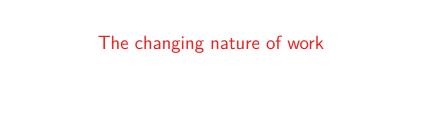
## Business Disruptions from Social Distancing

Miklós Koren Rita Pető

Published in PLoS ONE 15(9): e0239113. https://doi.org/10.1371/journal.pone.0239113

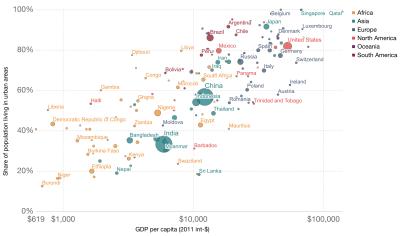


## City life is a key fact of developed economies

#### Urban population vs. GDP per capita, 2016



Share of the total population living in urban areas versus gross domestic product (GDP) per capita, measured in 2011 international-\$.



Source: OWID based on UN World Urbanization Prospects (2018), Maddison Project Database (2018) OurWorldInData.org/urbanization • CC BY

## Cities serve a very different function than 100 years ago

Michaels, Rauch, and Redding Task Specialization in U.S. Cities 1880–2000

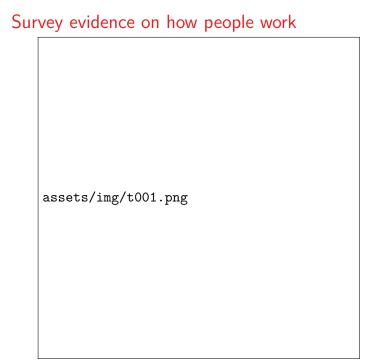
765

TABLE 2. Verbs most and least strongly correlated with metro area employment shares.

Rank	1880	1900	1920	1940	1960	1980	2000
Panel A:	Verbs most sti	rongly correla	ited with metr	o area emplo	yment share:	5	
1	Thread	Thread	File	File	Document	Identify	Develop
2	Stretch	Stitch	Distribute	Bill	Schedule	Document	Determine
3	Interfere	Telephone	Record	Take	File	Advise	Analyze
4	Hand	Sew	Notice	Compile	Record	Concern	Factor
5	Ravel	Hand	Telephone	Distribute	Distribute	Report	Review
6	Sew	Assist	Bill	Pay	Compile	Schedule	Confer
7	Braid	Visit	Envelope	Letter	Notice	Develop	Advise
8	Visit	Describe	Document	Notice	Identify	Analyze	Report
9	Receive	Number	Learn	Record	Send	Determine	Concern
10	Sack	Stamp	Number	Send	Notify	Notify	Plan

Figure 1: Most frequent verbs in job descriptions of urban workers (Michaels, Rauch and Redding 2019)

Communication and the division of labor							
a	ssets/img/fig1-eps-converted-to.pdf						





## Visits to retail and recreation places collapsed

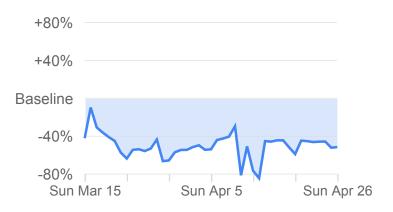


Figure 2: Data from Hungarian cell phone users (Google Mobility Report 2020)

## Many workplaces are shuttered



Figure 3: Data from Hungarian cell phone users (Google Mobility Report 2020)

## People are staying at home

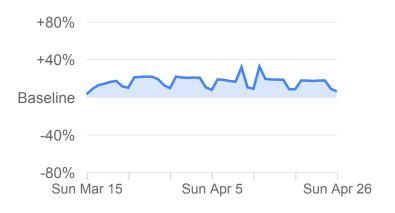


Figure 4: Data from Hungarian cell phone users (Google Mobility Report 2020)

Which jobs are most affected?

Important for economic subsidy, vaccination programs.

The most communication intensive sectors

## Many occupations rely heavily on face-to-face communication

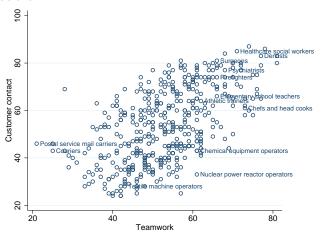


Figure 5: Teamwork refers to face-to-face communication with coworkers, Customer contact with customers (Koren and Pető 2020, based on U.S. data)

#### Face-to-face intensive industries have contracted the most

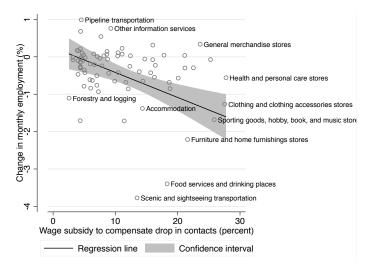


Figure 6: Employment change in March 2020 against compound measure of social-distancing cost (Koren and Pető 2020, based on U.S. data)

Job losses explained by fewer customer visits and communication intensity
assets/img/t003.png

Tax-equivalent losses are huge						
	assets/img/t004.png					

The year after

### The year after

What will be the long-run consequences? To speculate, we use

- The 2017 CEU-MTA Business Relations Survey.
- A mini survey of 2020 CEU MBA students.

## The CEU-MTA Business Relations Survey

CEU and MTA asked 1,200 Hungarian, Slovakian and Romanian manufacturing firms about relationships with their key buyers and suppliers.

## Meetings are important for joint innovation

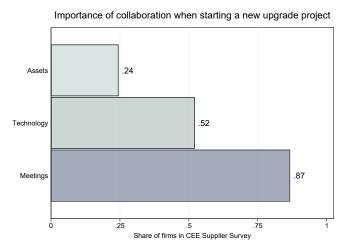


Figure 7: A third of firms collaborated with their key customer in order to improve their product (Békés, Koren, Muraközy and Telegdy 2019)

#### This collaboration remained after start

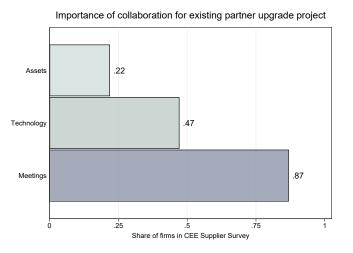


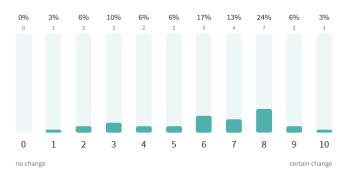
Figure 8: A quarter of firms collaborated with their key customer in order to improve their product (Békés, Koren, Muraközy and Telegdy 2019)

## Major business changes are expected

There is a lot of uncertainty about the post COVID-19 life. How likely will your business be different next year because of the crisis?

29 out of 29 answered

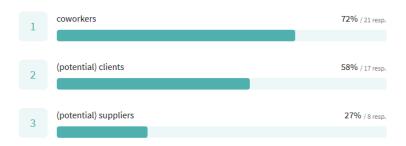
#### 6.0 Average rating



## Most meetings are with coworkers and clients

#### Do you travel to meet:

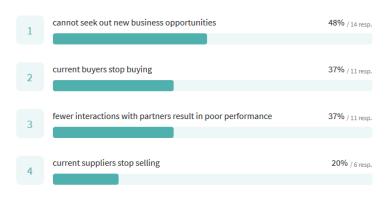
29 out of 29 answered



## Lack of new business opportunities is strongest risk

#### What do you see as the biggest risk for your business?

29 out of 29 answered



## Why are face-to-face meetings important for you work?

I work as a sales professional, where face-to-face interactions are key to build trustful relationships with my customers.

Face-to-face meetings ensure better quality of transferring strategic messages.

Non-verbal communication counts at least 30% of the total messages during meetings.

To build strong, lasting relationships.

# Can videoconferencing tools substitute for face-to-face meetings in your work?

We tried several times videoconferencing with customers, but not successfully. I doubt that we can switch to videoconferencing completely.

"Lack of client and staff interaction reduces quality of service  $\mbox{\ensuremath{^{\prime\prime}}}$ 

They can, up to certain level.

Yes, we already moved to video conferencing, no loss in productivity



#### Conclusion

- Face-to-face interaction is a key aspect of many jobs.
- In internal teamwork, working from home is a good alternative. But not for customer contact.
- Retail services suffer the most, in proportion to our predictions.

## Thank you

Connect on Twitter: - @korenmiklos