

The Intergenerational Effects of Job Polarization on Schooling

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Technological change has shaped the labor markets in the U.S. and many advanced countries during the last two decades. Increasing the automation of work processes, the rise in computer use increased the demand for high skilled labor and substituted certain workers in occupations with more routine tasks, i.e., tasks that could readily be performed by computers and other machines (Autor et al., 1998). In this study we estimate how parents' exposure to technological change affects children's school performance. For the analysis we create a sample of father-child pairs using the German Socio-Economic Panel Study (GSOEP). Taking tasks as imperfect substitutes (Autor et al., 2003), technological change affects occupations with a high share of routine tasks, more than those with more abstract and manual tasks. Consequently, we build on the work of Goos et al. (2014, 2009) and identify three groups of occupations: abstract, routine and service/manual workers. Employment characteristics of the parents were measured until the child turns 10 years to assure that job polarization impacts parents before the child's education choice. Due to differences in the child age at the school track choice across German states, the sample is restricted to children at the age of 14 years, i.e., the latest choice age. The identification uses an instrumental variable approach proposed by Autor and Dorn (2013) and exploits exogenous variation in the historical routine share at the state-industry level. The results suggest that children with a parent working in a routine occupation during childhood have a lower probability of choosing a higher school track compared to those with parents in other occupations. The effect is estimated to be more pronounced for boys than for girls. Our findings add to the literature on job polarization by showing that the technological change has far reaching socio-economic and intergenerational consequences.

Keywords: job polarization, schooling, intergenerational transmission

JEL Classification: J24, J62, O33

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