

Can School Choice Mitigate School Socioeconomic Segregation? Evidence from a Policy Change in Chile

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School socioeconomic segregation poses significant challenges for students' short- and long-term success. Integrating and diversifying schools with regard to students' socioeconomic status is an important policy endeavor, but can be an uphill battle due to several barriers including residential segregation, inequitable distribution of choice options, information asymmetries, and others. In this study, I examine determinants of school segregation in the Chilean context, where non-random admission procedures (for example, "cream skimming" by ability) and tuition fees at public and private-subsidized schools are thought to be particularly problematic. I estimate the causal effect of eliminating these two barriers on school socioeconomic segregation by leveraging a recent policy shock in Chile that aims at terminating with both in the short term.

The Chilean education market is characterized by the decentralization of public schools (municipal schools, representing 37% of the total enrollment), the availability of public funding to private schools (private subsidized schools, representing 55% of the total enrollment), a nationwide voucher and school choice system that includes both municipal and private subsidized schools, and a small proportion of private non-subsidized schools. Empirical studies have shown that the education system exhibits moderate to high level of school socioeconomic segregation. In order to reduce socioeconomic segregation, in 2015 the Chilean Congress passed the Inclusion Law. This law introduces two interventions at the school level: (i) it prohibits all schools receiving public funds to charge tuition to families, defining a process to make all subsidized schools free in the next few years (free treatment); and, (ii) it prohibits non-random admission by schools, introducing a centralized lottery-based deferred admission system (open admission treatment).

Taking advantage of the implementation process of the policy, which results in schools being affected by none, one, or two of these policy changes in the first years of the introduction of the policy, I estimate a staggered difference-in-difference model to assess whether school socioeconomic segregation changes as a result of this policy shock. To determine socioeconomic status, I rely on a dichotomic student variable (vulnerable/non-vulnerable status), which is constructed by the government for administrative purposes. I measure school socioeconomic segregation by creating an index that estimates the absolute difference between the school proportion of vulnerable/non-vulnerable students and the district's proportion.

Results for the first two years of implementation show that between-school socioeconomic segregation decreases by approximately six percentage points in schools eligible for the free treatment. When considering only entry grades (in the case of Chile, PK, K, 1st, and 7th grade), I observe reductions in between-school socioeconomic segregation in schools where only the free treatment, only the open admission treatment, and both treatments were implemented. These results are consistent across different specifications, including controlling for school and district characteristics, and year and district fixed effects. Ongoing and future work will examine heterogeneous effects of the policy (by levels of residential segregation, intra-district competition, and within-district quality dispersion across schools), as well as intra- and inter-district school socioeconomic segregation.

References

- Altonji, J. G., & Mansfield, R. K. (2011). "The role of family, school, and community characteristics in inequality in education and labor market outcomes". In Greg J. Duncan and Richard J. Murnane (Eds.) *Whither opportunity? Rising inequality, schools, and children's life chances*. Russell Sage Foundation, Ch. 16, pp. 339-358.
- Avery, C., & Pathak, P. A. (2015). The distributional consequences of public school choice (No. w21525). National Bureau of Economic Research.
- Alves, F., Elacqua, G., Koslinki, M., Martinez, M., Santos, H., & Urbina, D. (2015). Winners and losers of school choice: Evidence from Rio de Janeiro, Brazil and Santiago, Chile. *International Journal of Educational Development*, 41, 25-34.
- Ball, S. J. (2003). *Class strategies and the education market: The middle classes and social advantage*. Routledge.
- Bifulco, R., & Ladd, H. F. (2007). School choice, racial segregation, and test-score gaps: Evidence from North Carolina's charter school program. *Journal of Policy Analysis and Management*, 26(1), 31-56.
- Billings, S. B., Deming, D. J., & Rockoff, J. E. (2012). School segregation, educational attainment and crime: Evidence from the end of busing in Charlotte-Mecklenburg (No. w18487). National Bureau of Economic Research.
- Carrasco, A., Gutiérrez, G., & Flores, C. (2017). Failed regulations and school composition: selective admission practices in Chilean primary schools. *Journal of Education Policy*, 1-31.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. (1966). *Equality of educational opportunity*. Washington, DC, 1066-5684.
- Contreras, D., Sepúlveda, P., & Bustos, S. (2010). When Schools Are the Ones that Choose: The Effects of Screening in Chile. *Social Science Quarterly*, 91(5), 1349-1368.
- Duncan, G. & Murnane, R. (2012). Introduction: The American Dream Then and Now. In Greg J. and Richard J. Murnane (Eds.) *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances* (3-23). Russell Sage Foundation.
- Elacqua, G. (2012). The impact of school choice and public policy on segregation: Evidence from Chile. *International Journal of Educational Development*, 32(3), 444-453.
- Elacqua, G., & Fabrega, R. (2004). *El consumidor de la educación: El actor olvidado de la libre elección de escuelas en Chile. Uso e impacto de la información educativa en América Latina*. Santiago, Chile: PREAL.
- Fiel, J. E. (2013). Decomposing school resegregation social closure, racial imbalance, and racial isolation. *American Sociological Review*, 78(5), 828-848.
- Gallego, F. A., & Hernando, A. E. (2008). On the determinants and implications of school choice: semi-structural simulations for Chile. *Economía*, 9(1), 197-239.
- Glazerman, S. M. (1998). *School Quality and Social Stratification: The Determinants and Consequences of Parental School Choice*.
- Gorard, S. (2009). Does the index of segregation matter? The composition of secondary schools in England since 1996. *British Educational Research Journal*, 35(4), 639-652.
- Gorard, S., & Smith, E. (2004). An international comparison of equity in education systems. *Comparative education*, 40(1), 15-28.
- Guryan, J. (2004). Desegregation and black dropout rates. *American Economic Review*, 94(4), 919- 943.

- Gutiérrez, G., Jerrim, J., & Torres, R. (2017). School segregation across the world: has any progress been made in reducing the separation of the rich from the poor?.
- Hastings, J. S., Kane, T. J., & Staiger, D. O. (2005). Parental preferences and school competition: Evidence from a public school choice program (No. w11805). National Bureau of Economic Research.
- Hsieh, C. T., & Urquiola, M. (2006). The effects of generalized school choice on achievement and stratification: Evidence from Chile's voucher program. *Journal of public Economics*, 90(8), 1477-1503.
- Jencks, C. (1972). *Inequality: A reassessment of the effect of family and schooling in America*.
- Jenkins, S. P., Micklewright, J., & Schnepf, S. V. (2008). Social segregation in secondary schools: how does England compare with other countries?. *Oxford Review of Education*, 34(1), 21-37.
- Johnson, R. C. (2011). Long-run impacts of school desegregation & school quality on adult attainments (No. w16664). National Bureau of Economic Research.
- Kirk, D. S., & Sampson, R. J. (2011). "Crime and the production of safe schools". In Duncan, G. J., & Murnane, R. J. (Eds.). *Whither opportunity? Rising inequality, schools, and children's life chances*. Russell Sage Foundation, Ch. 19, pp. 397-418.
- Levačić, R., & Woods, P. A. (2002). Raising school performance in the league tables (part 1): disentangling the effects of social disadvantage. *British Educational Research Journal*, 28(2), 207-226.
- Ley N° 20845. *Diario Oficial de la República de Chile*, Santiago, Chile. June 8, 2015.
- Mayer, S. E. (2002). How economic segregation affects children's educational attainment. *Social forces*, 81(1), 153-176.
- McCrary, J. (2008). Manipulation of the running variable in the regression discontinuity design: A density test. *Journal of econometrics*, 142(2), 698-714.
- McEwan, P. J., Urquiola, M., & Vegas, E. (2008). School choice, stratification, and information on school performance: Lessons from Chile. *Economia*, 8(2), 1-27.
- Mickelson, R. A., & Nkomo, M. (2012). Integrated schooling, life course outcomes, and social cohesion in multiethnic democratic societies. *Review of Research in Education*, 36(1), 197-238.
- Mizala, A., & Torche, F. (2012). Bringing the schools back in: the stratification of educational achievement in the Chilean voucher system. *International Journal of Educational Development*, 32(1), 132-144.
- Murnane, R. J., Waldman, M. R., Willett, J. B., Bos, M. S., & Vegas, E. (2017). *The Consequences of Educational Voucher Reform in Chile* (No. w23550). National Bureau of Economic Research.
- Nechyba, T. (2003). School finance, spatial income segregation, and the nature of communities. *Journal of Urban Economics*, 54(1), 61-88.
- Nechyba, T. J. (2006). Income and peer quality sorting in public and private schools. *Handbook of the Economics of Education*, 2, 1327-1368.
- OECD. (2013b). *Teacher Evaluation in Chile*. Paris: OECD Publishing. Retrieved from <http://www.oecd.org/chile/OECD%20Review%20Teacher%20Evaluation%20Chile.pdf>
- Owens, A., Reardon, S. F., & Jencks, C. (2016). Income segregation between schools and school districts. *American Educational Research Journal*, 53(4), 1159-1197.
- Putnam, R. (2004). *Education, Diversity, Social Cohesion and Social Capital: Note for discussion*. Meeting of OECD Education Ministers.

- Rao, G. (2014). Familiarity does not breed contempt: Diversity, discrimination and generosity in Delhi schools. Job Market Paper. Department of Economics, UC Berkeley.
- Reardon, S. (2011). "The widening academic achievement gap between the rich and the poor: New evidence and possible explanations." In Greg J. Duncan and Richard J. Murnane (Eds.) *Whither opportunity? Rising inequality, schools, and children's life chances*. Russell Sage Foundation, Ch. 5, pp. 91-115.
- Reardon, S. F., & Bischoff, K. (2011). Income inequality and income segregation. *American Journal of Sociology*, 116(4), 1092-1153.
- Reardon, S. F., & O'Sullivan, D. (2004). Measures of spatial segregation. *Sociological methodology*, 34(1), 121-162.
- Reardon, S. F., & Owens, A. (2014). 60 years after Brown: Trends and consequences of school segregation. *Annual Review of Sociology*, 40.
- Silva, O. (2015). The demand for autonomous schools. Working Paper. LSE.
- Taeuber, K. E., & Taeuber, A. F. (1976). A practitioner's perspective on the index of dissimilarity. *American Sociological Review*, 41(5), 884-889.
- Taylor, C., & Gorard, S. (2001). The role of residence in school segregation: placing the impact of parental choice in perspective. *Environment and Planning A*, 33(10), 1829-1852.
- Thrupp, M. (1995). The school mix effect: the history of an enduring problem in educational research, policy and practice. *British journal of sociology of education*, 16(2), 183-203.
- Treviño, E., Valenzuela, J. P., & Villalobos, C. (2014). ¿Se agrupa o segrega al interior de los establecimientos escolares chilenos?. Reporte VII Concurso FONIDE, Ministerio de Educación.
- Urquiola, M. (2005). Does school choice lead to sorting? Evidence from Tiebout variation. *The American Economic Review*, 95(4), 1310-1326.
- Valenzuela, J. P., Bellei, C., & Ríos, D. D. L. (2014). Socioeconomic school segregation in a market-oriented educational system. The case of Chile. *Journal of education policy*, 29(2), 217-241.
- Van Ewijk, R., & Slegers, P. (2010). The effect of peer socioeconomic status on student achievement: A meta-analysis. *Educational Research Review*, 5(2), 134-150.
- West, A., Hind, A., & Pennell, H. (2004). School admissions and 'selection' in comprehensive schools: policy and practice. *Oxford review of education*, 30(3), 347-369.