 12th grade than non-rural students. The result was a gap in BA expectations at 12th grade ranging from 4 to 10 percentage points, with the lowest expectations among students from remote rural areas. Two years after high school, the gap persisted—and even widened to 12 percentage points for students from remote rural areas.

Much of the college expectation gap disappears if we expand the definition of college completion to include two-year degrees and one-year certificates. The majority of the change in BA expectation between 10th and 12th grade is accounted for by looking at the growth in the expectation of students who believe they will complete some college—an associate (AA) degree or a one-year certificate—but will not complete a bachelor’s degree. Few 10th graders expect to complete an AA as their highest degree, but by 12th grade there is a significant increase in the percentage of students who anticipate finishing with an AA (**Figure 2**). The increase is largest among students in rural schools. Although the total college expectation

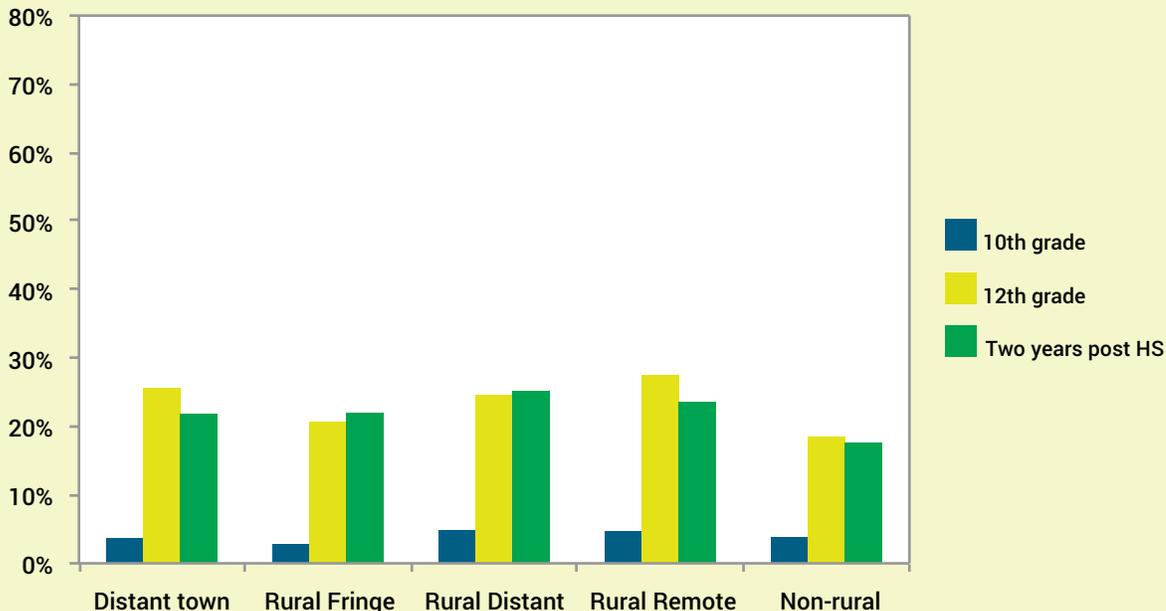
• Figure 1 •

PERCENTAGE OF STUDENTS WHO EXPECT TO COMPLETE AT LEAST A BA, AT THREE POINTS IN TIME



• Figure 2 •

PERCENTAGE OF STUDENTS WHO EXPECT TO COMPLETE SOME COLLEGE (LESS THAN A BA), AT THREE POINTS IN TIME

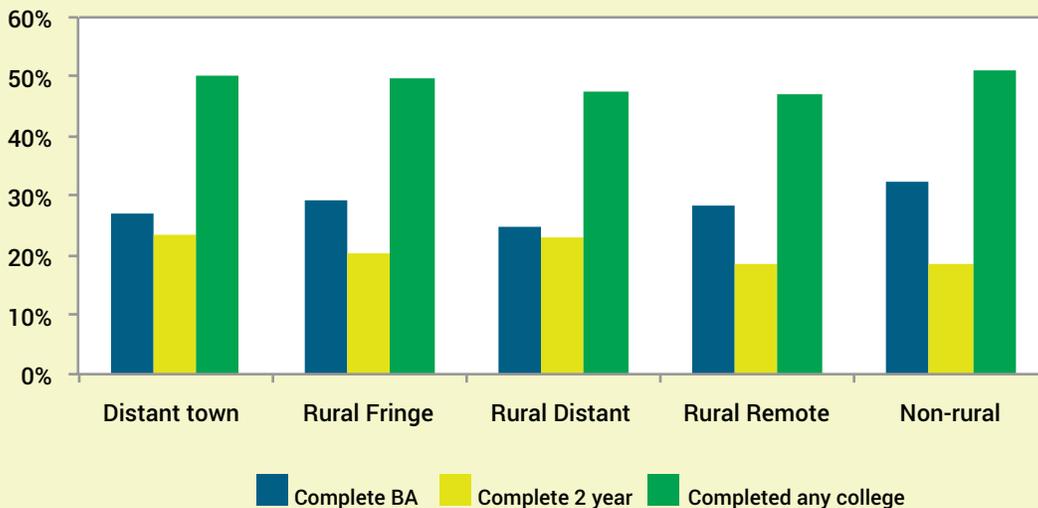


of rural students (BA completers plus AA completers) is still less than that of non-rural students, accounting for those who expect to complete an AA reduces the gap to between 1 percentage point and 4 percentage points, depending on the remoteness of the rural community.

The advantage of a longitudinal data set is that it permits us to examine the outcomes of the respondents several years after they were initially surveyed. In this case, it means we can examine whether the survey respondents had successfully completed college by the time they had been out of high school for eight years. We observe that rural students were less likely than non-rural students to have completed a BA eight years out of high school (**Figure 3**). However, rural students were more likely than non-rural students to have completed AA degrees or one-year certificates over the same period.

PERCENT OF STUDENTS WHO COMPLETED DIFFERENT LEVELS OF COLLEGE EDUCATION BY THE THIRD WAVE OF THE SURVEY

• Figure 3 •



Note: The green bar represents the sum of the BA completers and the two-year completers.

If we consider college attainment as *degree* attainment (i.e., a BA or AA or other certificate), then there does not appear to be a significant gap between rural and non-rural students in the data. However, if we view college attainment as synonymous with *bachelor's degree* attainment, then rural students systematically underperform compared to the non-rural students in our data.

The question of how to classify college attainment, and therefore to understand any gaps in attainment, is largely a question for policymakers to confront. The purpose of this paper is to explore patterns between rural and non-rural students that may help explain differences in the types of college attainment that is observed.

• ACADEMIC PREPARATION •

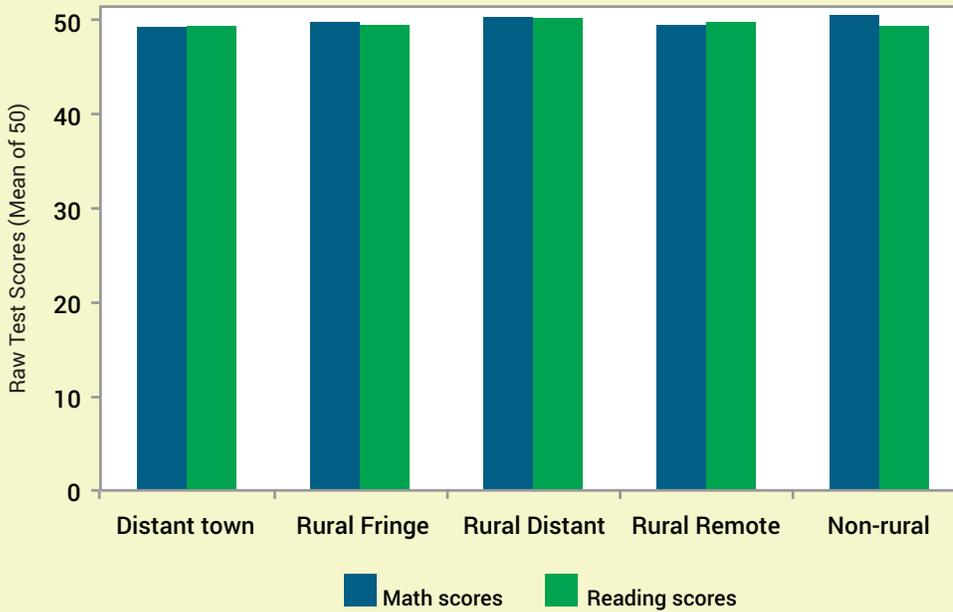
Students in rural areas were much less likely to have taken at least one AP or IB course. Consistent with previous results, remote and distant rural students were the least likely to have taken a college prep course; non-rural students were nearly twice as likely as the most rural students to have taken an AP or IB course.

As a first attempt at exploring the college attainment patterns, I examine whether there is a gap in the academic preparation of students that could explain some of the college expectations of 10th and 12th graders. As cited above, previous work has suggested that students from rural communities score as well on standardized tests as do non-rural students, which suggests some similarity in their levels of academic preparation. These data confirm earlier findings; scores on reading and math tests that were administered as part of the ELS indicate that rural students

score as well or better than non-rural students in both subjects (**Figure 4**). Therefore, these data do not provide any evidence that rural students underperform as compared to non-rural students when it comes to basic academic achievement.

MATH AND READING SCORES OF STUDENTS BY URBANICITY

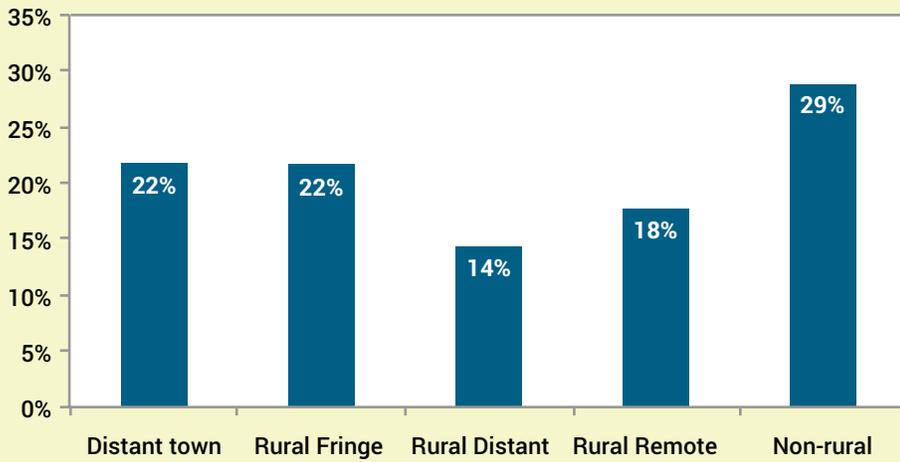
• Figure 4 •



Another aspect of academic preparation concerns the rigor of the coursework that prepares students for what is required at the college level. Rural students may have fewer opportunities to take college preparatory courses (e.g., Advanced Placement or International Baccalaureate), which are less likely to be offered in rural schools that are often small and unable to accommodate specialized courses. Unfortunately, these data cannot definitively answer whether the students had access to a college prep course at their schools, but we can examine whether rural students were less likely to enroll in such a course. Though we cannot differentiate whether their enrollment was due to the availability of courses or their desire to enroll in the courses that were available, the differences are quite striking (**Figure 5**). Students in rural areas were much less likely to have taken at least one AP or IB course. Consistent with previous results, remote and distant rural students were the least likely to have taken a college prep course; non-rural students were nearly twice as likely as the most rural students to have taken an AP or IB course. Similarly, rural students were less likely than non-rural students to have taken the SAT or ACT, although the gaps were rather small, ranging from 1 to 2.5 percentage points (not shown).

• Figure 5 •

PERCENTAGE OF STUDENTS WHO HAVE TAKEN AT LEAST ONE ADVANCED PLACEMENT (AP) OR INTERNATIONAL BACCALAUREATE (IB) COURSE IN HIGH SCHOOL



• ECONOMICS •

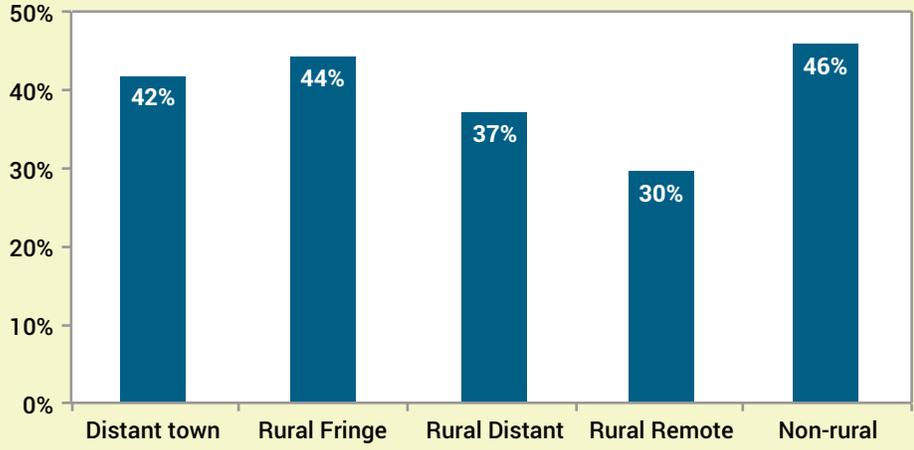
Approximately 46 percent of non-rural students came from families with annual income greater than \$50,000, as compared to roughly 30 percent of families in remote rural areas.

Family income may help explain some of the college attendance patterns of rural students, as families with lower income may have less ability to pay tuition and other expenses associated with four-year colleges. In our sample, rural students did appear to come from lower-income homes than did the average non-rural student. Approximately 46 percent of non-rural students came from

families with annual income greater than \$50,000, as compared to roughly 30 percent of families in remote rural areas (**Figure 6**). The gaps were not as large in other rural areas, ranging from 2 to 9 percentage points, but all were statistically significant. Rural respondents also attended schools with greater percentages of students who were eligible for free/reduced price lunch on average than did non-rural students (not shown). Taken together, these findings suggest that rural students come from more economically disadvantaged families and schools than do non-rural students. This economic gap could explain some of the difference in college attendance patterns.

• Figure 6 •

PERCENTAGE OF RESPONDENTS WITH FAMILY INCOME GREATER THAN \$50,000



• INFORMATION •

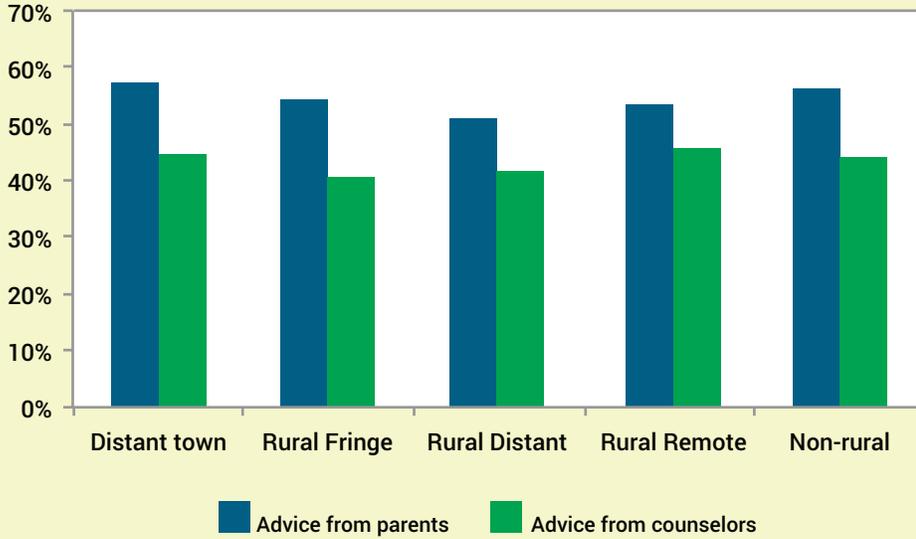
There do not appear to be systematic differences between rural and non-rural students in the frequency with which they seek college advice from their school guidance counselors.

Rural college attendance patterns could reflect an information gap. Many sources of information could influence students' decisions to attend college. Two questions on the second wave of the survey asked whether the respondents went to their parents and to guidance counselors for college advice. Rural students were slightly less likely than non-rural students to seek

college information from their parents, although the differences were not statistically significant (**Figure 7**). Similarly, there do not appear to be systematic differences between rural and non-rural students in the frequency with which they seek college advice from their school guidance counselors. In fact, some rural students were more likely than non-rural students to seek advice from guidance counselors. While we cannot determine the quality or accuracy of the information they received from these sources, these summaries do not provide compelling evidence of a prominent information gap between rural and non-rural students.

• Figure 7 •

PERCENTAGE OF RESPONDENTS WHO WENT TO PARENTS OR GUIDANCE COUNSELORS FOR COLLEGE ADVICE



• TIES TO COMMUNITY AND HOME •

The previous summaries have focused on issues of constraints facing rural students. In this section I focus on aspects of college aspiration that may operate either in conjunction with or independent of those constraints. The issues explored in this section relate to the aspirations that rural students express in connection with family and community expectations.

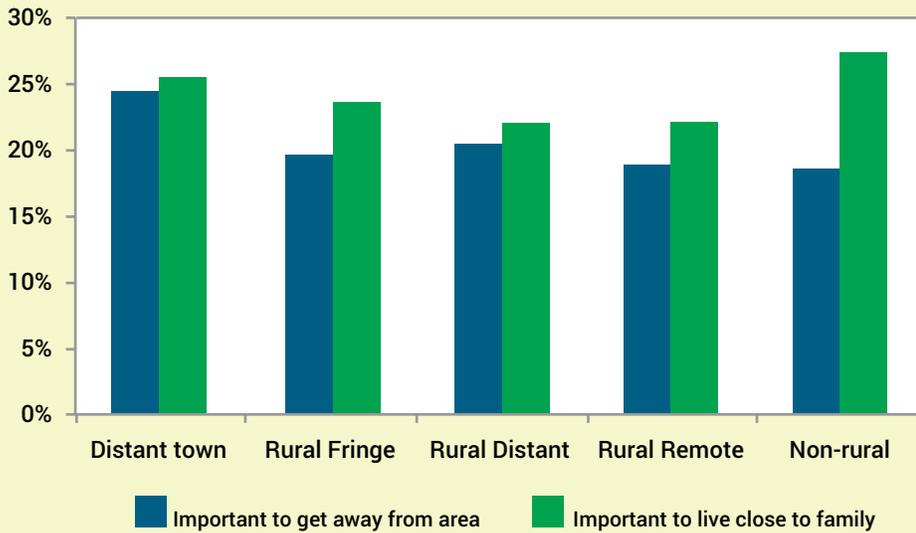
Rural students were more likely than non-rural students to say it was very important for them to “[get] away from this area of the country.”

One factor that could influence college attendance is whether rural students feel pressure to stay in their communities. Respondents were asked in 12th grade how important it was for them to live close to parents and relatives. If rural students are more likely to feel the need to stay close to home, it may reduce the desirability

of attending a college and/or obtaining a job far from home. However, rural students in this sample were actually less likely than non-rural students to say that living near parents and relatives is very important (**Figure 8**). Likewise, rural students were more likely than non-rural students to say it was very important for them to “[get] away from this area of the country.” While it is possible that rural and non-rural students interpret these questions differently, these findings do not suggest that rural high school students express a greater desire than non-rural students to settle close to where they grew up. If anything, rural students may be more likely than non-rural students to want to move away from their hometown.

• Figure 8 •

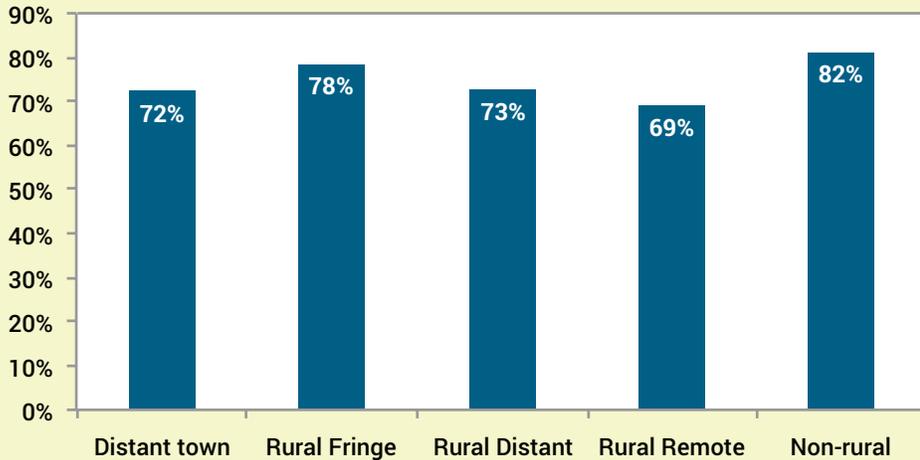
PERCENTAGE OF 12TH GRADE STUDENTS WHO EXPRESSED THAT IT WAS EITHER “VERY IMPORTANT” TO GET AWAY FROM THE AREA WHERE THEY LIVED DURING HIGH SCHOOL OR “VERY IMPORTANT” TO LIVE CLOSE TO PARENTS OR RELATIVES



Parents have a meaningful influence on their children’s college aspirations, and differences in rural college attendance patterns could reflect differences in parental expectations. Respondents were asked as 12th graders how far they thought their parents wanted them to go in school. Fewer rural students than non-rural students indicated that at least one of their parents expected them to graduate from college with a bachelor’s degree (**Figure 9**). As was true of previous results, the largest parental aspiration gaps were seen in remote rural areas, where fewer than 70 percent of respondents indicated they thought one or more parent expected them to graduate from college compared to roughly 82 percent of students in non-rural areas.

• Figure 9 •

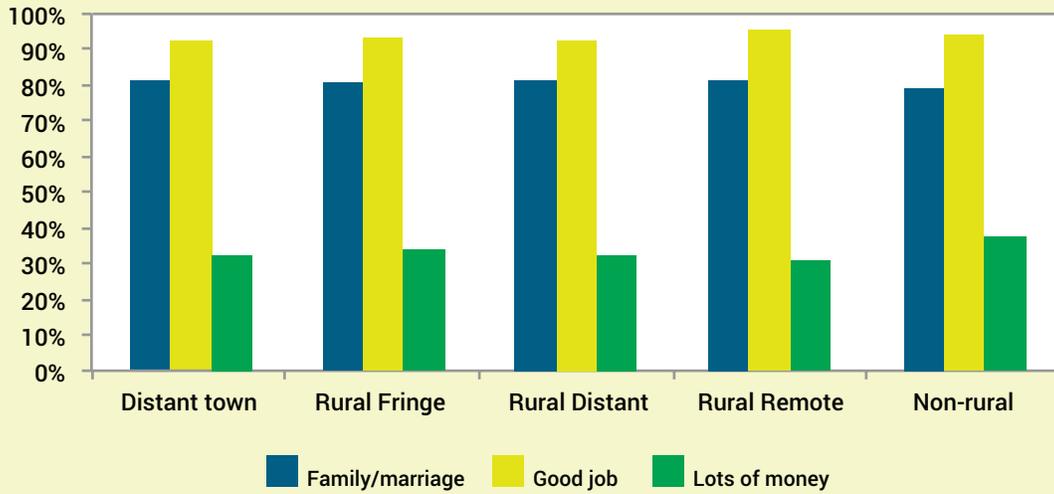
PERCENTAGE OF STUDENTS WHO FEEL THAT AT LEAST ONE PARENT EXPECTS THEM TO GRADUATE FROM COLLEGE



Rural students may simply have different preferences for life outcomes than non-rural students. For example, they may place greater emphasis on marriage and family and less emphasis on money and career status. To explore whether this was the case, we examined student responses as 12th graders to questions about the extent to which they felt it was very important to marry the right person and have a happy family, a good job, and lots of money. Rural students and non-rural students expressed similar preferences when it came to marriage/family and the importance of securing a good job (**Figure 10**). Relatively few expressed that it was very important to them to have lots of money, but non-rural students were slightly more likely than rural students to say it was very important to have lots of money. The differences between rural and non-rural students ranged from 4 to 7 percentage points.

• Figure 10 •

PERCENTAGE OF STUDENTS WHO EXPRESSED THAT IT WAS “VERY IMPORTANT” TO HAVE A GOOD MARRIAGE/FAMILY, A GOOD JOB, AND “LOTS OF MONEY”



• ACCOUNTING FOR DIFFERENCES •

In the analyses above, we identified several differences between rural and non-rural students that might help explain differences in college-going patterns. In many cases, multiple factors worked against the rural students completing a BA. For example, rural students were less likely to participate in college preparatory AP and IB courses and were more likely to come from lower-income homes. In a final set of analyses, we examine

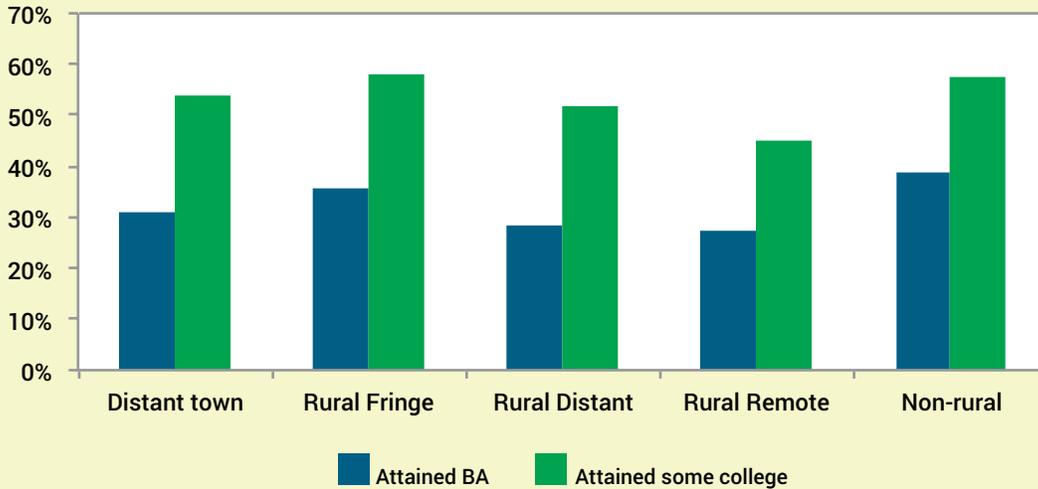
After accounting for observable characteristics between rural and non-rural students, we find a surprising and somewhat puzzling result: the BA attainment gap for rural students is actually larger than the simple descriptive statistics would suggest.

whether all of the factors we have identified help explain the differences in college attendance patterns between rural and non-rural students. For these analyses, we use a multiple linear regression technique to examine multiple factors that simultaneously could explain college-going patterns. With all of these in place at the same time, we can measure how much of the gap is explained by observable differences between rural and non-rural students.

After accounting for observable characteristics between rural and non-rural students, we find a surprising and somewhat puzzling result: the BA attainment gap for rural students is actually larger than the simple descriptive statistics would suggest (**Figure 11**). In other words, rural students are less likely to attain a bachelor's degree than are non-rural students with similar characteristics. When we repeat the analysis with any type

• Figure 11 •

COLLEGE ATTAINMENT GAP AFTER CONTROLLING FOR OBSERVABLE DIFFERENCES BETWEEN STUDENT TYPES



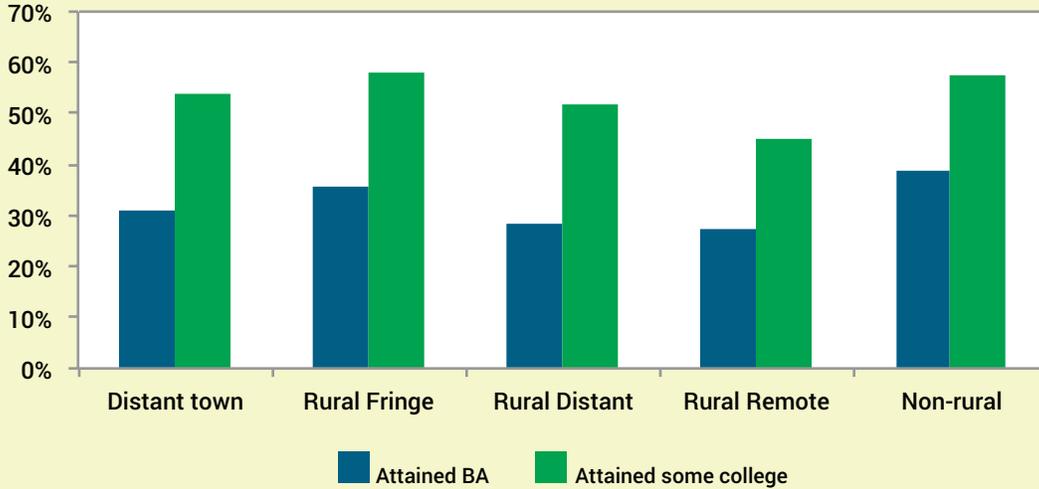
Note: The percentages shown are the predicted college persistence rates of students after controlling for family income, whether the student sought information from parents or counselors, completion of college preparatory courses, high school GPA, achievement scores on math and reading exams, and parents' level of education.

of college attainment (BA, AA, or certificate) as the outcome, there is still a sizeable gap between rural students' and non-rural students' college attainment. This suggests there is something else associated with rural students that influences college attainment.

To examine whether the attainment gap is due to differential persistence of rural and non-rural students, we repeat the analysis above but restrict the sample to just those students who, as of the second wave of the survey, had attempted some college coursework. Of those students who began college coursework, rural students were less likely to complete their degree (**Figure 12**). The differences, however, were primarily concentrated among students from remote rural areas. Students from rural fringe and rural distant areas were not statistically different from non-rural students when it came to completing a BA once they had started it. When looking at any college attainment (BA, AA, or certificate), the gap between rural students and non-rural students persists. Taken together, these findings suggest that there are factors beyond what we have examined here that depress college persistence among students from remote rural areas.

• Figure 12 •

COLLEGE PERSISTENCE: THE PERCENTAGE OF STUDENTS WHO COMPLETE COLLEGE AFTER THEY HAVE STARTED



Note: The percentages shown are the predicted college persistence rates of students after controlling for family income, whether the student sought information from parents or counselors, completion of college preparatory courses, high school GPA, achievement scores on math and reading exams, and parents' level of education.

• DISCUSSION AND CONCLUSIONS •

As high schoolers, rural and non-rural students express different preferences for college attainment. These differences were borne out when observing actual college attainment in a nationally representative sample of students followed over a period of 10 years. Although there were many differences between rural and non-rural students on dimensions that we might expect to influence college choices, these differences did not appear to explain the college attainment gap. Even after accounting for family income, family preferences, parental expectations, and all of the other preferences and constraints included in our model, rural students were less likely than non-rural students to complete college. The same patterns were observed in college persistence for the students from the most rural communities.

The college attainment gap is quite puzzling in light of facts uncovered in the data. Rural students scored just as highly as their non-rural counterparts on math and reading exams. They also expressed similar preferences as to the importance of finding good jobs and were no more likely than non-rural students to place a higher value on marriage and family. These facts do not appear to support the idea that rural students are less motivated to pursue higher education.

Some have speculated that rural students feel a greater pull to stay in their communities. This was not detected when the survey respondents were in 12th grade. If anything, rural students were more likely to express a desire to leave the area and were less likely to indicate that it was “very important” to live near family and relatives. However, following the students across the subsequent eight years allows us to observe whether rural respondents were, in fact, more likely to settle close to where they attended high school. The results indicate that remote rural students tended to settle somewhat closer to where they attended high school (an average of 133 miles for remote rural students versus an average of 179 miles for non-rural students). Although the differences may have been statistically significant, however, they do not suggest that remote rural students are all staying in their hometowns. None of the other rural classifications were meaningfully different from the non-rural students.

Some have speculated that rural students feel a greater pull to stay in their communities. This was not detected when the survey respondents were in 12th grade. If anything, rural students were more likely to express a desire to leave the area and were less likely to indicate that it was “very important” to live near family and relatives.

The mobility patterns suggest that rural students are not meaningfully less geographically mobile than non-rural students. Of course, if mobility were generally restricted among all types of students, the non-rural students would be at an advantage for attending college and finding work in which the returns on college education were higher, due to the comparative lack of access to these opportunities in rural areas. However, the observed mobility patterns do not suggest that the mobility is restrictive enough to deny most rural students opportunities if they

seek them. As a further check of geographic mobility, I measured whether students from rural areas were more likely than non-rural students to attend a college in their home state. Roughly 80 percent of all students who attended college did so in their home state, and there were no apparent differences in this rate between rural and non-rural youth.

The next frontier of this type of research is to explore the college experience for students in rural areas versus those from non-rural areas. As found in this paper, there is no apparent gap in college attendance if we consider attendance equally across two-year and four-year colleges. While the economic and social returns for two-year colleges are positive (Belfield and Bailey, 2011; Marcotte, Bailey, Borkoski, and Kienzl, 2005), they are likely less than those for four-year colleges (Greenstone and Looney, 2011). It is worth exploring whether the rural students who attended two-year colleges would have benefitted from attending four-year colleges. While a full analysis of this question is beyond the scope of this paper, we can observe whether rural students who attended college were less likely than non-rural students to attend a selective college (i.e., the institution does not accept all applicants). The data from ELS do not support this hypothesis: roughly 50 percent of all students who attended college attended at least one with some degree of selectivity. There were no differences in this rate across any of the urban-rural classifications examined in this paper.

Future research should continue to probe the transition from high school to college among rural youth. In particular, high school counselors and parents may benefit from a better understanding of the shift in college expectations that was observed between 10th and 12th grade in this sample. Similarly, research into the college experiences of rural youth would provide a better understanding of how and why rural students appear to have lower college persistence rates once they start. Such knowledge would help administrators and policymakers to better understand how to support college-going rural youth in attaining valuable degrees.

This paper illuminated important patterns in college attendance among rural youth. There is some hope that nearly half of rural students have completed some college by the time they have been out of high school for eight years. However, there appears to be more work to do for the half of rural (and non-rural) youth that did not attend college, and to address the BA attainment gap between rural and non-rural youth. In the face of globalization and its accompanying changes among rural economies, the vitality of rural communities depends upon a well-educated and adaptable workforce.

• BIBLIOGRAPHY •

- Aud, Susan, Sidney Flicker-Wilkinson, Paul Kristapovich, Amy Rathbun, Xiaolei Wang, and Jijun Zhang. *The Condition of Education 2013*. Washington, DC: US Department of Education, National Center for Education Statistics, 2013. Retrieved from <http://nces.ed.gov/pubsearch>.
- Barrow, Lisa, and Cecilia Elena Rouse. "Does College Still Pay?" *The Economists' Voice* 2, no. 4 (September 2005). Retrieved from [http://www.degruyter.com/dg/viewarticle/j\\$002fev.2005.2.4\\$002fev.2005.2.4.1097\\$002fev.2005.2.4.1097.xml;jsessionid=EC67920638CA8DB119EE6738ECFA444C](http://www.degruyter.com/dg/viewarticle/j$002fev.2005.2.4$002fev.2005.2.4.1097$002fev.2005.2.4.1097.xml;jsessionid=EC67920638CA8DB119EE6738ECFA444C).
- Belfield, Clive R., and Thomas Bailey. "The Benefits of Attending Community College: A Review of the Evidence." *Community College Review* 39, no. 1 (January 2011): 46–68. <http://doi.org/10.1177/0091552110395575>.
- Bettinger, Eric P., Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block Fafsa Experiment*." *The Quarterly Journal of Economics* 127, no. 3 (April 18, 2012): 1205–42. <http://doi.org/10.1093/qje/qjs017>.
- Chenoweth, Erica, and Renee V. Galliher. "Factors Influencing College Aspirations of Rural West Virginia High School Students." *Journal of Research in Rural Education* 19, no. 2 (October 2004): 1–14.
- Dynarski, Susan M., and Judith E. Scott-Clayton. "The Cost of Complexity in Federal Student Aid: Lessons from Optimal Tax Theory and Behavioral Economics." *National Tax Journal* 59, no. 2 (2006): 319–56.
- Gibbs, Robert M. "Going Away to College and Wider Urban Job Opportunities Take Highly Educated Youth Away from Rural Areas." *Rural Development Perspectives* 10, no. 3 (1995): 35–44.
- Gibbs, Robert M. "The Challenge Ahead for Rural Schools." *FORUM for Applied Research and Public Policy* 15, no. 1 (Spring 2000): 82–87.
- Greenstone, Michael, and Adam Looney. *Where is the Best Place to Invest \$102,00 – In Stocks, Bonds, or a College Degree?* Washington, DC: Brookings Institution, The Hamilton Project (2011). <http://www.brookings.edu/research/papers/2011/06/25-education-greenstone-looney>.
- Lochner, Lance (2004). "Education, Work, and Crime: A Human Capital Approach." *International Economic Review* 45, no. 3 (August 2004): 811–43. <http://doi.org/10.1111/j.0020-6598.2004.00288.x>.
- Lochner, Lance. (2011). "Non-Production Benefits of Education: Crime, Health, and Good Citizenship." NBER Working Paper No. 16722, National Bureau of Economic Research, Cambridge, MA, January 2011. Retrieved from <http://www.nber.org/papers/w16722.ack>.
- Marcotte, David E., Thomas Bailey, Carey Borkoski, and Greg S. Kienzl. "The Returns of a Community College Education: Evidence From the National Education Longitudinal Survey." *Educational Evaluation and Policy Analysis* 27 no. 2 (2005):157–75. <http://doi.org/10.3102/01623737027002157>.
- Muraskin, Lana, and John Lee. *Raising the Graduation Rates of Low-Income College Students*. Washington, DC: The Pell Institute for the Study of Opportunity in Higher Education, 2004. Retrieved from <http://eric.ed.gov/?id=ED490856>.
- Ohio Appalachian Center for Higher Education. *Access and Success—Appalachian Ohio: Report 2: Preliminary Analysis of High School Students Survey*. Portsmouth, OH: Voinovich School of Leadership and Public Affairs, 2008. Retrieved from http://www.oache.org/downloads/ACCESS-AND-SUCCESS_report2_fallsurveyFINAL.pdf.
- Perna, Laura W., Heather T. Rowan-Kenyon, Scott Loring Thomas, Angela Bell, Robert Anderson, and Chunyan Li. "The Role of College Counseling in Shaping College Opportunity: Variations across High Schools." *The Review of Higher Education* 31, no. 2 (Winter 2008): 131–59.
- Rouse, Cecilia Elena. "The Labor Market Consequences of an Inadequate Education." Prepared for the Equity Symposium on The Social Costs of Inadequate Education, Teachers College, Columbia University, September 2005. Retrieved from <http://www.literacycooperative.org/documents/TheLaborMarketConsequencesofanInadequateEd.pdf>.
- Yang, Shu-O W. "Rural Youths' Decisions to Attend College: Aspirations and Realizations." Paper presented at the Annual Meeting of the Rural Sociological Society, Guelph, ON, Canada, August 19–23, 1981. Retrieved from <http://eric.ed.gov/?id=ED207765>.