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Abstract:
The Covid-19 pandemic has disrupted working life in many ways, the negative consequences of which may be distributed unevenly under lockdown regulations. In this paper, we construct a new set of pandemic-related indices from the Occupational Information Network (O*NET) using factor analysis. The indices capture two key dimensions of job task requirements: (i) the extent to which jobs can be adaptable to work from home; and (ii) the degree of infection risk at workplace. The interaction of these two dimensions help identify which groups of workers are more vulnerable to income losses, and which groups of occupations pose more risk to public health. This information is crucial for both designing appropriate supporting programs and finding a strategy to reopen the economy while controlling the spread of the virus. In our application, we map the indices to the labor force survey of a developing country, Thailand, to analyze these new labor market risks. We document differences in job characteristics across income groups, at both individual and household levels. First, low income individuals tend to work in occupations that require less physical interaction (lower risk of infection) but are less adaptable to work from home (higher risk of income/job loss) than high income people. Second, the positive occupational sorting among low-income couples amplifies these differences at the household level. Consequently, low-income families tend to face a disproportionately larger risk of income/job loss from lockdown measures. In addition, the different exposure to infection and income risks between income groups can play an important role in shaping up the timing and optimal strategies to unlock the economy.

Data description:
The information on job task requirements from the Occupational Information Network (O*NET) to construct a set of indices measure (i) the degree of job flexibility in terms of work location and (ii) the extent to which jobs require the worker to perform tasks in close physical proximity with others. It is mapped with Thailand’s Labor Force Survey (2019) for the evaluation of the labor market risks at both individual and household levels.

JEL codes: D10, E24, J12, J2

Keywords: Covid-19; Labor Market; Work-from-home; Physical proximity; Occupational sorting

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