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The Effect of Education on Equality of Opportunity in Health

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There is extensive evidence that higher educational attainment is associated with better health and higher life expectancy (‘the education-health gradient). The relationship persists over time and across countries, and is valid for all demographic groups. The literature, however, is less conclusive with respect to the causal impact of education on health. Whereas some authors find a positive effect, others find no effect, or a positive effect only for certain demographic sub-groups. The heterogeneity of the results can be partially assigned to the differences in identification strategies, health measures, or the nature of the implemented reforms.

Apart from inconclusive results on the impact of education on health, the literature does not provide any answer on the question whether additional educational attainment might help to reduce inequality in health, even if it does not necessarily improve health outcomes at the aggregate level. This might be the case if, for example, extension of education benefits to a larger extent disadvantaged population sub-groups than those with more appealing socio-economic background. We address this question by evaluating the causal impact of education received in childhood on inequality of opportunity in health later in life. We consider a variety of subjective and objective health measures: self-reported health (an ordinary variable ranging from 1 to 5), body mass index (the ratio of weight in kilograms to the square of height in meters), handgrip strength (a continuous variable with values ranging from 0 to 100), peak expiratory flow (a continuous variable with values ranging from 30 to 999), etc.

There are different channels through which education may influence health outcomes of individuals. Among the most important ones are health behaviors (choices, which individuals make with respect to their lifestyles), labor market opportunities (better-educated people face better employment opportunities and higher earnings, which, in turn, affect health), and decision-making with regard to health care utilization. We will also try to identify the contribution of each of these channels to the relationship between education and inequality of opportunity in health.

Our identification strategy builds on the exploitation of the exogenous variation in the minimum number of compulsory school years within and between several European countries, which we use to instrument the number of years in education spent by each respondent. This variation stems from a set of school reforms introduced at different points of the 20th century in different

European countries. The strategy has been widely explored in previous literature to study the impact of education on health (Brunello et al., 2013 and Brunello et al., 2016) and the impact of education on earnings (Brunello et al., 2009; Devereux and Hart, 2010; Brunello et al., 2017).

The estimations are based on data from the Survey of Health, Aging, and Retirement in Europe (SHARE). The SHARE is a longitudinal survey of individuals aged 50 years and older. It started in 2004 in 10 European countries and was extended later on to 27 European countries and Israel. The dataset provides extensive information on demographic and labor market characteristics of respondents, their family arrangements, household income and assets, and, most importantly, on a wide range of health indicators, health behaviors and health care utilization. In wave 3 (2008-2009), the SHARELIFE questionnaire was utilized to collect information on life histories of the respondents (their childhood circumstances, employment history, health and health care utilization history, etc.).