Tyler, J., & Vitanova, S. (2008). "Does MSP Participation Increase the Supply of Math Teachers? Developing and Testing an Analytic Model," *Peabody Journal of Education*, 83(4): 536-561.

Abstract: An important feature of the Math and Science Partnership Program (MSP) of the National Science Foundation (NSF) is to increase K-12 student achievement in math and science by increasing the quality, quantity, and diversity of the nation's K–12 math and science teachers. Because the underlying supply of math and science teachers is never directly observed, the central premise of this paper is that an examination of the extent to which the Partnership Program might impact the quantity and quality of math and science teachers requires careful thought and modeling. With that starting point, this study first develops a model that supports a premise that shifts in underlying supply can be inferred from shifts in the percentage of certified math teachers employed when (1) salaries are constrained to be below market clearing salaries and (2) uncertified or "out-offield" certified teachers can compete as substitutes for certified math teachers. The study then tests the plausibility of the model using data from Texas and in so doing provides preliminary estimates of the extent to which a school or school district's partnership participation affected the supply of certified math teachers available to that school or district. The results, while inconclusive on the question of the labor supply effects of partnership participation by a school or school district, do suggest the reasonableness of the model for future work when more appropriate data will be available.

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