Do immigrants improve the health of natives?∗

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A B S T R A C T

This paper studies the effects of immigration on health. Specifically, we merge information on individual characteristics from the German Socio-Economic Panel (1984–2009) with detailed local labour market characteristics, and we then exploit the longitudinal component of the data to determine how immigration affects the health of both immigrants and natives over time. We find that immigrants to Germany are healthier than natives upon their arrival (the healthy immigrant effect) but that immigrants’ health deteriorates over time. We show that the convergence in health is heterogeneous across immigrants and occurs more rapidly among those working in more physically demanding jobs. Because immigrants are significantly more likely to work in strenuous occupations, we investigate whether changes in the spatial concentration of immigrants affect the health of the native population. Our results suggest that immigration reduces the likelihood that residents will report negative health outcomes. We show that these effects are concentrated in blue-collar occupations and are stronger among low-educated natives. Improvements in natives’ average working conditions and workloads help explain the positive effects of immigration on the health of the native population.

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1. Introduction

In the public discourse, immigration is frequently blamed for higher health care costs and increased burdens on taxpayers. However, empirical evidence shows that immigrants are typically young, relatively healthy and thus less likely to utilise health care than natives of host countries (Goldman et al., 2006); indeed, a voluminous set of studies provides evidence of a “healthy immigrant effect”. Upon their arrival, immigrants are healthier than both their populations of origin and than natives of host countries, but immigrants’ health deteriorates over time. These paradoxical facts are observed across several countries and across various metrics of health (Kennedy et al., 2006; Antecol and Bedard, 2006; Chiswick et al., 2008). Shedding light on these health patterns is crucial to evaluate the costs and benefits of migration, and, in particular, its impact on health care costs. Yet, the mechanisms underlying immigrant health trajectories are not fully understood.

Previous research analysing the “healthy immigrant effect” has focused on selection, behaviours and return migration as possible factors underlying the convergence observed in immigrants’ health (Giuntella, 2013; Antecol and Bedard, 2006; Chiswick et al., 2008; Jasso et al., 2004). Surprisingly, previous studies have largely ignored the relationship between working conditions and the health trajectories of immigrants. However, there is evidence that immigrants are more likely both to work in riskier occupations and to have more difficult work schedules than natives (Orrenius and Zavodny, 2012, 2009; Giuntella, 2012). In addition, several studies show that both the physical requirements and the environmental conditions of the workplace have negative effects on health (Case and Deaton, 2005; Fletcher and Sindelar, 2009, 2011; Ravesteijn et al., 2013). In this paper, we hypothesise that sorting into more strenuous occupations contributes to immigrants’ health deterioration. Furthermore, we examine whether immigration improves the health of natives and previous cohorts of immigrants by increasing the supply of healthy low-skilled workers, which leads natives

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and previous cohorts of immigrants to shift into better working conditions.

Although there is a voluminous literature on immigration’s effects on wages, employment and prices (Card, 1990; Hunt, 1992; Friedberg and Hunt, 1993; Borjas, 1995; Carrington and Lima, 1996; Dustmann et al., 2005; Borjas et al., 2011, 2008; Ottaviano and Peri, 2012; Glitz, 2012), little is known about the possible effects that immigration might have on other working conditions that are known to affect health. This paper studies how sorting immigrants across jobs affects their health trajectories and, in turn, the health of the incumbent resident population. Our contribution is twofold. First, we focus on one of the mechanisms affecting immigrants’ health convergence by examining the role of occupations. Second, to the best of our knowledge, this is the first paper to study the effects of immigration on the health of the native population. We argue that differences in the initial endowments and the composition of capital (health capital, human capital, and financial endowments) between immigrants and natives can explain the reallocation of tasks in the host country population and the positive effects of immigration on health outcomes. Indeed, both the absence of detrimental effects on employment and wages and the reallocation of working conditions can be explained by the complementarity of tasks in the production function (Peri and Spaber, 2009; D’Amuri and Peri, 2010; Foged and Peri, 2013).

Similar to Akay et al. (2014), who examine the effects of immigration on individual well-being, we focus on Germany, a country characterised by a large and diverse immigrant population. We exploit the richness of the German Socio-Economic Panel (SOEP) which allows us to analyse the health trajectories of a representative sample of both natives and immigrants in Germany. The SOEP contains information on self-reported and doctor-assessed health conditions and a large set of socio-demographic characteristics. In addition, it includes occupational titles that can be used to classify occupations based on the physical intensity that is associated with relative working conditions.

We demonstrate that immigrants (regardless of their arrival cohort) are healthier upon their arrival than their German-born counterparts, but the health of these immigrants rapidly converges to that of the native population. Moreover, the convergence is heterogeneous across immigrants and occurs more rapidly among male immigrants working in more physically demanding jobs. We show that immigrants are more likely both to be employed in blue-collar jobs and to be exposed to work-related health risks for longer periods of time than their native counterparts. These facts are consistent with the implications of a standard Grossman (1972) health capital model. Ceteris paribus, low-skilled individuals are more willing to accept risky occupations, trading off health for higher lifetime earnings (Case and Deaton, 2005). Because immigrants appear to be positively selected on health with respect to their population of origin but typically are characterised by lower education and less wealth than natives, they have greater incentive to trade their health capital for money. Therefore, immigrants may be more willing than natives to accept poorer working conditions in exchange for higher wages.

Having determined that immigrants are more likely to work in riskier occupations than natives and that health deterioration occurs significantly more quickly among immigrants working in more strenuous jobs, we next investigate how immigration affects the health trajectories of both natives and immigrants in Germany. We merge the SOEP with local labour market characteristics and investigate how changes in the spatial concentration of immigrants over time affect the health of the incumbent resident population. One of the major challenges of the spatial correlation approach is that the location of immigrants across different areas may be endogenous. Natives may respond to the wage impact of immigration on a local area by moving to other areas, and immigrants may cluster in areas with better economic conditions.

Exploiting the longitudinal nature of the data, we are able to follow individuals over time wherever they move. Using a transition approach, we internalise the spillover effects that may be induced by native mobility (Foged and Peri, 2013) and that would typically bias area studies (Borjas, 2003). Including individual fixed effects allows us to examine how changes in an individual’s exposure to immigrants affect that individual’s working conditions and health over time. Moreover, we can determine whether respondents change their location in response to changes in the proportion of immigrants in the local population and whether movers are in better health conditions than stayers. Furthermore, we find similar results when using a higher level of aggregation.

Finally, we argue that pull factors that attract more immigration, such as economic growth, should lead to a downward bias in the effect of interest because of the well-known negative (short-run) correlation between the economic cycle and health (Ruhm, 2000). In particular, Ruhm (2000, 2013), Haaland and Telle (2014) show that work-related injuries and cardiovascular diseases follow the economic cycle while Borjas (1994) shows the pro-cyclicality of migration. Therefore, although we expect a positive correlation between immigration and wages, we may expect a negative (if any) correlation between economic conditions and health outcomes. In other words, the effects of immigration on health would be downward biased if we do not properly control for the economic cycle. For this reason, we also control for local labour market fixed effects and a large set of time-varying local labour market characteristics (GDP, unemployment, etc.) that should account for the omitted variable bias associated with permanent and time-varying local area characteristics.

To further address the issue of endogeneity, we exploit the fact that historical concentrations of immigrants are a good predictor of current immigrant inflows and use a traditional shift-share instrument in our analysis (Card, 2001). By including individual, local area, and year fixed effects and controlling for the time-varying characteristics of the local labour market and ROR specific time trends, we can reasonably assume that past immigrant concentrations are uncorrelated with current unobserved labour demand shocks that may be correlated with health. Moreover, we conduct several falsification tests using forward values of the immigration rate, analysing the relationship between changes in the immigration share and regional trends in the health outcomes in the periods preceding our analysis, and focusing on groups who are less likely to be exposed to immigrants in the labor market. Our results are robust to alternative model specifications and estimation methods.

We find that a higher immigration share in the local labour market increases the likelihood of the native population reporting better health outcomes. Consistent with our hypothesis, the 2SLS estimates are larger than the OLS estimates, and the positive effects are concentrated among low-skilled males in blue-collar jobs. We find no evidence that immigration has significant effects on the allocation of blue- and white-collar jobs in the population. However, we do observe that immigration reduces the number of hours worked and the degree of physical intensity among blue-collar workers. At the same time, consistent with several studies analysing the effects of immigration in Germany (D’Amuri et al., 2010; Bonin, 2005; Pischke and Velling, 1997), we find no evidence of any detrimental effects of immigration on wages and employment. The effects of immigration on these observable working conditions can explain

1 Although most studies of Germany have found no evidence of detrimental effects on wages, it is notable that recent evidence using establishment-level analysis (Campos-Vazquez, 2008) or a quasi-experimental approach (Glitz, 2012) finds negative short-run effects on employment. Consistent with these studies, we find