

Household-level Prevalence and Poverty Penalties of Working in Non-teleworkable and Non-essential Occupations: Evidence from East and West Germany in 2019

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Households are key units of redistribution and risk pooling. Individuals' economic disadvantages, such as unemployment or earnings drops, can either be compensated or concentrate within households (Biegert & Ebbinghaus, 2020; Brady et al., 2017). Household constellations in terms of the number of earners and their occupations define households' capacity to cushion crises, such as the Covid-19 pandemic, or face challenges as rising inflation. Research focusing only on individuals, or on characteristics of household heads, cannot capture to what extent household earner constellations compensate or concentrate economic disadvantages (Hogendoorn & Härkönen, 2023).

Poverty research routinely focuses on social risks of low education, unemployment, and single parenthood as predictors of poverty (Brady et al., 2017; Hübgen, 2020; Vandecasteele, 2011). In recent years, in-work poverty notably increased across Europe, that is, the share of individuals living in households below the poverty line despite being gainfully employed (Andress & Lohmann, 2008; Brülle et al., 2019; Filandri & Struffolino, 2019; Lohmann & Marx, 2018). This calls for directing attention also to occupational risks of in-work poverty, in addition to established social risks of poverty in mostly non-employed households. Working in non-teleworkable, and to a lesser extent in non-essential, that is critical infrastructure, occupations was on average associated with occupational disadvantages, such as lower skill and lower pay already before the pandemic (Nivorozhkin & Poeschel, 2022). Since the COVID-19 pandemic, non-teleworkable and non-essential occupations gained importance as new dimensions of labor market inequality associated with a higher risk of job loss or income cuts (Brussevich, Dabla-Norris, & Khalid, 2022; Cetrulo, Guarascio, & Virgillito, 2020). Occupations that are both non-teleworkable and non-essential are likely particularly disadvantageous combining lower skill and pay (non-teleworkable) and lower job security and benefits (non-essential). To date, it is unknown, how non-teleworkable and non-essential occupations are concentrated within household constellations, and to what extent households where the only earner, or both earners work in a non-teleworkable and non-essential occupation are exposed to greater risks of poverty.

The prevalence of non-teleworkable and non-essential occupations across households depends on regional labor market and occupational structures, as well as the socio-demographic composition of households. Economically vulnerable households where

the only or both earners work in a non-teleworkable and non-essential occupation are likely more prevalent in a downward leveled occupational structure, where these jobs make up a larger share of the occupational distribution. The poverty penalty associated with working in a non-teleworkable and non-essential occupation might further depend on related occupational characteristics, such as fixed-term contracts and shift work that are difficult to reconcile with long-term financial planning and family responsibilities. Moreover, poverty penalties associated with the only or both earners working in non-teleworkable and non-essential occupations would be higher, if the socio-demographic composition of these households disproportionately comprises known social risks of poverty, such as single parenthood, low education, a migrant background or a single earner providing for many economically dependent household members.

We address two questions: 1) How prevalent were household constellations where the only earner or both earners worked in a non-teleworkable and non-essential occupation in East and West Germany in 2019? 2) Did the poverty penalty associated with the only or both earners working in a non-teleworkable and non-essential occupation differ between East and West Germany in 2019?

The empirical analyses link the most recent release of the large-scale representative data from the German Microcensus (2019) that became available in the summer of 2022, to original data on non-teleworkable and non-essential occupations from survey data and the German federal state decrees classifying essential occupations since May 2020.

In contrast to overall similar prevalences, in East Germany the household poverty penalty associated with the only or both earners working in a non-teleworkable and non-essential occupation was substantially elevated. Controlling for socio-demographic composition of households, including number of children living in the household, migration background, education, age and gender of the main earner decreased poverty levels in West Germany, but not in East Germany. As a result, controlling for the socio-demographic composition of households increased rather than decreased East-West poverty gaps associated with non-teleworkable and non-essential occupations. This points to suppressor effects, where poverty gaps would be even larger, if the socio-demographic composition of households was more similar between East and West Germany, for example if the share of lower educated, migrant, or single earner couple households with three and more children was as high in East Germany as it was in West Germany in 2019. In contrast, adjusting for additional occupational characteristics, including part-time and atypical employment, fixed-term contracts, shift work and the lack of leadership responsibilities lowered poverty levels associated with non-teleworkable and non-essential jobs to a much larger extent in East Germany than in West Germany. As a result, the sizeable East-

West poverty gap associated with non-teleworkable and non-essential occupations was reduced by about one half, but still remained sizeable.