



Institute for
New Economic Thinking
AT THE OXFORD MARTIN SCHOOL

WAGE INEQUALITY AND POVERTY EFFECTS OF LOCKDOWN AND SOCIAL DISTANCING IN EUROPE

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Introduction

- The Covid-19 pandemic has highlighted the importance of measuring the economic consequences of enforced “social distancing” (lockdown and partial re-opening of activities)
- Aggregate effects: Decline in GDP of 5% - 9% in the euro area this year (IMF, 2020)
- Also as important: this effect is not going to be equally severe for all workers → potential increase in inequality and poverty

The asymmetric effect of the virus containment measures – Recent literature

- Different teleworking ability for different occupations in the US (Dingel and Neiman, 2020)
- Forecasting of supply and demand first order effects on different occupations and industries in the US (Del Río-Chanona et al. 2020)
- Wage premium measured for teleworkable occupations, and lower share of these occupations in poorer regions (Irlacher and Koch 2020, for Germany).
- Increase in poverty and inequality in Italy during the two-month lockdown focusing (Brunori et al. 2020)
- Data on unemployment April-May in the US shows how it has affected much more strongly low-income occupations (Orr, 2020)

Our contribution

- Connect the asymmetry in teleworking ability of occupations with microdata (EU-SILC) on wages (employees + self-employed) considering essentiality and partial closure after lockdown.
- Provide first-order supply side estimates of potential increases in inequality and poverty in 29 European countries under difference scenarios of lockdown + partial closure of activities.
- Flagging up the importance of counteracting measures to palliate this potential poverty and inequality increase.

From teleworking to Lockdown Working Ability

- Teleworking is only one aspect of the working ability during a lockdown.
- Essential workers (e.g. healthcare workers, agricultural sector) can work regardless of their teleworking index.
- All workers in closed activities (hospitality) cannot work at all during the lockdown (and partially during the de-escalation period).
- We have classified essential and closed activities based on the decisions made by the Spanish and Italian governments.

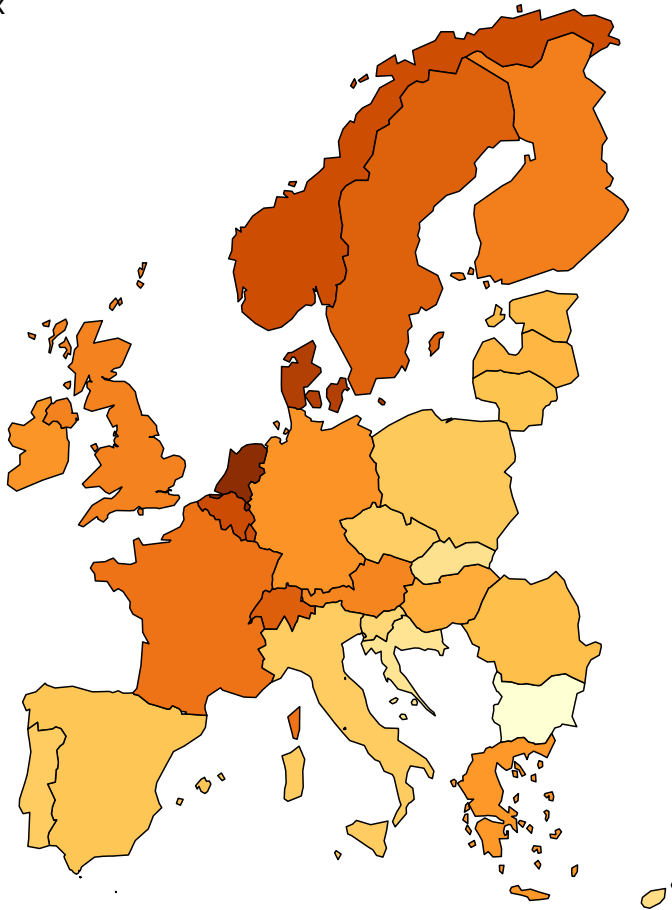
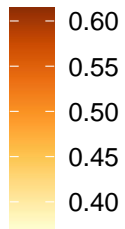
The Lockdown Working Ability (LWA) Index

- Worker: $i \in \{1, 2, \dots, n\}$
- Occupation: o_i
- Individual teleworking index: $T_i \in [0,1]$
- Essentiality score of occupation: $E_i \in (0,1]$
- Closure score of occupation: $C_i \in (0,1]$
- **Individual LWA index:**

$$LWA_i = \begin{cases} E_i + (1 - E_i)T_i & o_i = e \text{ (essential)} \\ (1 - C_i)T_i & o_i = c \text{ (closed)} \\ T_i & o_i \neq e, c \end{cases}$$

Average Lockdown Working Ability

LWA Index



- Overall average: 0.49
- Higher mean LWA index northern-western Europe (0.61 Netherlands)

Computing the potential wage loss for each worker

- Individual wage loss: wl_{it}
- Individual annual wage in t-1: w_{it-1}
- Duration of the lockdown (in annual terms): D_t
- Under a lockdown of 1, 2 or 4 months:

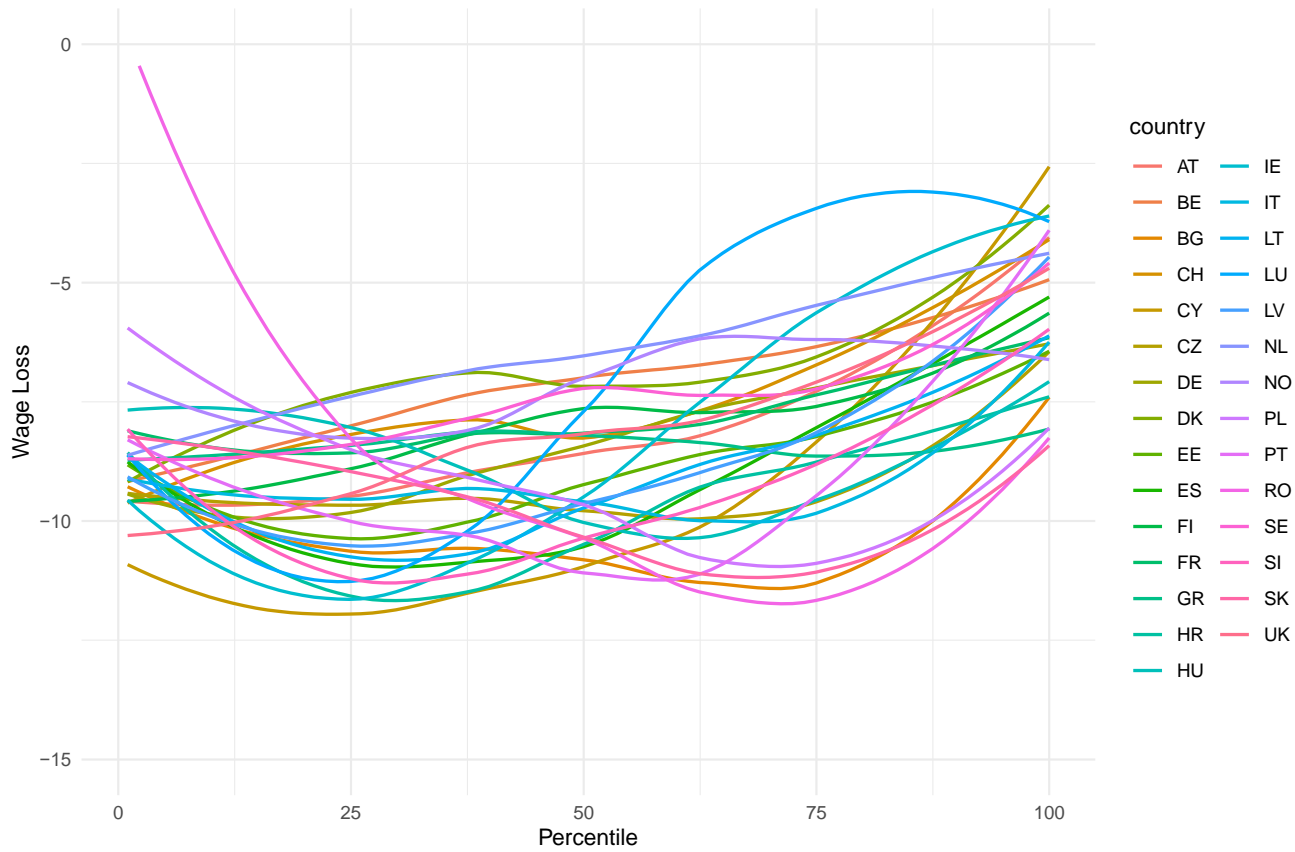
$$wl_{it} = w_{it-1} \cdot D_t (1 - LWA_i)$$

- Under a lockdown of 1, 2 or 4 months and 6 months of partial functioning (20% closure):

$$wl_{it} = w_{it-1} \left[D_t \cdot (1 - LWA_i) + 1_c \cdot \frac{6}{12} \cdot 0.2 \right]$$

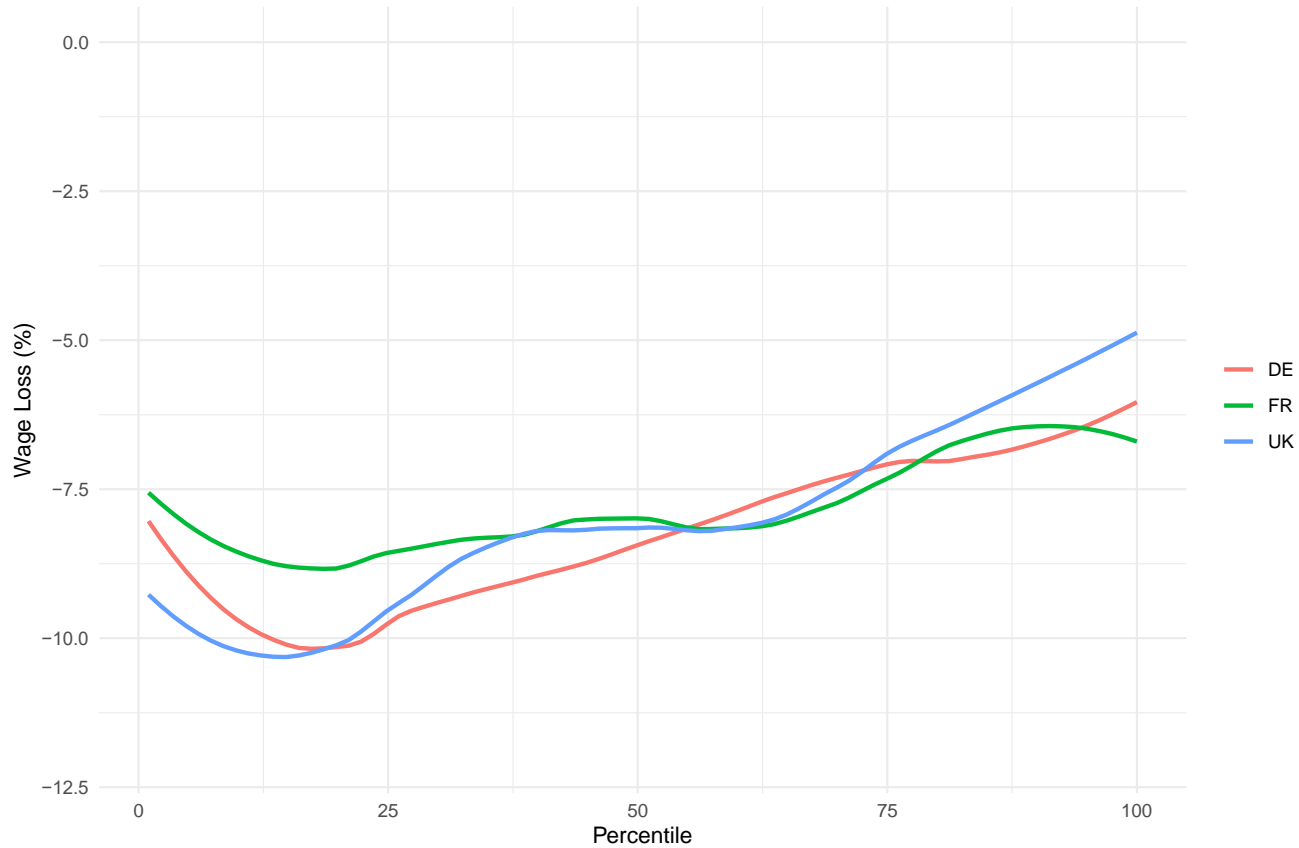
$$\text{where } 1_c = \begin{cases} 1 & \text{if } o_i = c \\ 0 & \text{if } o_i \neq c \end{cases}$$

Lockdown Incidence Curves



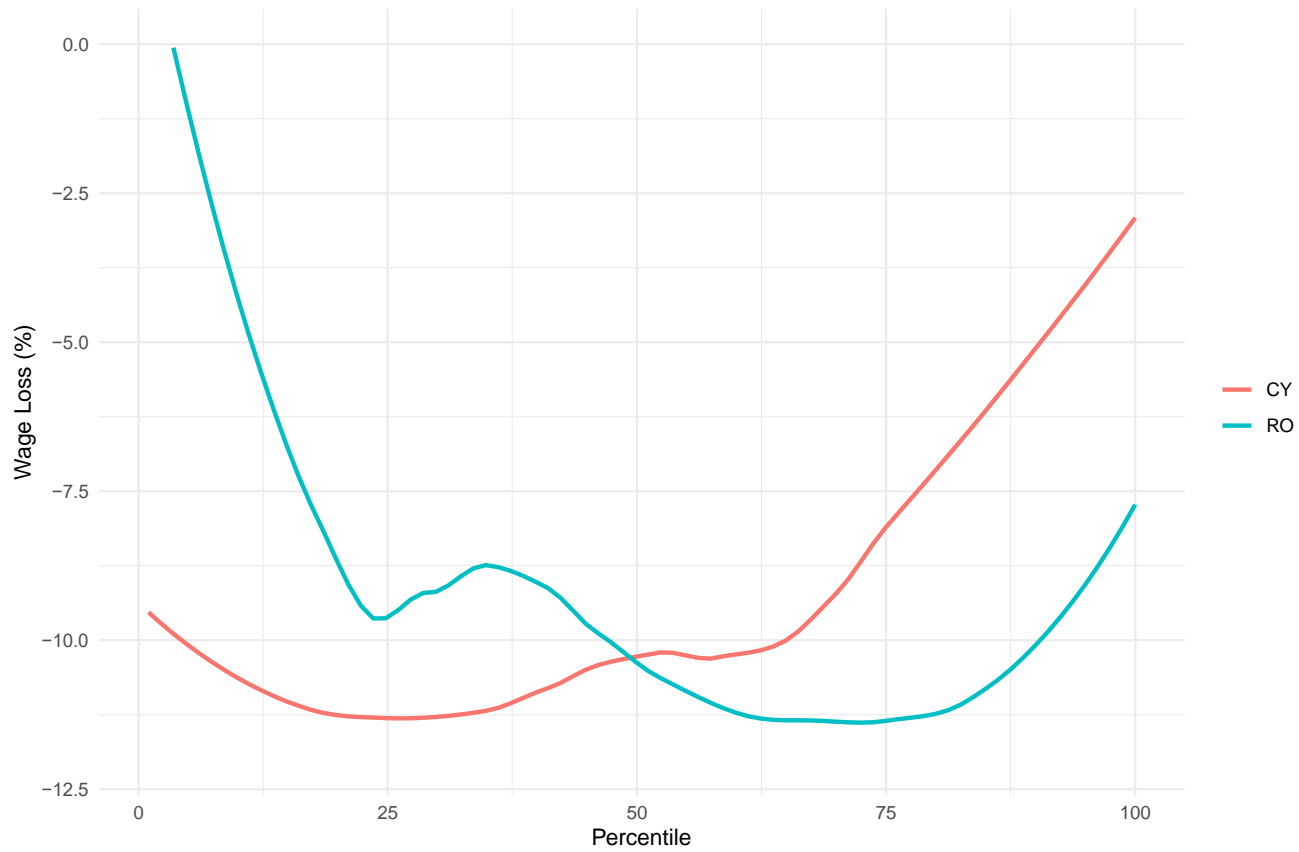
2-month lockdown scenario

Lockdown Incidence Curves



2-month lockdown scenario

Lockdown Incidence Curves

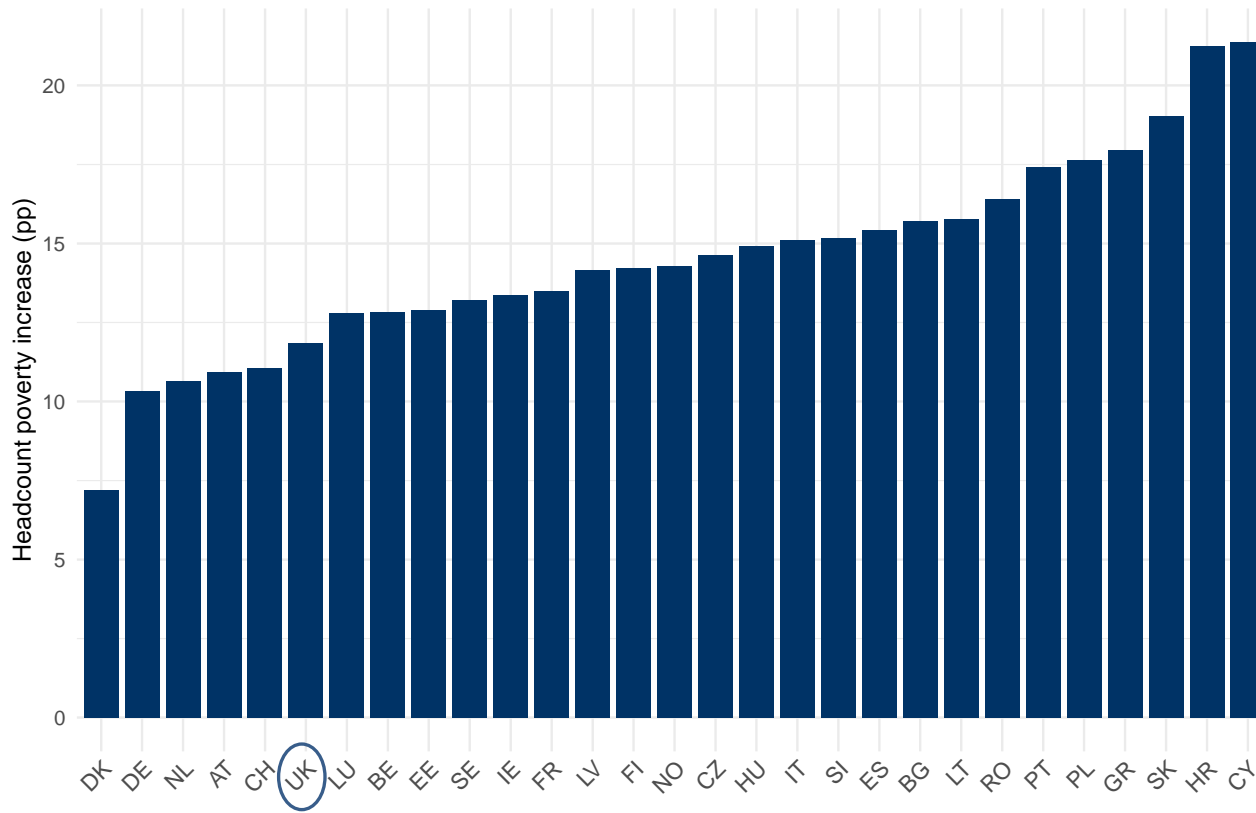


2-month lockdown scenario

Average potential wage loss for poor workers (below 60% of the median wage)

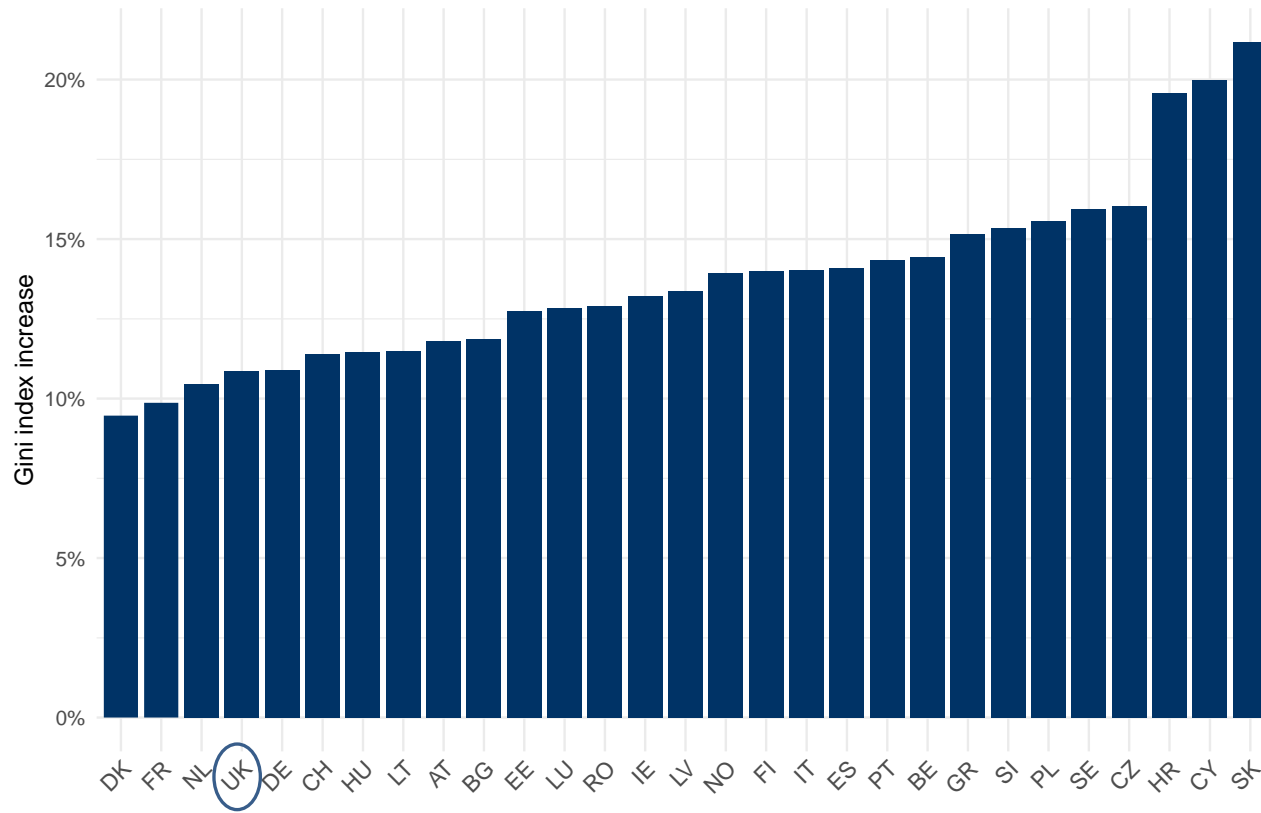
- For 2m lockdown / 2m + 6m partial closure:
 - Range between 3.1% (RO) - 12.2% (CY) / 5.1%–32.4%
 - Average for Europe: 10% / 22.5%
 - UK: 10.8% / 25.5%

Poverty Increase (pp. increase in 'Headcount Index')



2-month lockdown + 6-month partial closure scenario

Inequality Increase (% increase in the Gini Index)



2-month lockdown + 6-month partial closure scenario

Between and within inequality changes in Europe

- Using MLD we decompose total increase in inequality in Europe in within and between country components (2m / 2m + 6m)
 - Total inequality increase: 4.3% / 19.8%
 - Between country inequality increase: 2.4% / 5.2%
 - Within country inequality increase: 5% / 25.9%

Summary and discussion (I)

- 10% loss of wage for poor workers on average in Europe (2m); 22% considering additional and 6-month de-escalation period of partial functioning (80%) of some activities.
- Between 2.5 and 8.5% percent of workers additionally fall below the poverty threshold in the 2m lockdown scenario (5% avg); between 7% and 21% (14.5% avg) including partial closure period.
- Between 2% and 5% (3.5% avg) increase in Gini for European countries with a 2-month lockdown scenario, and between 10% and 20% (14.5% avg) including partial closure of activities.
- Regardless of the metric, all countries suffer significant increases in poverty and inequality: the impact of the pandemic is certainly not equalising and not pro-poor.