EMEs and COVID-19: Shutting Down in a World of Informal and Tiny Firms

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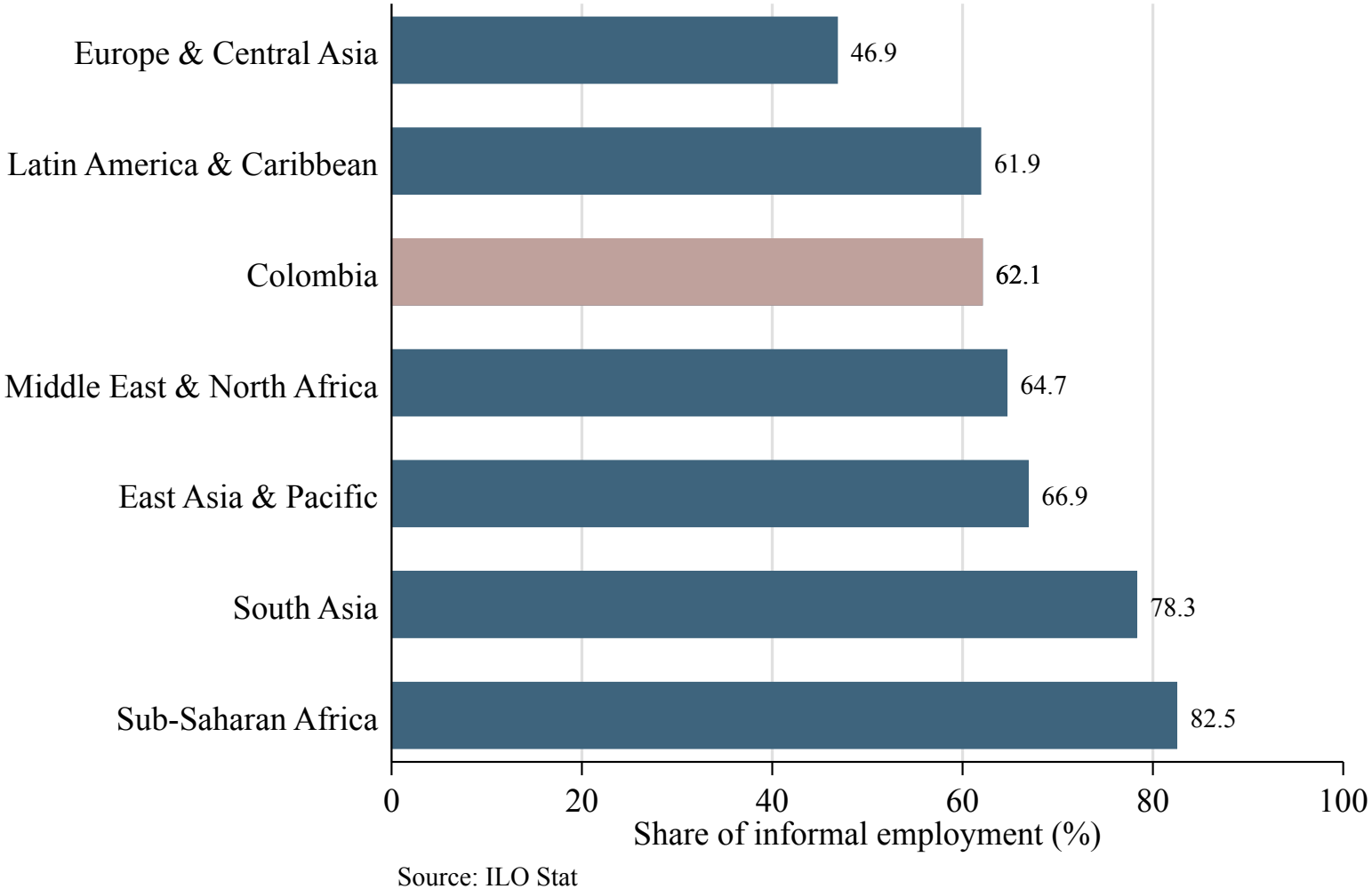
EMEs are Different

- High informality and prevalence of microenterprises render emerging market economies more vulnerable to the COVID-19 crisis
  - Have low organizational capital, which makes them more "flexible" than formal firms (entry and exit)
- Beyond firm size and informality, firms and workers in EMEs also have lower capability for telework, higher fractions of working at home, higher contact occupations.
- Many implemented some of the longest-lasting and most strict blanket lockdown measures.

Alfaro, Becerra, and Eslava (2020)

Informal jobs are prevalent in the developing world

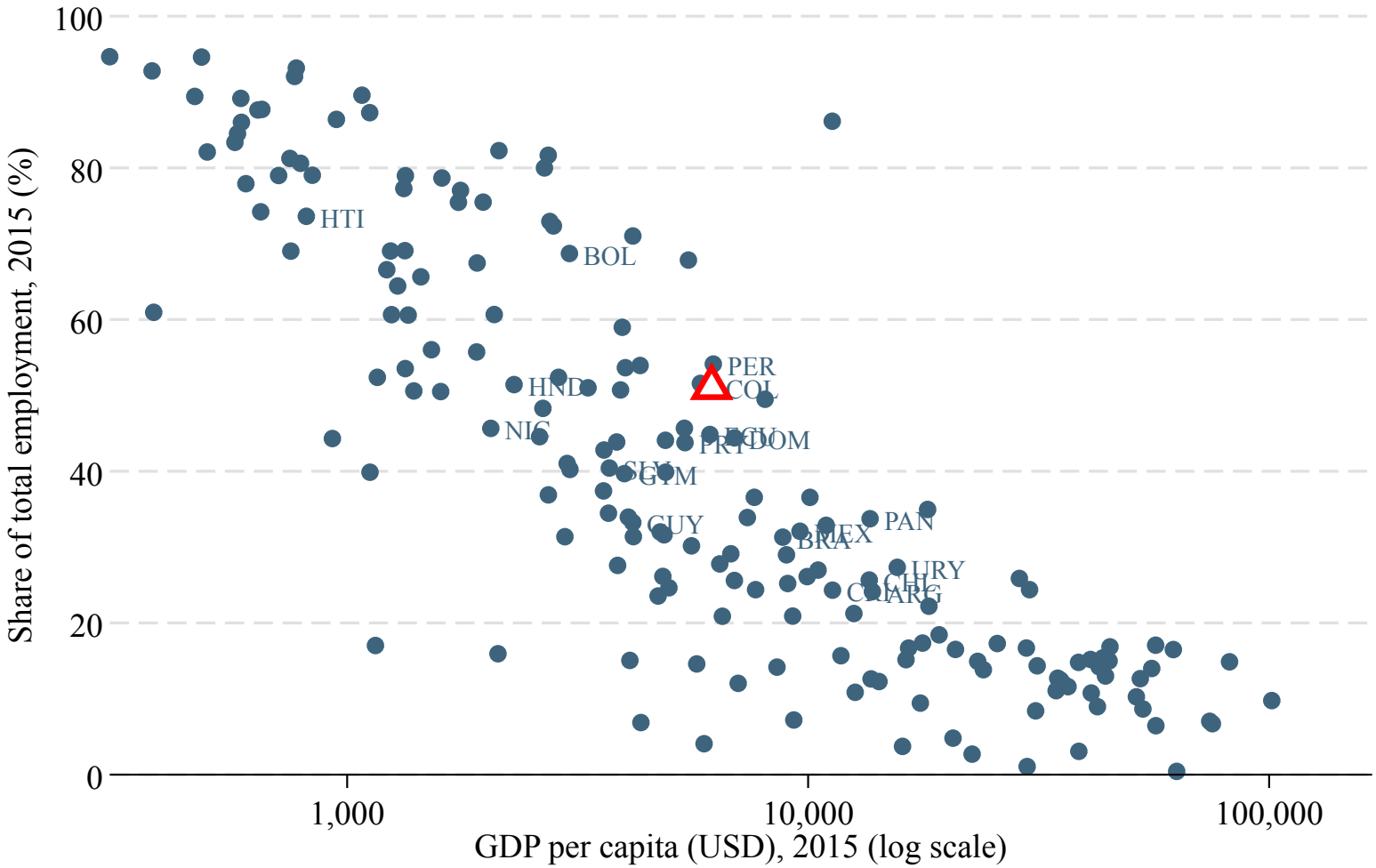
Share of informal employment by region



Source: ILO Stat

Large incidence of self-employment

Share of self-employment and GDP per capita



Source: World Development Indicators

In this paper

- We assess vulnerability of employment and income to the COVID-19 crisis in EMEs relative to the developed world
  - We account for the distribution of workers across sectors, firm-size categories, formality status and occupations
- Supply/demand shocks + propagation through linkages network
- Accounting framework: applied to Colombia, similar employment distribution to other EMEs/Latam; detailed data.
- Ex post analysis of actual outcomes as function of ex ante exposure measures.

Within Literature (all 2020!)

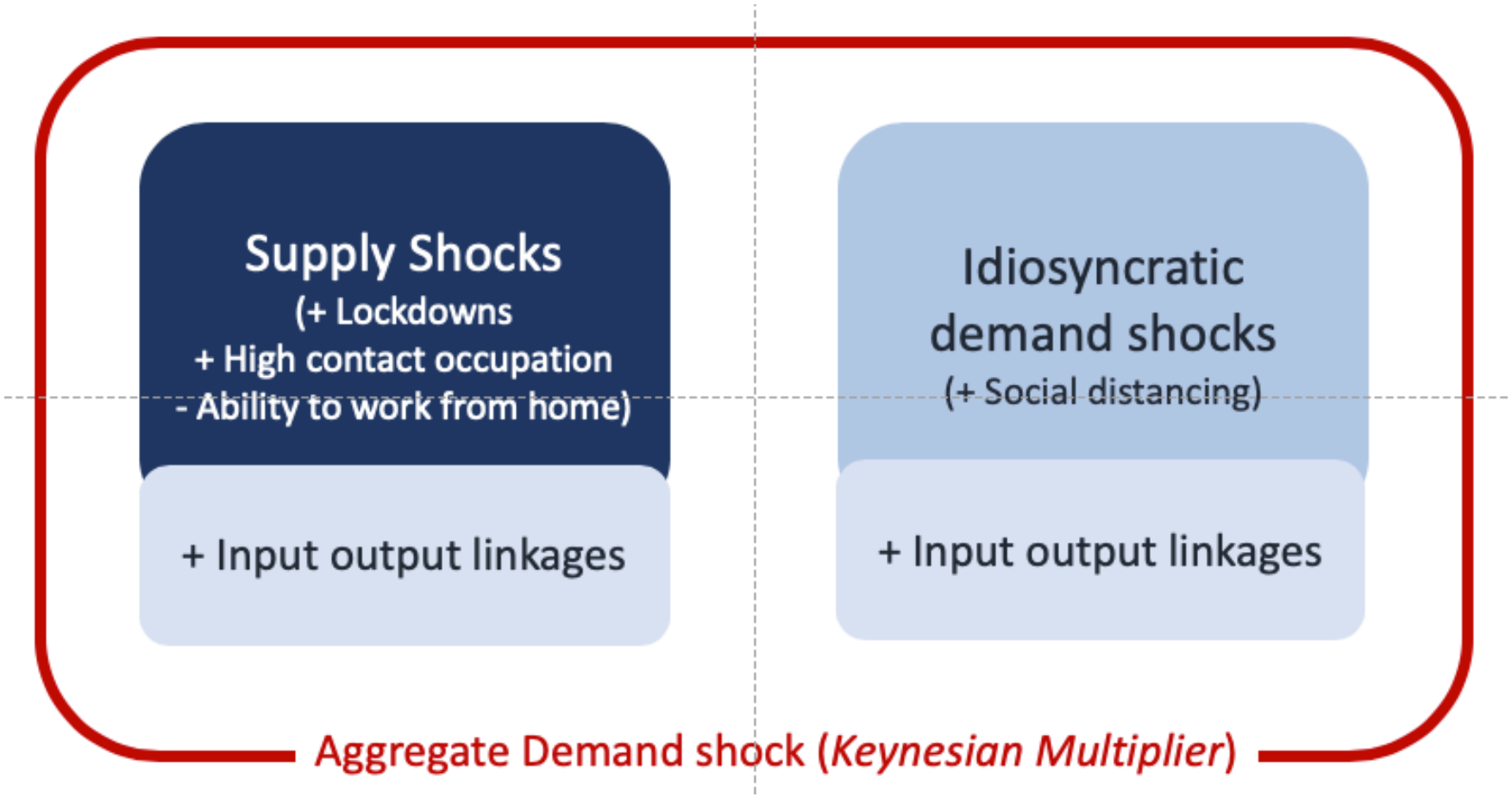
- Macroeconomic models with demand and supply shocks+SIR: infection feeds into demand, lockdown may dampen negative economic effect. *Acemoglu et al, Alvarez et al, Farboodi et al, Eichenbaum et al, Cakmakli et al*
  - We add developing economy perspective and perspective based on actual data
- Empirical measurement of exposure given job or worker characteristics and evolution of employment *Cajner et al, Coibion et al, Dingel and Neiman, Koren and Petot, Leibovici et al, Bartik.*
  - No comprehensive framework with demand, supply, IO
- Lockdown vs. demand *Cakmakli et al, Goolsbee and Syverson*
  - Identification of demand vs supply, developed contexts, and lockdowns that are not blanket and displayed short duration
- COVID and developing economies *Alon et al.*
  - Focus on demographics and informality in extremely poor countries with very imperfectly enforced lockdowns.

Preview of results

- Blanket lockdowns and idiosyncratic demand losses: 50%-60% of jobs and 40% of value added at risk, chief among them informal jobs and those in small firms
- Imposing U.S. employment distribution on Colombian data: much smaller effects (17% and 11%)
  - At the same time faster recovery under more informality
- 50% of the variance of lost work hours explained by ex ante exposure, with lockdowns and informality explaining most.
- Many of those risks indeed realized in second quarter of 2020: losses of 44% of hours worked, 25% of jobs, 16% of economic activity.

Accounting framework

Economic effects of COVID-19 crisis on employment and output



▸ the model

Alfaro, Becerra, and Eslava (2020)

Accounting framework

Determinants of economic risk

1. **Labor informality**: Lack of compliance with labor regulations, including employment protection, many hand-to-mouth workers.
2. **Firm size**: Larger firms typically have both larger cash reserves and more access to credit than smaller firms.
3. **Economic sector**: Essential sectors less vulnerable to the crisis: allowed to operate + inelastic demand; sectors that are easily transferred to the virtual world
4. **Occupation**: Occupations that require high physical contact and that are not fit for telework are at higher economic risk.

Alfaro, Becerra, and Eslava (2020)

Accounting framework (continued)

We define the probability that i losses her job and income, $\pi_{it} \in [0, 1]$, as:

$$\pi_{it} = \min\{1, (shock_s + IO_s) \cdot \min\{1, (1 - T_i) + H\_contact_i\} \cdot S_{it} \cdot AD\} \tag{1}$$

where

$$shock_s = Lock_s + Dloss_s \tag{2}$$

$Lock_s = 1$ in non essential sectors, $Dloss_s = \%$ fall in sector's production in Sweden, adjusted by teleworkability

Accounting framework (continued)

$$IO_s = \sum_{j \neq s} shock_j \times \frac{purchases_{j:from:s}}{grossout_s} + \sum_{j \neq s} shock_j \times \frac{purchases_{s:from:j}}{grossout_s} \quad (3)$$

$$S_{it} = 1 \text{ if informal or micro and } 1 \leq t \quad (4)$$
$$S_{it} = 1 \text{ if inf,micro or small and } t \geq 2$$
$$S_{it} = 1 \text{ if formal and (micro-small) and } t \geq 3$$

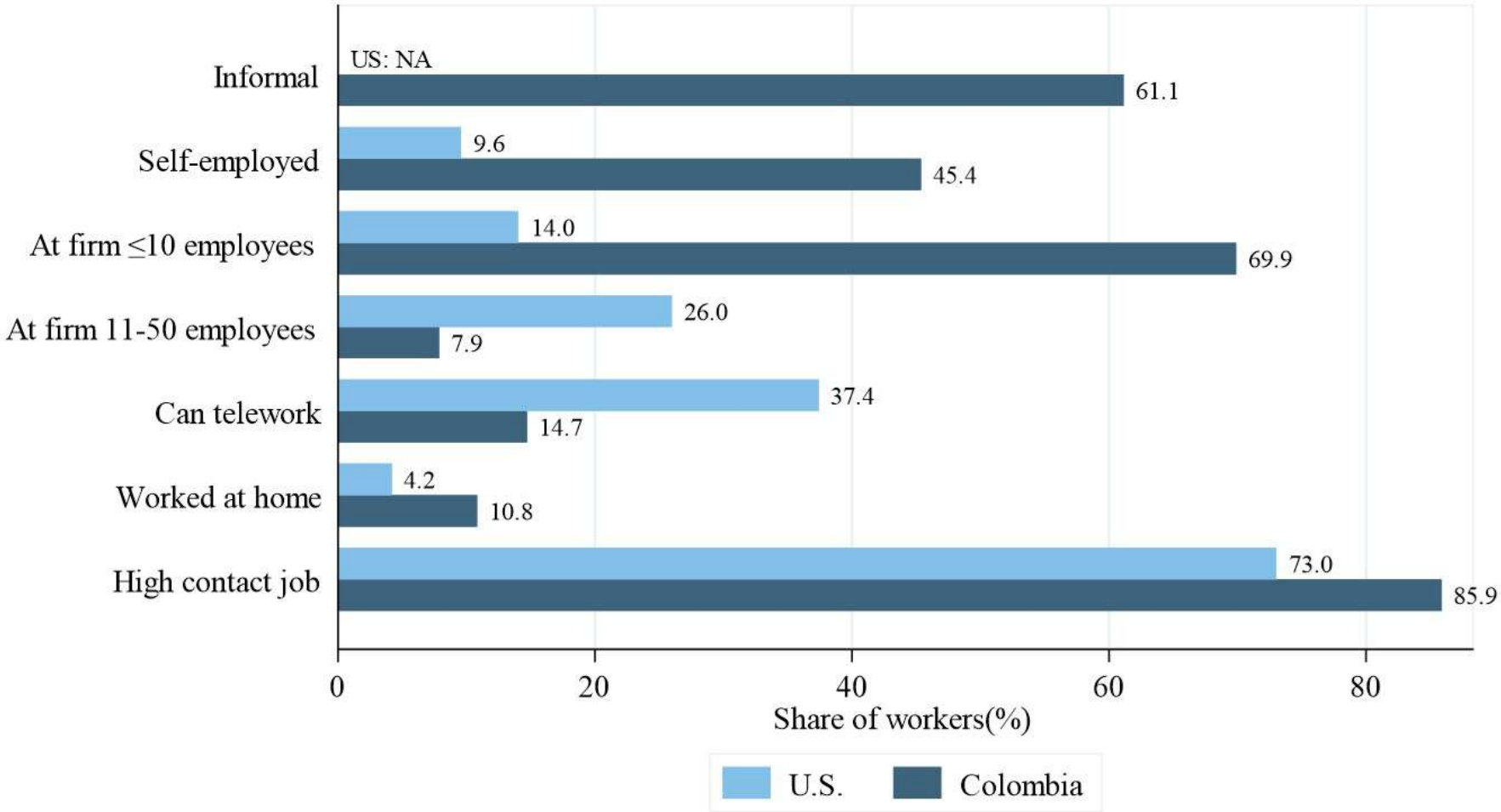
$$AD = \sum_{income} \rho_{income} \times \frac{1}{1 - MPC_{income}}. \quad (5)$$

Alfaro, Becerra, and Eslava (2020)

Data and measurement

- Colombian Household Survey (GEIH)
- Self-employed, informality status, size of employer firm
- By occupation: ability to telework
  - Dingel and Neiman occupational categories in the ACS, which follows the Standard Occupational Classification, as either fit for telework or not.
  - We aggregate SOC classes to the level of GEIH occupational categories. We then obtain for each of those categories the fraction of US workers in the ACS whose occupational class is classified as fit for telework. Hence, the probability of teleworking is computed as equal to the fraction for the GEIH occupational category that the individual is in.

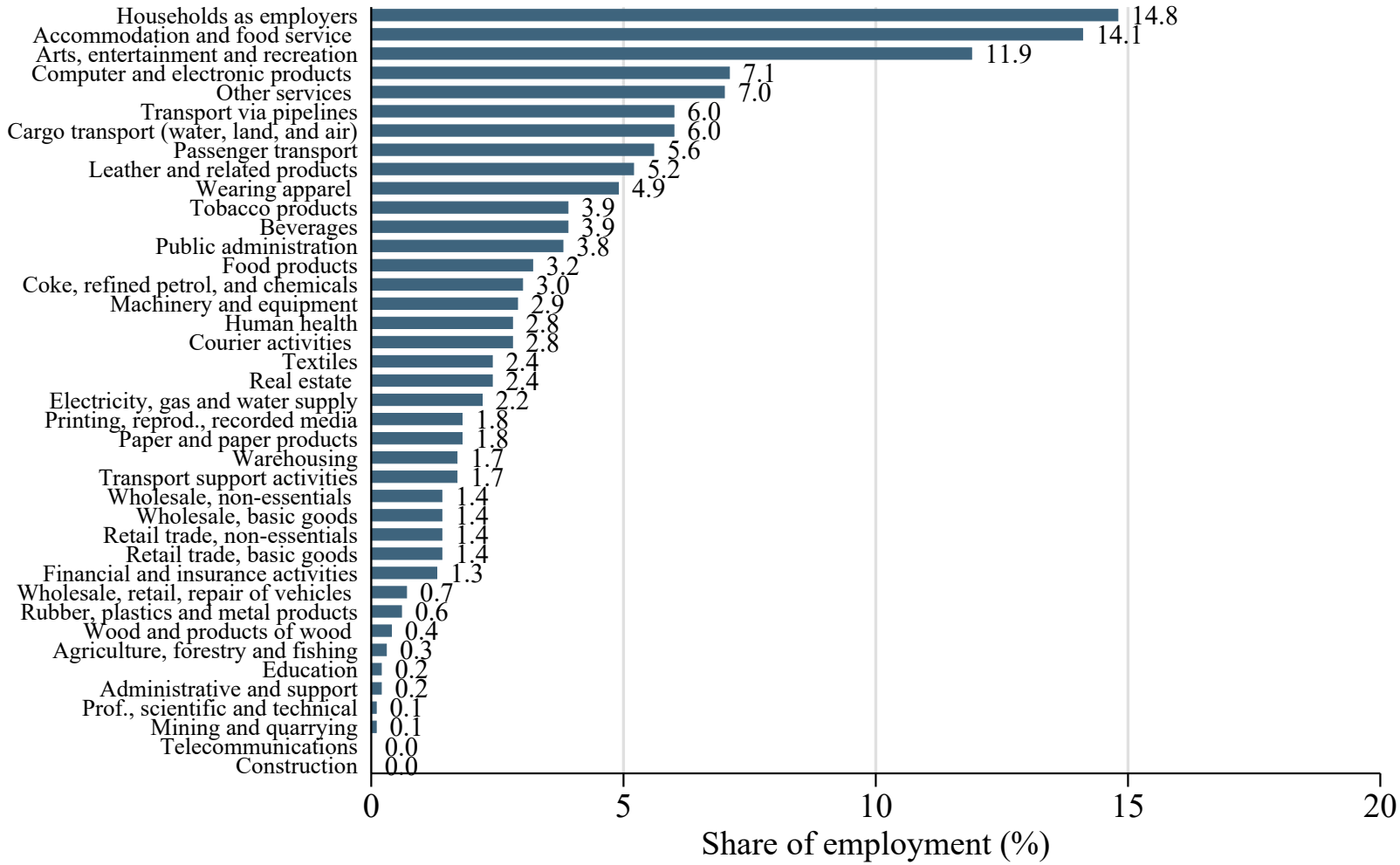
Employment characteristics Colombia vs. US



Source: GEIH(2019), ACS(2017) and BDS(2014)

Demand shocks that vary by sector

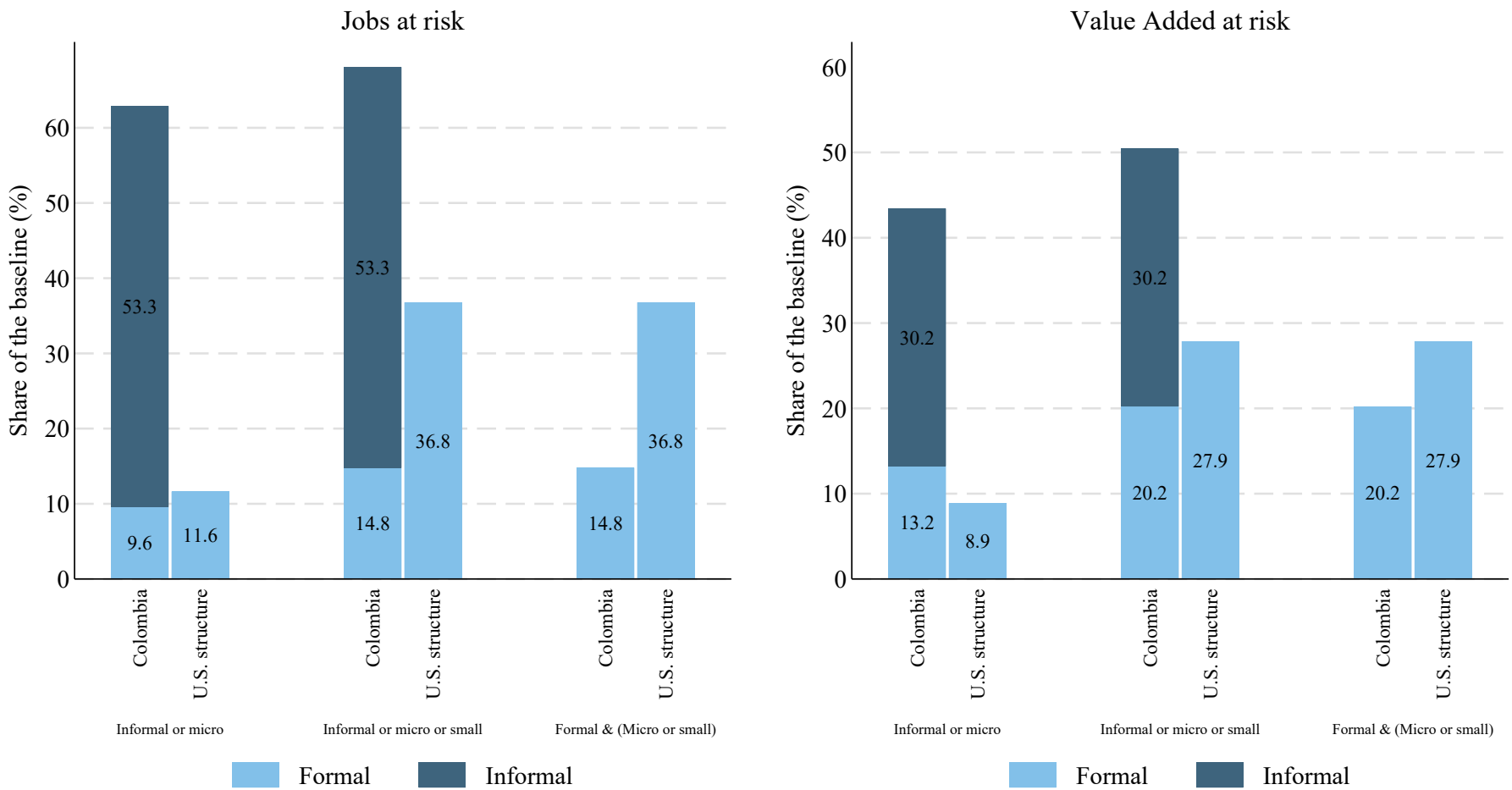
Production losses in Sweden



Source: Statistics Sweden

Results ex ante analysis

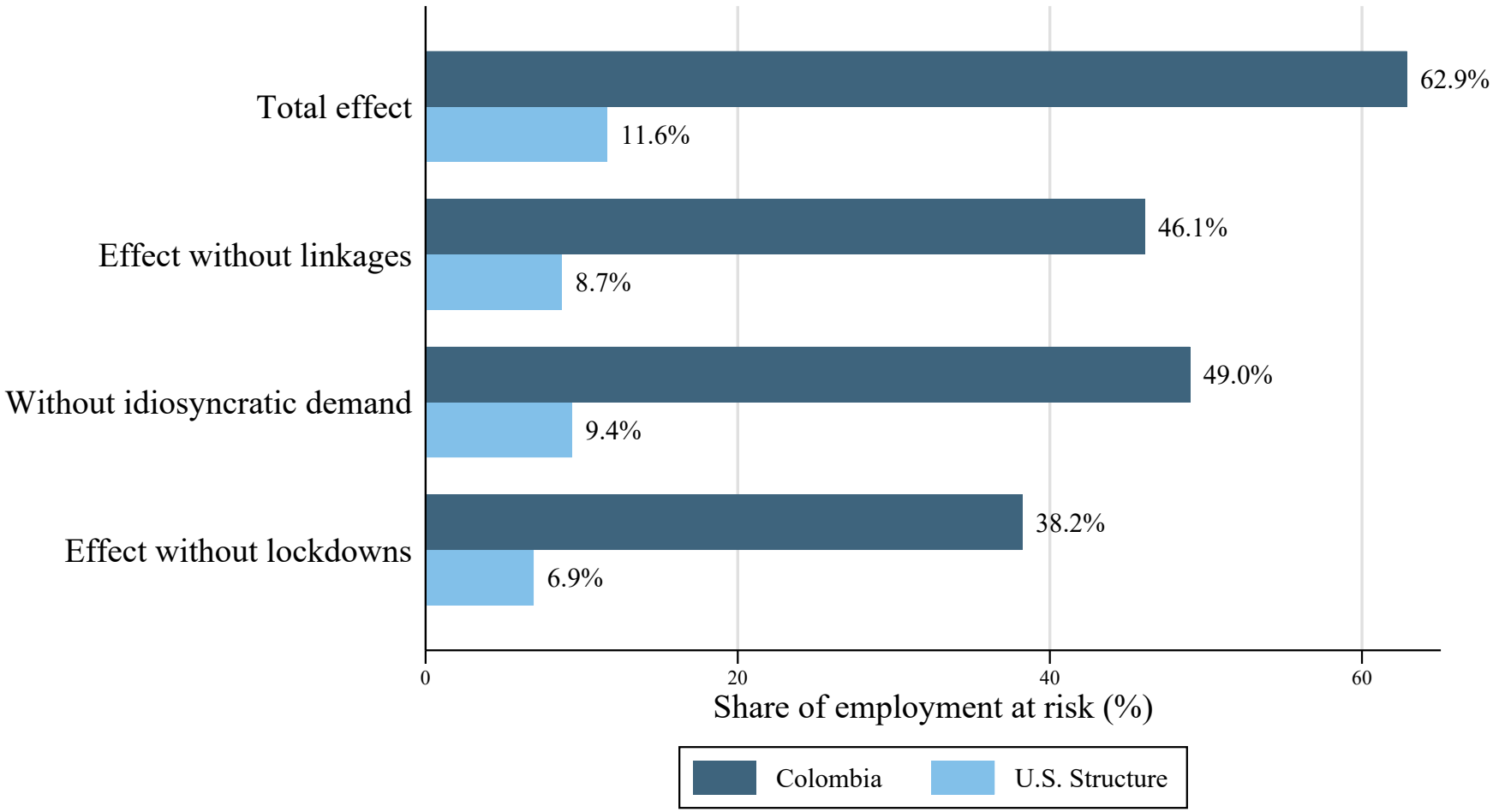
Jobs and VA at risk Under Strict Lockdown



Notes: Bars labeled "U.S. structure" recalculate jobs at risk and value added at risk under the assumption that the distribution of workers is as in the U.S. in terms of economic sectors, firm size, and occupations.

Alfaro, Becerra, and Eslava (2020)

Role of Shocks



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Actual job losses

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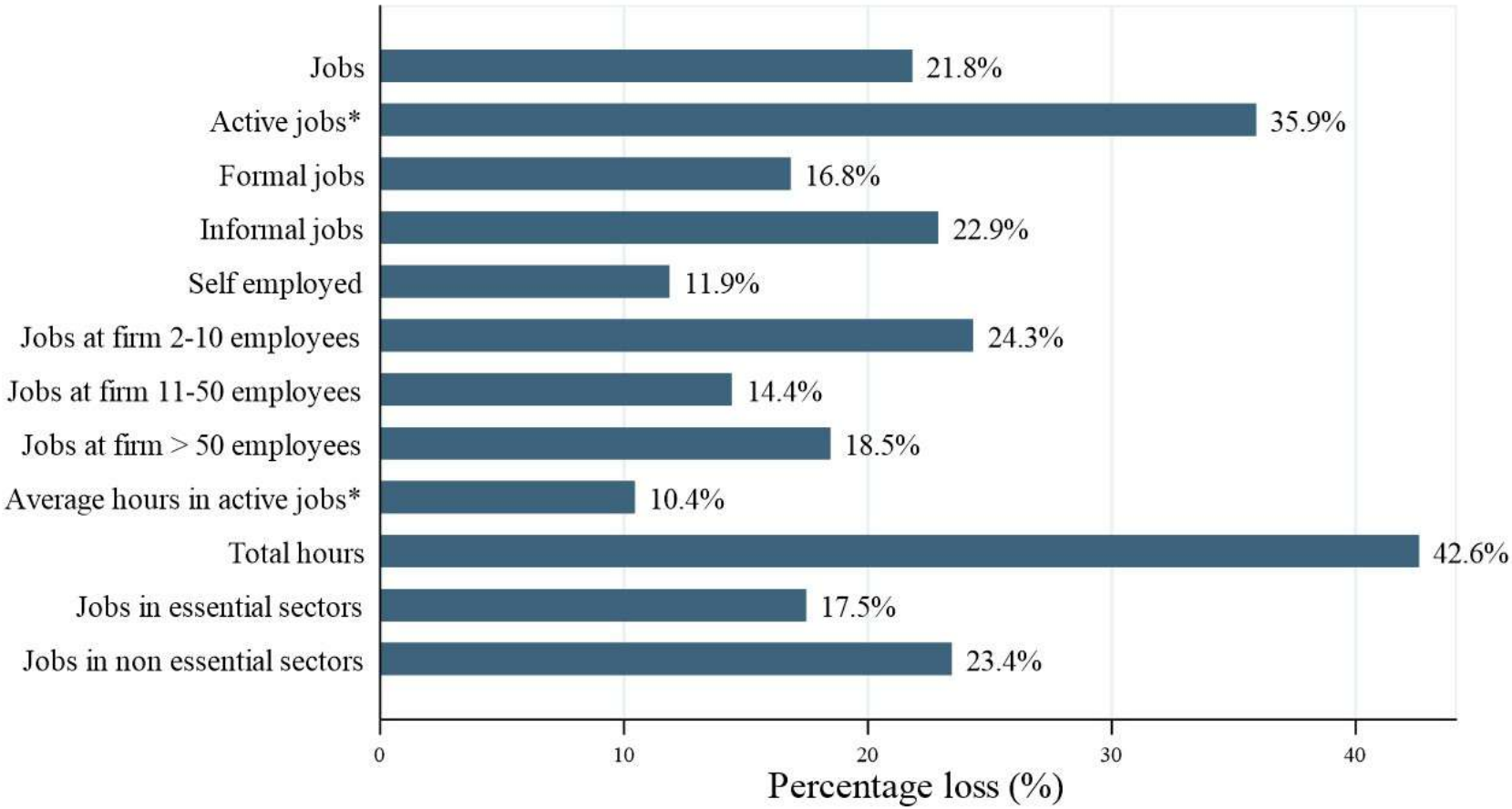
Percentage employment losses: second quarter 2020 vs 2019

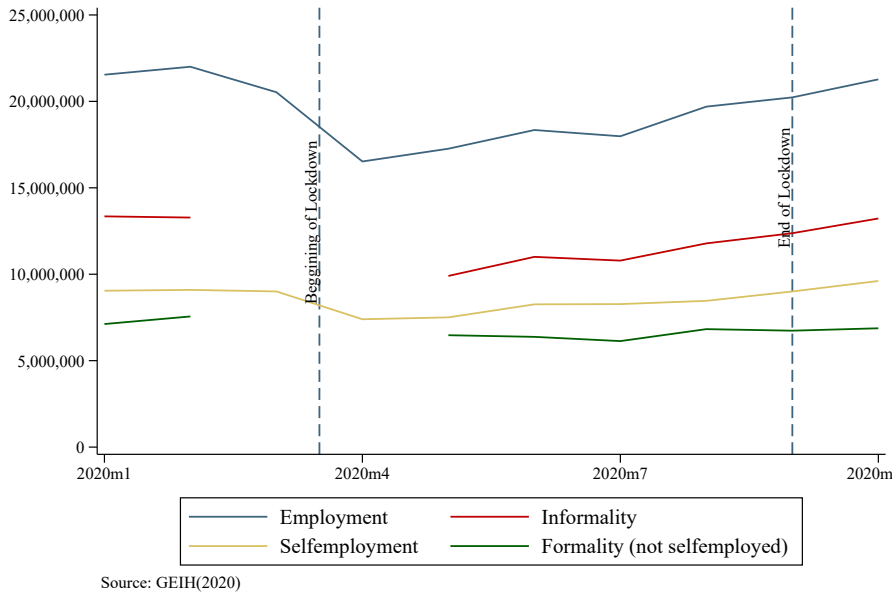


Source: GEIH second quarter (2019-2020). Hours worked, formality status and firm size only availablefor May and June. (*) We consider active jobs those that reporthaving worked positive hours during the previus week.

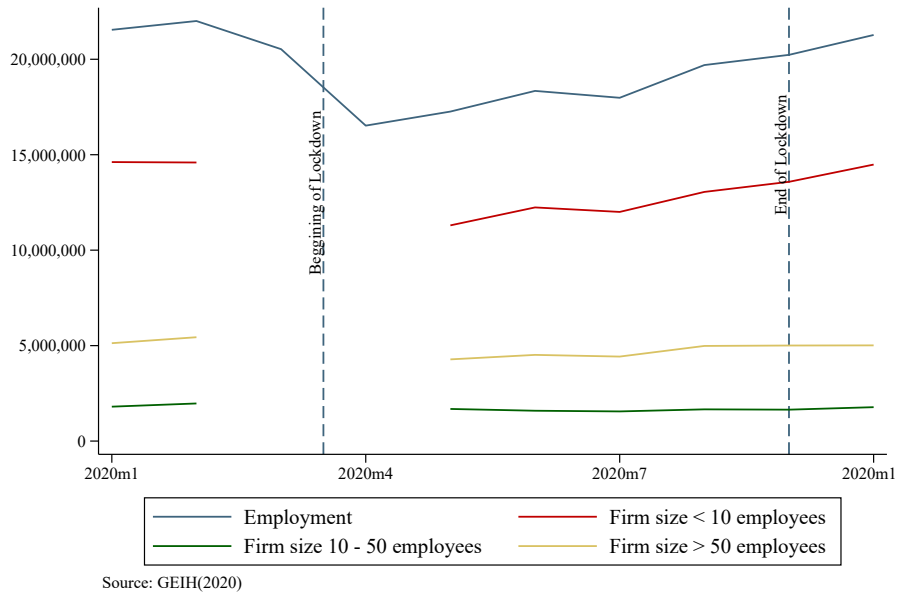
Alfaro, Becerra, and Eslava (2020)

Informal jobs lead the recovery

Employment by formality status and firm size, 2020

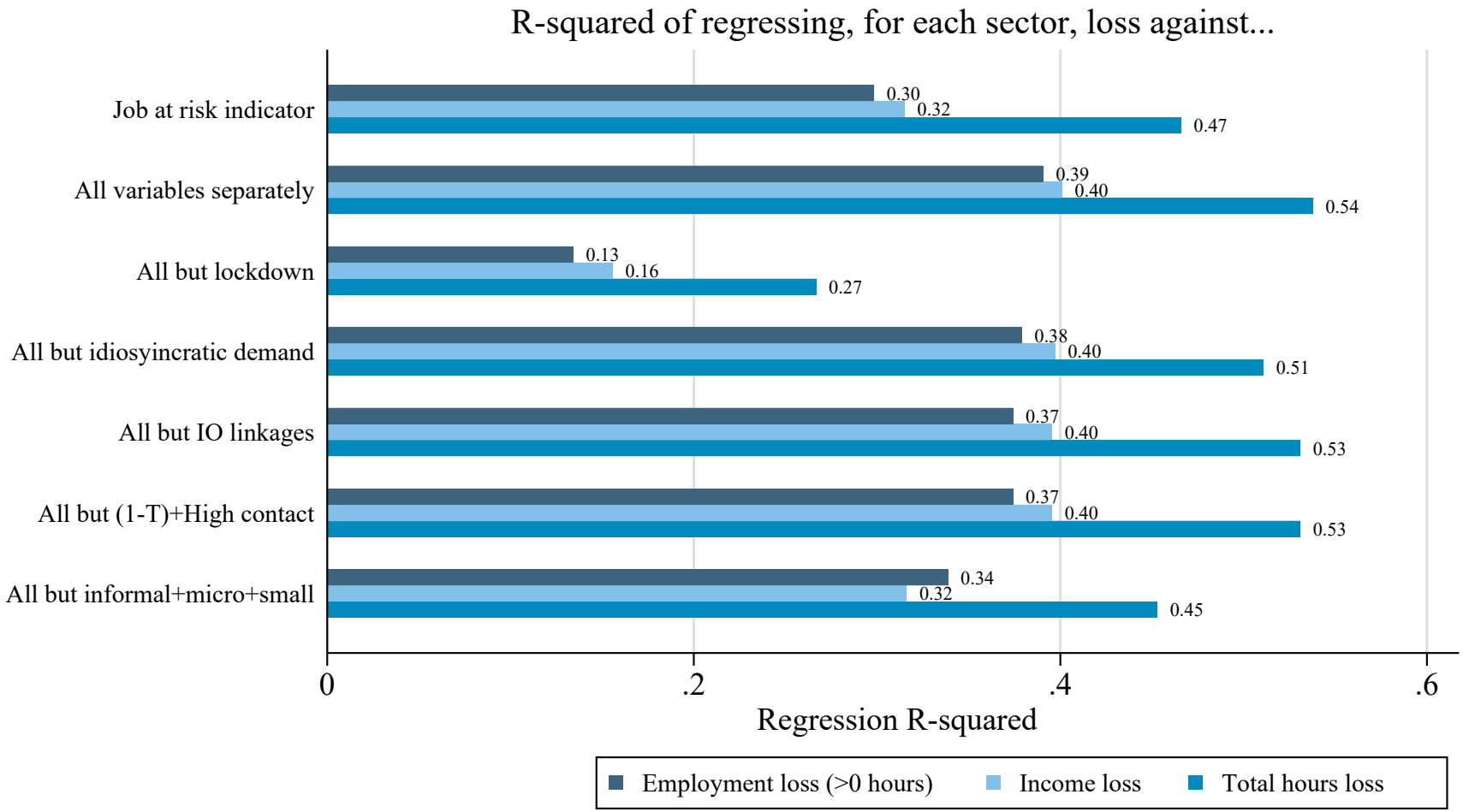


Source: GEIH(2020)



Source: GEIH(2020)

Dimensions of exposure explain much of cross-sectional variation



Source: GEIH second quarter (2019-2020).

Final remarks

- High informality and prevalence of microenterprises render emerging market economies more vulnerable to the COVID-19 crisis
- With widespread labor market rigidities and barriers to formal firm entry, formal-sector jobs will take long to recover.
  - Cash transfers/support formal jobs
- Policies should also aim to reduce the barriers to formality as a way to speed up a "better" recovery

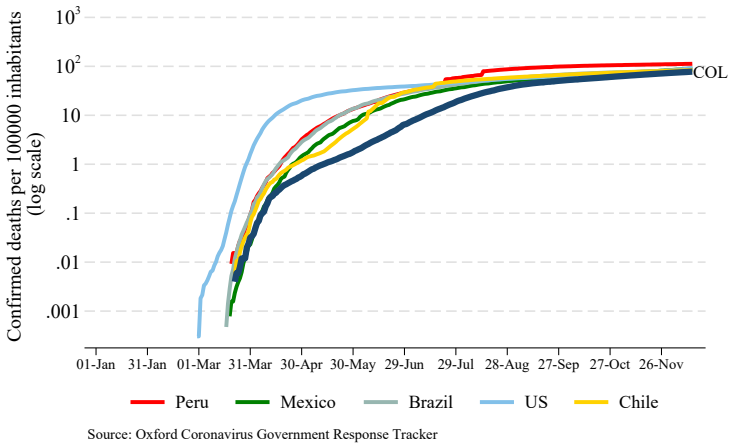
Final remarks

- With high potential costs of blanket long-term lockdowns, and low capacity to deal with those costs, they should be minimized. Selective lockdowns based on age or economic activities have been proposed, but also problematic
- Crucial that governments in EMEs decidedly adopt strategies that allow them to deal with the epidemia with minimum resort to lockdowns.
- Vaccination should be today's priority, together with continued efforts on well designed and scaled testing, tracing and isolation, masks.
- Approriate information a must.

Discussion:lockdowns vs demand

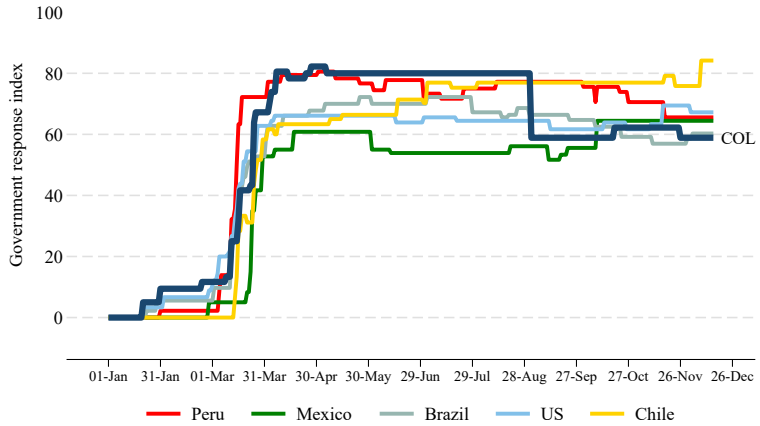
Number of deaths and Government response

Confirmed deaths



Source: Oxford Coronavirus Government Response Tracker

Oxford's Government Response Index



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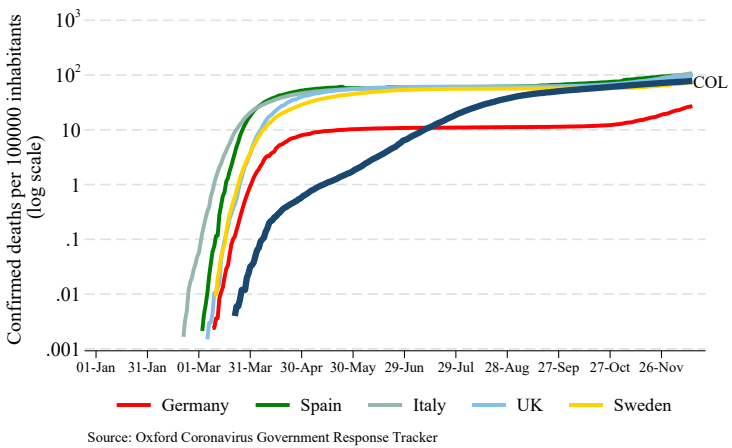

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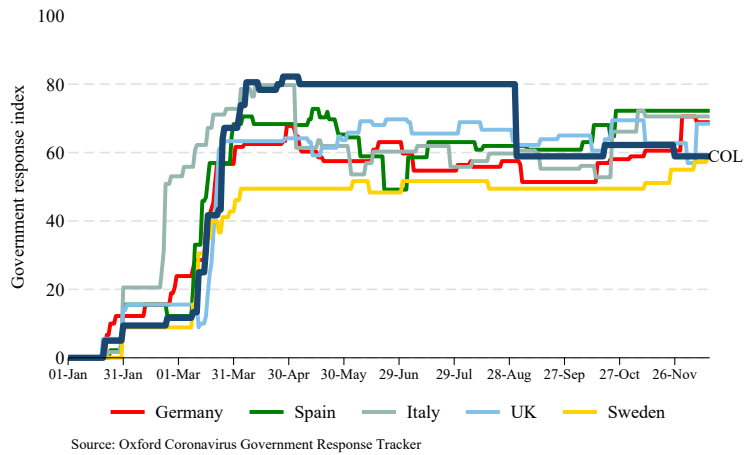

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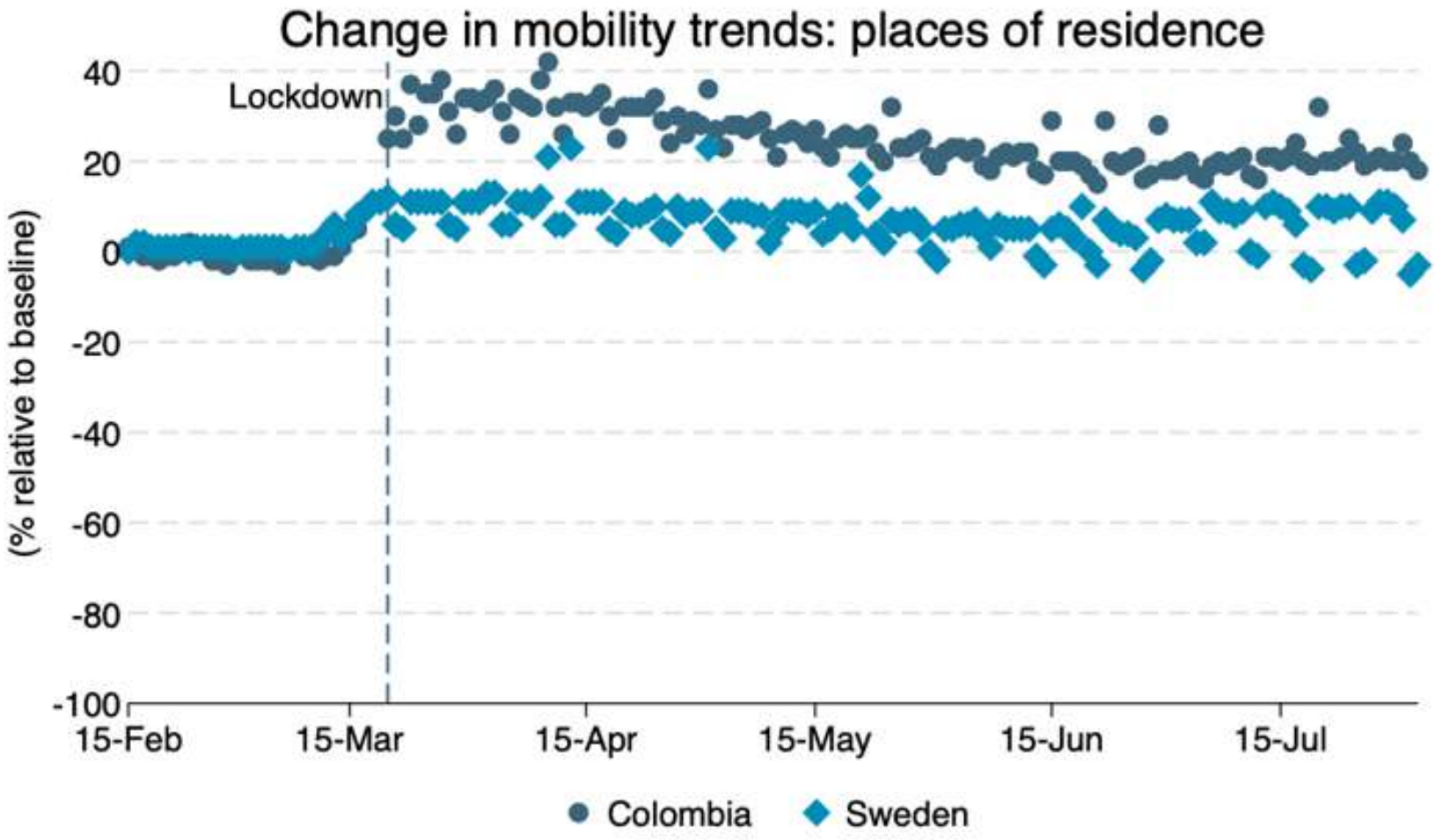
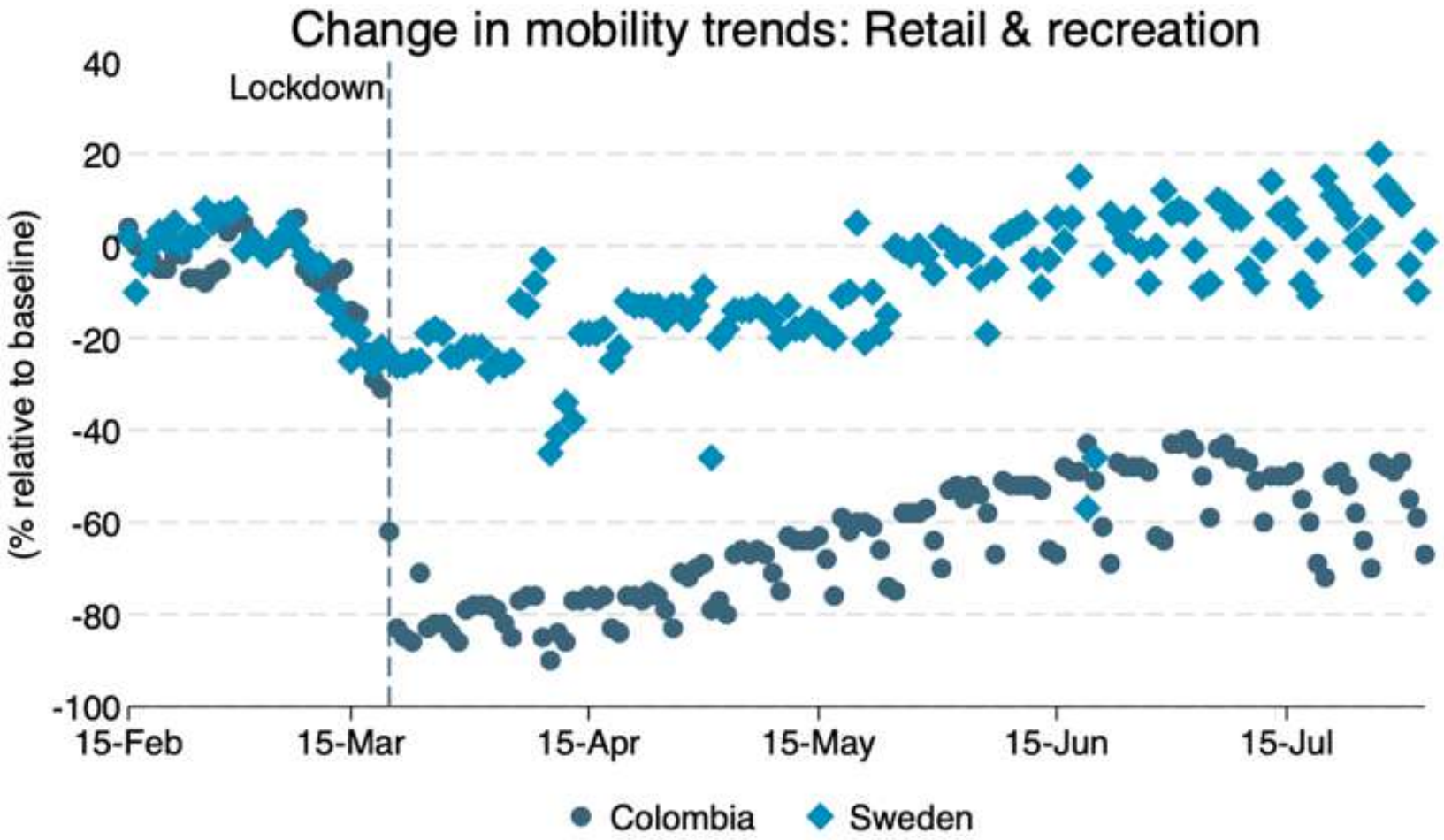
Mobility trends



Notes: Baseline is the median value, for the corresponding day of the week, between Jan 3–Feb 6, 2020.
Source: Google's COVID-19 Community Mobility Report

Alfaro, Becerra, and Eslava (2020)

Mobility trends



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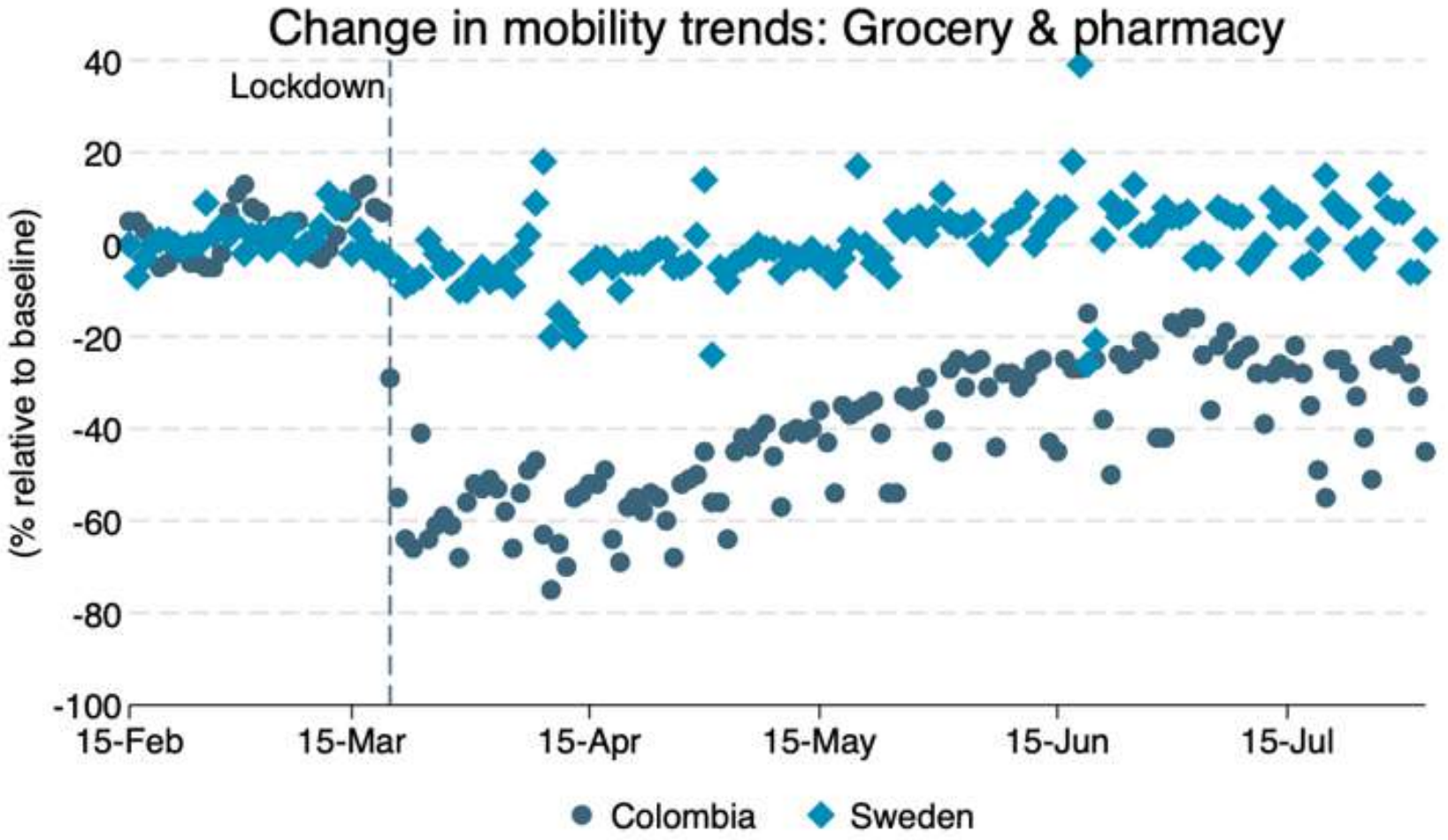

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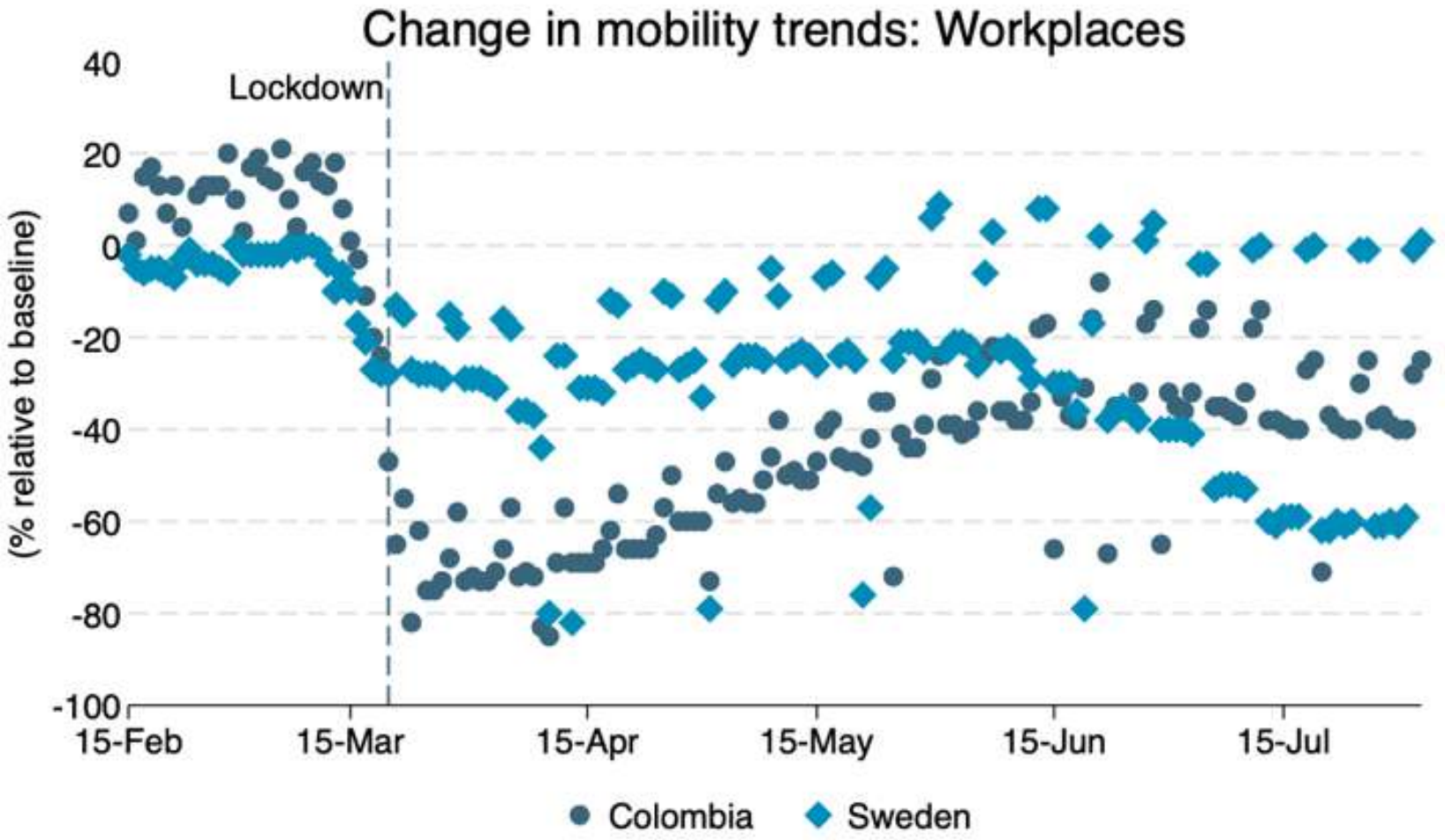

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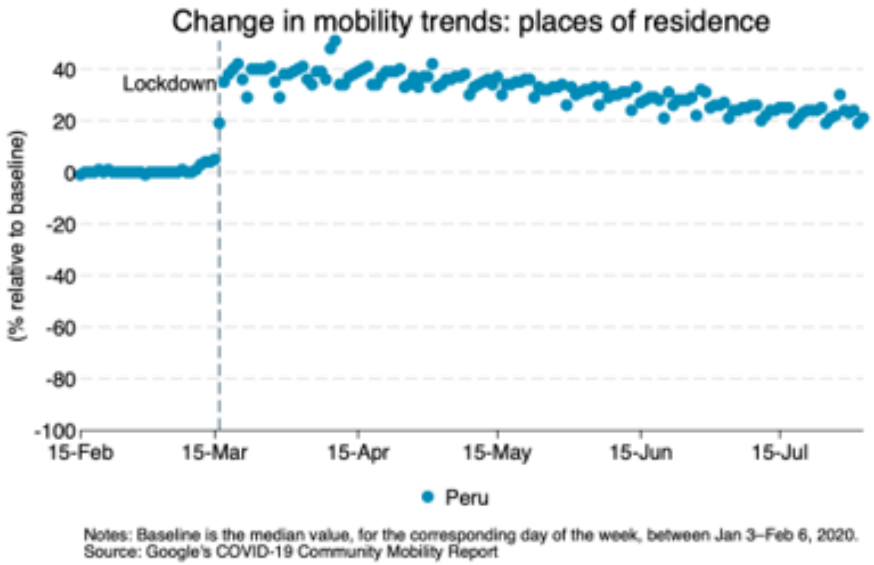
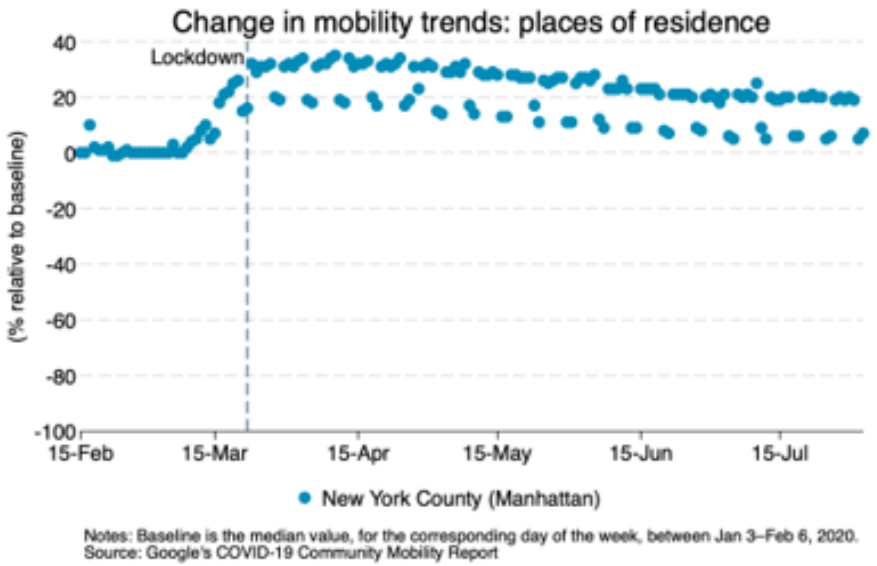
Mobility trends: Peru and Manhattan





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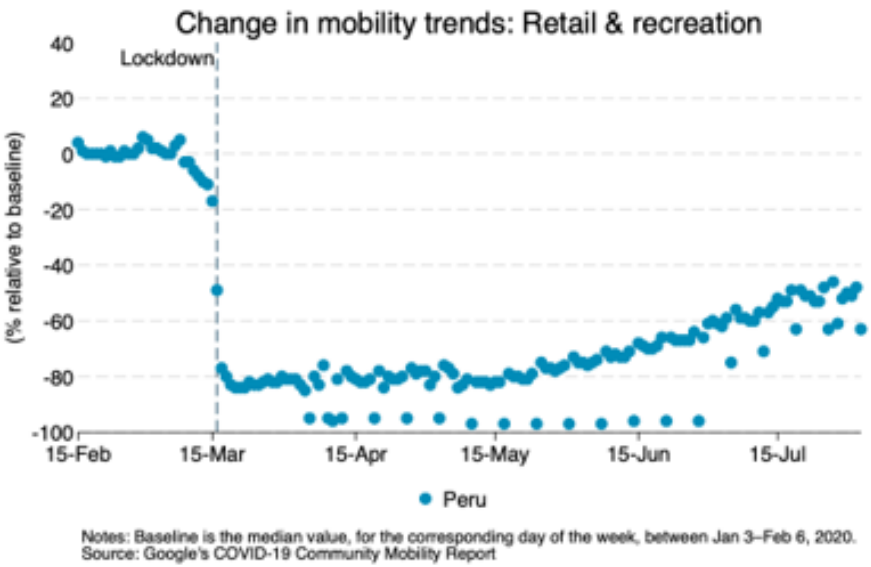
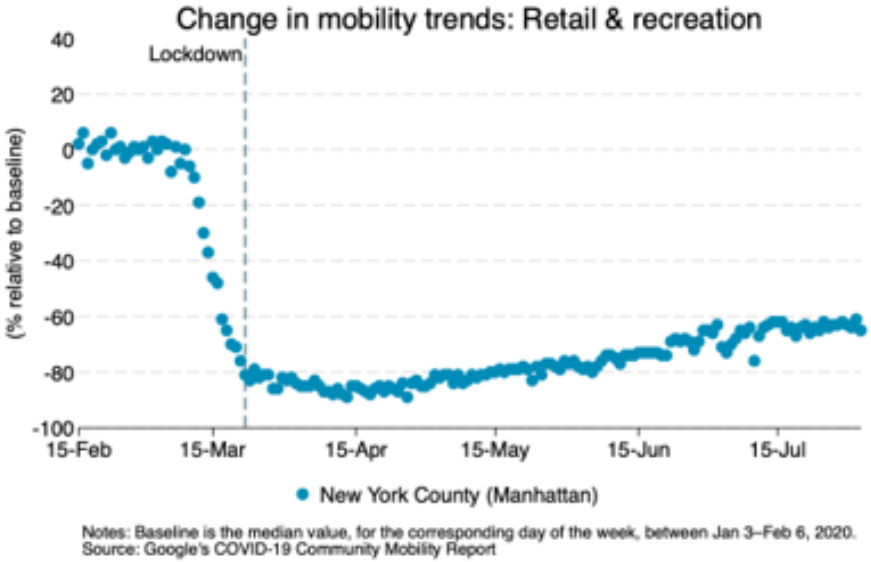
Mobility trends: Peru and Manhattan





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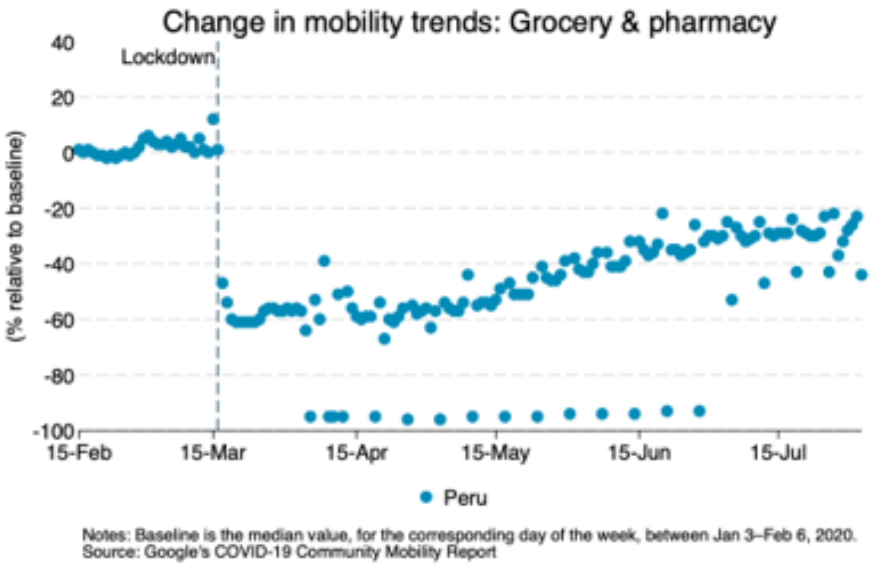

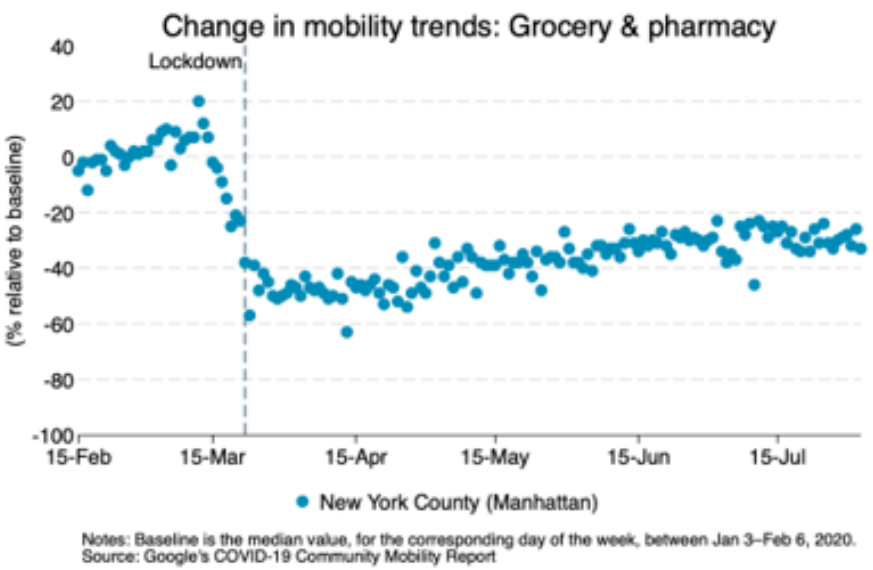

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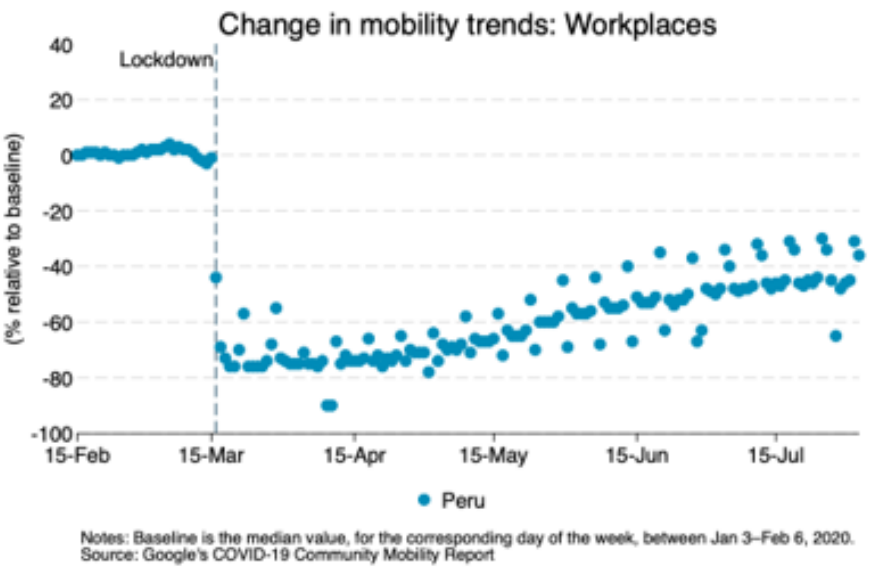

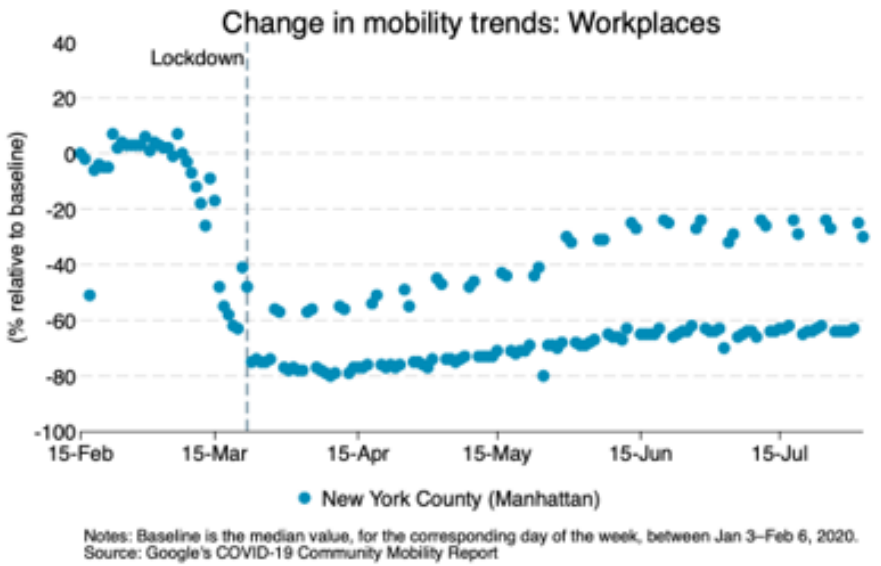

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