

Virginia Coalition of Housing and Economic Development Researchers

Addressing the Impact of Housing for Virginia's Economy

A REPORT FOR VIRGINIA'S HOUSING POLICY ADVISORY COUNCIL
NOVEMBER 2017

Appendix Report 7: Housing, Education, and Economic
Development- a Review of the Literature

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&

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Research has recognized the linkages between housing and education outcomes, but these links are complex. Neither housing nor education operates discretely, and each is affected by a range of other factors such as health, transportation, employment, crime, and income, as well as the state of the economy, political decisions, and the allocation of resources (Cunningham & MacDonald 2012). This dynamic and complex relationship makes identifying direct links between housing and education difficult. The following review of relevant literature highlights important themes concerning the links between housing and educational outcomes, including housing location, housing supply, housing affordability, and housing quality. The review considers the connection between education and economic development in order to illuminate the possible impact that housing has on economic development through workforce and community development.

Housing Location and Educational Quality

Housing location and school quality and performance are connected closely. The roots of the neighborhood or locational effect on education lies in racial and economic segregation, with poverty concentrated in older neighborhoods and their schools (McKoy & Vincent, 2008). Children living in high-poverty neighborhoods attend lower-quality schools than their middle-class counterparts (Orfield & Lee, 2005). Concentrated poverty correlates with poor student performance and high rates of student failure as well (Rothstein, 2004; Rothwell, 2012; Bayer, 2000; Theodos, Coulton, & Budde, 2014).

State and local property taxes are the main sources of funding for U.S. public schools, so wealthy areas with high property values can generate more revenue to fund their local schools, while poorer areas with low property values have difficulty raising sufficient resources to sustain high quality programs. In addition, the relationship between taxes and school quality is reciprocal: studies have shown that the quality of the public school system is a leading factor in area home values (Kain & Quigley, 1970; Li & Brown, 1980; Haurin & Brasington, 1996). Families often make housing decisions based on school quality, and higher income families are spending their extra resources for this purpose (Owens, 2016). This trend creates competition for housing within attendance zones of the highest performing schools, perpetuating income inequality and an ongoing mismatch between affordable housing and high quality schools.

School quality and performance are important for student outcomes and success. Deming, Hasting, Kane, & Staiger (2014) find that students moving from low to high performing schools are less likely to be arrested, more likely to graduate high school, and more likely to attend a four-year college. Similar results from Angrist et al. (2013) illustrate positive effects on SAT scores and four-year college attendance. Altonji & Mansfield (2014) estimate that attending a high school at the 10th versus the 90th percentile of the school quality distribution increases the predicted probability of high school graduation and four-year college enrollment by about 10 and 20 percentage points, respectively. The connection between student scores, graduation, and advancement to four-year college can be explained in part by additional opportunities provided in higher-performing schools. Students attending low performing schools do not have the opportunity for accelerated coursework, and are less likely to be college ready and have positive post-secondary outcomes (Burriss, Heubert, & Levin, 2006; Clotfelter, Ladd, & Vigdor, 2015). Similar studies found benefits of increased course progression, including a positive effect on university enrollment (Clark, 2010; Dobbie & Fryer, 2014).

Available and Affordable Housing and Stability

Residential instability caused by unaffordable housing can have significant and lasting effects on children's educational experiences and outcomes. For example, residential instability in a child's early life is associated with significant reductions in behavioral school readiness at age five (Ziol-Guest & McKenna, 2013). Low income households experience high rates of housing mobility (Theodos, Coulton, & Turner 2009; Crowley, 2003). A lack of affordable housing often results in an increase in residential mobility for low income families when they find themselves priced out of markets where they live (McKoy & Vincent, 2008). Coulton et al (2009) find that many low income households are "churning movers," suggesting that their moves are "a response to financial stress or problems in their rental housing arrangements."

Residential instability causes frequent school changes, higher absentee rates, and lower educational achievement. Many studies have examined the effects that frequent moves have on children's scholastic achievement. Disrupting the physical location of a young child or an adolescent "has a strong negative and significant effect on achievement" (Haveman et al. 1991, 144; Beatty, 2010). Children who change schools often are exposed to curricula that vary greatly across schools and districts, forcing them to catch up and shift their focus to different material in the middle of the school year (Mueller & Tighe, 2007). Students who changed schools frequently lag behind non-mobile students by a year or more in reading and math (Garriss-Hardy & Vrooman, 2005). Studies have found that homeless and highly mobile students have higher rates of absenteeism (Buckner et al, 2001), and score lower than stably housed children on standardized tests in reading, spelling, and math (Obradovic et al. 2009; Rafferty, Shinn, and Weitzman 2004). Further, mobility in early childhood also has lasting, negative social and psychological effects. Repeated school moves increased the risk of violent behavior in high school, and caused students to fall behind socially (Rumberger 2003; Buerkle 1998). The effects extend to graduation potential, with one study finding that three or more moves in early childhood is associated with a 13.7 percentage point decrease from the base probability of graduating from high school (Haveman, Wolfe, & Spaulding, 1991).

Increased student mobility has a significant effect on classrooms and schools as a whole. By having to catch up or change curricula, mobile students take time and resources away from other students in the classroom, increasing the strain on teachers and school systems (Mueller & Tighe, 2007). The curricular pace at schools with highly mobile populations is one grade below grade level on average (Kerbow et al. 2003), often causing students to underperform on standardized tests (Kaase, 2005).

Housing Affordability and Cost Burden

Parents that must work multiple stressful jobs to afford their housing costs may not be able to be as involved or supportive of their children as parents with better access to affordable homes (Duncan et al 2012; Guryan et al 2008). Yeung, Linver, and Brooks-Gunn (2002) reviewed an array of empirical studies and concluded that "economic hardship diminishes parental abilities to provide warm, responsive parenting" (p.1862). Parents constrained by residential instability may not be able to prioritize helping children with their homework, or get involved in school activities (Cunningham, Harwood, and Hall 2010).

Higher-earning and higher-educated parents spend more time engaging with their children, actively caring, teaching, and playing with them (Guryan et al, 2008). Further, studies find that the health and stress levels of parents and caregivers—especially those of pregnant mothers—affect children's development, ability to learn, and educational attainment. (Aizer et al 2012; Curie & Almond & 2011; Heckman 1999; Kalil & Zoil-Guest 2005)

Family and child stress can directly impact a student's education and future career success. Stress during the early childhood years, such as that brought on by parental unemployment or demanding jobs, can diminish children's subsequent academic and labor market accomplishments (National Scientific Council on the Developing Child [NSCDC], 2014; Kalil & Zoil-Guest 2005).

A family's housing cost burden relates directly to children's development and educational achievement as well. Several studies find that increases in a family's disposable income significantly improve children's test scores. (Duncan et al, 2011; Dahl & Lochner 2012; Boca, Flinn, & Wiswall 2014). Newman and Holupka (2014, 95) find that families who are not cost burdened are more likely to spend a portion of their income on child enrichment, which impacts children's cognitive achievement. Further, the greater the cost burden, the less money households are likely to spend on child enrichment. Although limited, research found that unaffordable housing contributes directly to children's poor attendance and performance in school (Anderson et al. 2003, 48). For example, Gagne and Ferrer (2006, 285) find that major home repair requirements and short length of residence have negative effects on children's math scores. Low income children who live in more affordable areas tend to have better health and educational outcomes, with stronger effects for adolescents compared to school-aged children. In particular, grade retention increases as housing affordability decreases for children of all ages (Harkness & Newman, 2005).

Housing Quality and Health/Environment

Poor quality housing exerts a negative impact on educational performance through its association with poor health and poor home environment as well. Unaffordable housing can lead to difficult choices in household budgets, such as choosing between paying the rent or paying for food and other necessities like adequate health care. Families with affordability issues may choose lower quality housing to make up for the gap in income (Cunningham & MacDonald, 2012).

Evidence shows that families living in low-quality housing may suffer severe health consequences, particularly children. Strong evidence supports the contentions that housing is the principal source of exposure to lead paint, and that poor housing conditions contribute to asthma (Kinney et al., 2002; Rothstein, 2004). The evidence is also strong that these health factors increase school absence and affect academic performance (Moonie et al, 2008)

A shortage of affordable housing can create negative home environmental factors, such as overcrowding and other sources of housing related stress. Studies have found that children growing up in overcrowded housing have lower math and reading scores, complete fewer years of education, and are less likely to graduate from high school than their peers (Braconi, 2001). Increases in noise and chaos interfere with children's studies and

cognitive development. Research has also linked household chaos with reductions in children's IQ scores and increases in behavior problems. (Deater-Deckard et al., 2009)

Education and Economic Development

Developmental and educational consequences associated with student mobility and inadequate housing may have economic implications for individuals, and a community's workforce. Many studies show that educational attainment—the number of school years completed—correlates closely with both individual earnings and economic growth (Krueger & Lindahl, 2001; Sainesi & Reenen, 2003). In general, more education is associated with higher individual earnings. In particular, studies within and across nations find that an additional year of schooling translates into a roughly 10 percent increase in annual individual earnings (Heckman et al, 2006; Psacharopoulos, 2004). Chetty and Hendren (2015) studied more than five million families who moved between counties, and characterized the effects of neighborhoods on children's earnings and other outcomes in adulthood. They suggested that counties with higher quality schools have significantly positive impacts on children's outcomes, especially those children from families with below-median incomes. Children who moved to a county where the percentile of the schools' test scores was one standard deviation higher caused an increase in lifetime income of 4.2% for below-median income families, and 3.0% for above median income families (Card, 1999; Heckman, 2006).

Aside from this individual benefit, further evidence suggests that additional years of schooling provide social benefits in the forms of improved health, higher levels of civic participation, lower crime rates, and—most importantly for this analysis— greater economic growth (Lochner and Moretti 2004; Currie and Moretti 2003). Educational attainment increases human capital, resulting in the enhanced productivity of a nation's workforce, increased rates of technological innovation, and increased diffusion and adoption of new production processes and technologies, all of which help boost economic growth. (Mincer 2001; Barro 2001). Further, each additional year of schooling within a population is associated with greater long-run economic growth rates. (Mankiw et al 1992; Benhabib & Spiegal 1994; Hall & Jones 1999; Hanushek & Woessmann 2008).

Equal access to high quality schools has been shown to provide a brighter economic outlook. Because schools and neighborhoods are so closely interconnected, providing equitable and affordable housing opportunities across a jurisdiction can provide more equitable educational opportunities (Tegeler & PRRAC, 2011). More equitable educational opportunities can mean greater and more sustainable economic growth overall (Lynch, 2015). The case for improving educational opportunities for low income individuals is supported by evidence that raising skills at the bottom improves economic growth more than raising skills at the top, as measured by GDP and tax revenue growth (Hanushek & Woessmann 2010). Further, closing educational achievement gaps has been predicted to reduce income inequality by raising the lifetime earnings of the poorest 75 percent of children more than they raise the lifetime earnings of the richest 25 percent of children. A recent study by Lynch (2015) concludes that improving the education of all future workers “accelerates economic growth and can promote more equal opportunity over the long run resulting in stronger, more broadly shared economic growth, which in turn raises national income and increases government revenue, providing the means by which to invest in improving our economic future.” (Lynch, 2015, 8)

The benefits of raising achievement levels and closing educational achievement gaps may allow for intergenerational economic mobility- “paying it forward.” The current young generation would be better off when they are adults because they “will have higher earnings, higher material standards of living, and, presumably, an enhanced quality of life” (Lynch, 2015, 35). This greater achievement would be passed on to future generations, as children born to these future parents will have improved educational and economic outcomes, creating compounding regional economic benefits.

Lynch (2015) also finds that school-specific solutions for socioeconomic-based achievement gaps are limited in what they can accomplish. Given the common practice of assigning students to neighborhood schools, distribution of affordable housing must be considered along with educational policies and practices. The potential for improved and equitable educational outcomes relies on consideration of neighborhood demographics and the housing policies that contribute to residential integration or segregation (Tegeler & PRRAC, 2011, 5). Research also suggests that achievement gaps develop and exist prior to school years, therefore educational reforms cannot address the root problem (Duncan et al, 2012). Housing as a platform for educational growth is a key factor to achieving the resulting economic impact.

References

Aizer, A., Stroud, L., & Buka, S. (2012). Maternal Stress and Child Outcomes: Evidence from Siblings. doi:10.3386/w18422

Altonji, J., & Mansfield, R. (2014). Group-Average Observables as Controls for Sorting on Unobservables When Estimating Group Treatment Effects: the Case of School and Neighborhood Effects. doi:10.3386/w20781

Anderson, L. M., St. Charles, J., Fullilove, M. T., Scrimshaw, S. C., Fielding, J. E., & Normand, J. (2003). Providing affordable family housing and reducing residential segregation by income. *American Journal of Preventive Medicine*, 24(3), 47-67. doi:10.1016/s0749-3797(02)00656-6

Angrist, J. D., Pathak, P. A., & Walters, C. R. (2013). Explaining Charter School Effectiveness. *American Economic Journal: Applied Economics*, 5(4), 1-27. doi:10.1257/app.5.4.1

Barrio, R. J. (2001). Human Capital and Growth. *American Economic Review*, 91(2), 12-17.

Bayer, P. J.. (2000). Household Mobility, School Choices, and School Outcomes. Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association, 93, 141–149. Retrieved from <http://www.jstor.org/stable/41950599>

Beatty, A. S., & National Research Council (U.S.). (2010). *Student mobility: Exploring the impacts of frequent moves on achievement: summary of a workshop*. Washington, DC: National Academies Press.

Benhabib, J., & Spiegel, M. M. (1994). The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data. *Journal of Monetary Economics*, 34(2), 143-173.

- Braconi, F. (2001). Housing and Schooling. *Citizen's Housing and Planning Council: The Urban Prospect*, 7(2).
- Buckner, J. C., Bassuk, E. L., & Weinreb, L. F. (2001). Predictors of Academic Achievement among Homeless and Low-Income Housed Children. *Journal of School Psychology*, 39(1), 45-69. doi:10.1016/s0022-4405(00)00059-5
- Buerkle, K. M. (1998). Report on kids and housing mobility. *Minneapolis: Family Housing Foundation*.
http://www.fhfund.org/_dnld/reports/kids.pdf
- Burdick-Will, J., Ludwig, J., Raudenbush, S. W., Sampson, R. J., Sanbonmatsu, L., & Sharkey, P. (2010). Converging Evidence for Neighborhood Effects on Children's Test Scores: An Experimental, Quasi-Experimental, and Observational Comparison. In *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances* (pp. 255-276). New York, NY: Russell Sage Foundation.
- Burris, C. C., Heubert, J. P., & Levin, H. M. (2006). Accelerating mathematics achievement using heterogeneous grouping. *American Educational Research Journal*, 43(1), 105-136.
- Card, D. (1999). The Causal Effect of Education on Earnings. *Handbook of Labor Economics*, 1801-1863.
- Clampet-Lundquist, S., & Massey, D. (2008). Neighborhood Effects on Economic Self-Sufficiency: A Reconsideration of the Moving to Opportunity Experiment. *American Journal of Sociology*, 114(1), 107-143. doi:10.1086/588740
- Clark, D. (2010). Selective Schools and Academic Achievement. *The B.E. Journal of Economic Analysis & Policy*, 10(1). doi:10.2202/1935-1682.1917
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2015). The Aftermath of Accelerating Algebra: Evidence from District Policy Initiatives. *Journal of Human Resources*, 50(1), 159-188. doi:10.1353/jhr.2015.0005
- Conley, D. (2001). A Room with a View or a Room of One's Own? *Housing and Social Stratification. Sociological Forum*, 16(2), 263-280.
- Crowley, S. (2003). The Affordable Housing Crisis: Residential Mobility of Poor Families and School Mobility of Poor Children. *The Journal of Negro Education*, 72(1), 22. doi:10.2307/3211288
- Currie, J., & Almond, D. (2011). Human capital development before age five. *Handbook of Labor Economics*, 1315-1486. doi:10.1016/s0169-7218(11)02413-0
- Currie, J., & Moretti, E. (2003). Mother's Education and the Intergenerational Transmission of Human Capital: Evidence from College Openings. *The Quarterly Journal of Economics*, 118(4), 1495-1532. doi:10.1162/003355303322552856
- Cunningham, M., & MacDonald, G. (2012). *Housing as a Platform for Improving Education Outcomes Among Low-Income Children*.

Dahl, G. B., & Lochner, L. (2012). The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit. *American Economic Review*, 102(5), 1927-1956. doi:10.1257/aer.102.5.1927

Deater-Deckard, K., Mullineaux, P. Y., Beekman, C., Petrill, S. A., Schatschneider, C., & Thompson, L. A. (2009). Conduct problems, IQ, and household chaos: A longitudinal multi-informant study. *Journal of Child Psychology and Psychiatry*, 50(10), 1301-1308.

Del Boca, D., Flinn, C., & Wiswall, M. (2013). Household Choices and Child Development. *The Review of Economic Studies*, 81(1), 137-185. doi:10.1093/restud/rdt026

Deming, D. J., Hastings, J. S., Kane, T. J., & Staiger, D. O. (2014). School Choice, School Quality, and Postsecondary Attainment. *American Economic Review*, 104(3), 991-1013. doi:10.1257/aer.104.3.991

Dobbie, W., & Fryer, R. G. (2014). The Impact of Attending a School with High-Achieving Peers: Evidence from the New York City Exam Schools. *American Economic Journal: Applied Economics*, 6(3), 58-75. doi:10.1257/app.6.3.58

Duncan, G. J., Morris, P. A., & Rodrigues, C. (2011). Does money really matter? Estimating impacts of family income on young children's achievement with data from random-assignment experiments. *Developmental Psychology*, 47(5), 1263-1279. doi:10.1037/a0023875

Duncan, G., Magnuson, K. M., Kalil, A., & Ziol-Guest, K. (2012). The Importance of Early Childhood Poverty. *Social Indicators Research*, 108, 87-98.

Gagne, L. G., & Ferrer, A. (2006). Housing, Neighbourhoods and Development Outcomes of Children in Canada. *Canadian Public Policy / Analyse de Politiques*, 32(3), 275. doi:10.2307/4128739

Garriss-Hardy, B., Vrooman, C. (2005). School Stability and School Performance. Greensboro, NC: National Center for Homeless Education, SERVE Center, the University of North Carolina at Greensboro.

Guryan, J., Hurst, E., & Kearney, M. S. (2008). Parental Education and Parental Time with Children. doi:10.3386/w13993

Hall, R. E., & Jones, C. I. (1999). Why Do Some Countries Produce So Much More Output per Worker than Others? *Quarterly Journal of Economics*, 114(1), 83-116.

Hanushek, E. A., & Woessmann, L. (2008). The Role of Cognitive Skills in Economic Development. *Journal of Economic Literature*, 46(3), 607-668. doi:10.1257/jel.46.3.607

Hanushek, E. A., Woessmann, L. (2010). *How much do educational outcomes matter in OECD countries?* Cambridge, MA: National Bureau of Economic Research.

Harkness, J. & Newman, S. J. (2005). Housing affordability and children's well-being: Evidence from the National Survey of America's Families. *Housing Policy Debate* 16(2): 223-255.

Haurin, D. R., & Brasington, D. (1996). School Quality and Real House Prices: Inter- and Intrametropolitan Effects. *Journal of Housing Economics*, 5(4), 351-368. doi:10.1006/jhec.1996.0018

Haveman, R., Wolfe, B., & Spaulding, J. (1991). Childhood Events and Circumstances Influencing High School Completion. *Demography*, 28(1), 133. doi:10.2307/2061340

Heckman, J. J. (2000). Policies to foster human capital. *Research in Economics*, 54(1), 3-56. doi:10.1006/reec.1999.0225

Heckman, J., Lochner, L. J., & Todd, P. E. (2006). Earnings Functions, Rates of Return and Treatment Effects: The Mincer Equation and Beyond. In *Handbook of the Economics of Education* (1st ed., pp. 307-458). Elsevier.

Kaase, K. (2005). The Impact of Mobility on Academic Achievement: A Review of the Literature Evaluation and Research Department, Report No. 04.39, Wake County Public School System, Raleigh, NC

Kain, J. F., & Quigley, J. M. (1970). Measuring the Value of Housing Quality. *Journal of the American Statistical Association*, 65(330), 532-548. doi:10.1080/01621459.1970.10481102

Kalil, A., & Ziol-Guest, K. M. (2005). Single Mothers' Employment Dynamics and Adolescent Well-Being. *Child Development*, 76(1), 196-211. doi:10.1111/j.1467-8624.2005.00839.x

Kawitzkey, Simon, Fred Freiberg, Diane L. Houk, and Salimak Hankins. (2013). *Choice Constrained, Segregation Maintained: Using Federal Tax Credits to Provide Affordable Housing*. New York: Fair Housing Justice Center

Kerbow, D., Azcoitia, C., & Buell, B. (2003). Student Mobility and Local School Improvement in Chicago. *The Journal of Negro Education*, 72(1), 158. doi:10.2307/3211299

Kinney, P. L., Northridge, M. E., Chew, G. L., Gronning, E., Joseph, E., Correa, J. C., ... Goldstein, I. (2002). On the Front Lines: An Environmental Asthma Intervention in New York City. *Am J Public Health*, 92(1), 24-26. doi:10.2105/ajph.92.1.24

Krueger, A. B., & Lindahl, M. (2001). Education for Growth: Why and for Whom? *Journal of Economic Literature*, 39(4), 1101-1136.

Li, M. M., & Brown, H. J. (1980). Micro-Neighborhood Externalities and Hedonic Housing Prices. *Land Economics*, 56(2), 125. doi:10.2307/3145857

Lochner, L., & Moretti, E. (2001). The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports. doi:10.3386/w8605

Lynch, R. G. (2015). The Economic and Fiscal Consequences of Improving U.S. Educational Outcomes. Washington Center for Equitable Growth. Retrieved from <http://equitablegrowth.org/wp-content/uploads/2015/02/10153405/0115-ach-gapreport.pdf>

- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A Contribution to the Empirics of Economic Growth. *The Quarterly Journal of Economics*, 107(2), 407-437. doi:10.2307/2118477
- Mckoy, D. L., & Vincent, J. M. (2008). Housing and Education: The Inextricable Link. In *Segregation: The rising costs for America* (pp. 125-150). New York, NY: Routledge.
- Mincer, J. (1984). Human Capital and Economic Growth. *Economics of Education Review*, 3(3), 195-2005.
- Moonie, S., Sterling, D. A., Figgs, L. W., & Castro, M. (2008). The Relationship Between School Absence, Academic Performance, and Asthma Status. *J School Health*, 78(3), 140-148.
- Mueller, E. J., & Tighe, J. R. (2007). Making the Case for Affordable Housing: Connecting Housing with Health and Education Outcomes. *Journal of Planning Literature*, 21(4), 371-385. doi:10.1177/0885412207299653
- National Scientific Council on the Developing Child. (2014). Excessive stress disrupts the development of brain architecture. *Journal of Children's Services*, 9(2), 143-153. doi:10.1108/jcs-01-2014-0006
- Newman, S. J., & Holupka, C. S. (2014). Housing Affordability and Child Well-Being. *Housing Policy Debate*, 25(1), 116-151. doi:10.1080/10511482.2014.899261
- National Low-income Housing Coalition. (NLHIC). (2013). "Out of reach 2013." retrieved at <http://nlihc.org/oor/2013>.
- Obradović, J., Long, J. D., Cutuli, J. J., Chan, C., Hinz, E., Heistad, D., & Masten, A. S. (2009). Academic achievement of homeless and highly mobile children in an urban school district: Longitudinal evidence on risk, growth, and resilience. *Develop. Psychopathol*, 21(02), 493. doi:10.1017/s0954579409000273
- Orfield, G., Lee, C., & Civil Rights Project (Harvard University). (2005). *Why segregation matters: Poverty and educational inequality*. Cambridge, MA: Civil Rights Project, Harvard University.
- Owens, A. (2016). Inequality in Children's Contexts: Income Segregation of Households with and without Children. *American Sociological Review*, 81(3), 549-574. doi:10.1177/0003122416642430
- Psacharopoulos, G., & Patrinos, H. A. (2004). Returns to investment in education: a further update. *Education Economics*, 12(2), 111-134.
- Public and Affordable Housing Research Corporation (PAHRC). (2013). *Why Housing Matters: 2014 PAHRC Report*. CT: HAI Group.
- Rafferty, Y., Shinn, M., & Weitzman, B. C. (2004). Academic achievement among formerly homeless adolescents and their continuously housed peers. *Journal of School Psychology*, 42(3), 179-199. doi:10.1016/j.jsp.2004.02.002
- Riccio, J. A., & Mdr. (2010). *Sustained Earnings Gains for Residents in a Public Housing Jobs Program: Seven-Year Findings from the Jobs-Plus Demonstration*. Policy Brief.

Rosenbaum, J. E. (1991). Black pioneers—do their moves to the suburbs increase economic opportunity for mothers and children? *Housing Policy Debate*, 2(4), 1179-1213. doi:10.1080/10511482.1991.9521086

Rosenbaum, J. E., DeLuca, S., & Brookings Institution. (2000). *Is housing mobility the key to welfare reform?: Lessons from Chicago's Gautreaux Program*. Washington, DC: Brookings Institution, Center on Urban and Metropolitan Policy.

Rothstein, R. (2004). *Class and schools: Using social, economic, and educational reform to close the Black-white achievement gap*. New York, N.Y.: Teachers College, Columbia University.

Rothwell, J., & Brookings Institution. (2012). *Housing Costs, Zoning, and Access to High-Scoring Schools*.

Rubinowitz, L. S., & Rosenbaum, J. E. (2000). *Crossing the class and color lines: From public housing to white suburbia*. Chicago: University of Chicago Press.

Rumberger, R. W. (2003). The Causes and Consequences of Student Mobility. *The Journal of Negro Education*, 72(1), 6. doi:10.2307/3211287

Schwartz, A. F. (2006). *Housing policy in the United States*. New York: Routledge.

Sianesi, B., & Reenen, J. V. (2003). The Returns to Education: Macroeconomics. *Journal of Economic Surveys*, 17(2), 157-200. doi:10.1111/1467-6419.00192

Sparkes, J., Hills, John, Piachaud, David, Le Grand, ... Howard. (2002). *Preventing social exclusion: education's contribution*. Oxford University Press.

Theodos, B., Coulton, C., & Budde, A. (2014). Getting to better performing schools: The role of residential mobility in school attainment in low-income neighborhoods. *Cityscape*, 16(1), 61-84.

Theodos, B., Coulton, C., & Turner, M. A. (2009). *Family Mobility and Neighborhood Change: New Evidence and Implications for Community Initiatives*. Urban Institute.

Turner, M. A., Popkin, S. J., & Rawlings, L. (2009). *Public housing and the legacy of segregation*. Washington, DC: Urban Institute Press.

Wodtke, G. T., Harding, D. J., & Elwert, F. (2011). Neighborhood Effects in Temporal Perspective: The Impact of Long-Term Exposure to Concentrated Disadvantage on High School Graduation. *American Sociological Review*, 76(5), 713-736. doi:10.1177/0003122411420816

Yeung, W. J., Linver, M. R., & Brooks-Gunn, J. (2002). How Money Matters for Young Children's Development: Parental Investment and Family Processes. *Child Development*, 73(6), 1861-1879. doi:10.1111/1467-8624.t01-1-00511

Ziol-Guest, K. M., & McKenna, C. C. (2013). Early Childhood Housing Instability and School Readiness. *Child Dev*, 85(1), 103-113. doi:10.1111/cdev.12105