Patterns amidst the turmoil: COVID-19 and cities

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Introduction

What do we know for certain – if anything – about the impacts of COVID-19 on cities? As the virus continues to evolve, the implications for the future of cities evolve too.

COVID-19 raises new questions about the complex, underlying forces that drive urban growth. Much attention is focused on examining and projecting the urban implications of the pandemic (Acuto et al., 2020; Bailey et al., 2020; Batty, 2020; Florida et al., 2020; McGuirk et al., 2020; Nathan and Overman, 2020).

Not surprisingly, the experience of COVID-19 ties together globally connected yet physically disparate cities in distinct ways. On some level, the pandemic represents an acceleration of pre-existing urban conditions (Florida, 2020; Kleinman, 2020). By looking for patterns amidst the turmoil, we can divide the urban economic impacts of COVID-19 into four categories: spatial, sectoral, interconnected, and uneven. In this commentary, I expand upon this framework as a means of thinking strategically about the future of cities post-pandemic. I then address the urgent need for granular data from a range of sources in order to inform deeper examination and directed decision-making.

Spatial

Does the pandemic spell the end of cities? Many people started asking this question as cities around the world began to lock down, trying to stem transmission by minimizing in-person contact and enforcing physical distancing. Seemingly overnight, physical concentration and all its benefits – including urbanization and agglomeration economies, innovation spawned by serendipitous exchanges, talent and knowledge spillovers – became dangerous. If cities could not provide the advantages of clustering, would people and organizations choose to stay? Questions about the intra- and interurban impacts of the pandemic persist, partly because the long-term effects remain unknown. In the short term, evidence – both numeric and anecdotal – points to more movement away from the central city rather than towards it.
How can we measure this movement? Post office change-of-address forms, and cell phone tracking data, are sources of information, albeit imperfect, that track shifts within and between cities. In April 2020, the US post office received twice the usual number of mail-forwarding requests from New York City residents, with nearly two-thirds of these requests for addresses outside the city. According to analysis of cellphone data conducted between March and May 2020, approximately 5% of the city’s residents left (Quealy, 2020). Observers indicate that relocation from urban to suburban and exurban areas is consistent with, and an amplification of, customary household moves (Florida et al., 2020). Evidence from the Bay Area seems to confirm this observation: in a study of the destinations listed for those requesting a change of address, more than 40% of moves were within the city, while the top six destinations outside San Francisco were all located in the Bay Area (Dineen, 2021). Nevertheless, COVID-19 has accelerated – either temporarily or permanently – the movement of households away from some of the largest urban centres. Notably, however, we are also looking at an incomplete system since international migration, a key contributor to urban population growth in global cities, has been paused for the better part of a year.

Within cities, downtown business districts in particular have struggled to maintain their customary vibrancy during lockdowns and remote work. Estimates suggest that less than 15% of office workers in the central office districts in Toronto, New York, and San Francisco are physically working in office buildings (Leonard, 2020; SRRA Research, 2020). Althoff et al. (2020) explain part of this paradox: the biggest, most expensive cities in the US are home to the greatest number of workers who are most capable of working remotely. And conversely, cities with the greatest number of potentially remote jobs are most at risk of disruption during crises that precipitate remote work. Yet we cannot predict how long these changes will last. While tech firms such as Facebook and Shopify have pronounced the future of work as remote first and digital by default, their ongoing urban real estate investments suggest otherwise (Barber, 2021).

At present, indications are that even if office workers return, most will work from home at least some of the time. Many cities are now preparing for the possibility of permanent increases in downtown office vacancies. Some are considering the potential of repurposing office space for residential use – although this conversion is not a simple task.

In brief, the pandemic has singled out the urban core as a space of declining activity and occupancy.

**Sectoral**

At the outset, most people assumed that the pandemic would cause economic devastation. Globally, stock markets fell dramatically in February and March 2020, and observers predicted an economic recession. By year’s end, however, it was clear that this threat would not materialize. Yet after a year’s worth of economic challenges related to COVID-19, we can see that some sectors and occupations face great risk while others demonstrate resilience and growth.

COVID-19 lockdowns have resulted in substantive losses in travel, accommodation, retail services, and arts and culture. Theatres and concert venues have gone dark, airport passenger traffic and hotel occupancy rates have plummeted, and job prospects in these sectors are currently bleak.

Conversely, technology firms, financial services, food manufacturing and sellers, and consumer goods producers are experiencing stability and even growth. Alphabet, Amazon, and Apple have all seen their market valuations increase significantly over the past year, with each company now worth well in excess of $1 T.
In some thriving sectors, such as food manufacturing, warehousing, and delivery services, concerns for frontline workers abound. These businesses rely on low-wage workers in precarious jobs that cannot be done remotely, and we increasingly recognize that these employees face an unjust lack of social supports, such as a living wage and sick pay.

In retrospect, it makes sense that the impacts of COVID-19 are far from uniform. However, to build stronger cities, we need to understand these uneven repercussions for high- and low-growth sectors, and for remote and in-person labour.

Interconnected

The spatial and sectoral effects of COVID-19 not only reveal current issues but also portend dramatic spillover effects. The lack of office workers in central business districts amplifies the loss of activity for other downtown-based businesses and workers (George-Cosh, 2020; Haag and Rubinstein, 2020; Leonard, 2020). The loss of high-income office workers in business districts leads to job loss for lower income earners (Arieff, 2020), such as cleaners, restaurant staff, and salespeople.

Mobility patterns have also dramatically shifted during COVID-19, with fewer people commuting to work and greater fears of virus transmission in enclosed transit vehicles. During the pandemic, global cities have exhibited similar mobility patterns. All forms of mobility (driving, transit, and walking) declined considerably at the beginning of lockdowns. While driving and walking began to approach normal conditions when cities reopened, transit ridership – most notably subways – has remained well down. In London, subway ridership was only 41% of normal in October 2020 (Bosetti et al., 2020). In Toronto, it hovered at 32% of normal that same month (Toronto After the First Wave, 2021).

COVID-19 has upended the customary role of urbanization and agglomeration economies in cities. These forces usually bring together individuals and groups to support activity within and across spaces, sectors, firms, and institutions. Rather than witnessing the creation of such new connections, we are instead seeing these bonds unravel.

Uneven

Without doubt, the pandemic has exacerbated structural and systemic inequalities. In Canada, pandemic job losses have been greater for low-income earners than high-income earners, and racialized workers continue to experience higher levels of unemployment than non-racialized people (Statistics Canada, 2021).

Low-income and racialized individuals are more likely to work in jobs that do not lend themselves to remote work. They are also more likely to experience crowded living conditions and work environments where physical distancing is difficult. In New York City during the spring lockdowns, cellphone data indicates that wealth was a strong indicator of which neighbourhoods lost residential population and which ones remained stable. Similarly, race-based and income-based data collected in Toronto demonstrates that racialized and low-income individuals experienced a higher incidence of contracting COVID-19. This finding held true as both the first and second waves of the virus spread through the city (Yang et al., 2020).

Urban inequality is not new. However, by shining a light on how our cities contribute to systemic race-based and class-based discrimination, the pandemic provides an opportunity for renewed commitments, reflection, and action.
Data
As the earlier discussion has suggested and the pandemic has shown, we need fine-grained, real-time data more urgently than ever. In order to understand ongoing and often swift changes – declines in transit ridership and revenues, shifts in the number of people working in downtown office buildings, the movement of households in and out of urban areas, job losses and gains – access to timely and accurate data is essential. However, real-time data also presents a double-edged sword. On the one hand, knowledge is power. And on the other, and especially in an ongoing crisis, conclusions based on single datasets collected over brief time periods may not foreshadow the long view.

It is clear that government agencies do not collect, or have access to, the necessary data to accurately examine the scope and scale of challenges. Furthermore, data lags typically characterize the release of public information about population and labour force, for instance. These delays, often spanning months to a year or more, frustrate the need for rapid responses. To enhance understanding of impacts and to develop targeted policy responses, scholars and policymakers are exploring and leveraging non-governmental data sources. What’s needed are more – and better – tools for aggregating and analysing data from both public and private sources.

The pandemic has shown that we must remain open to non-traditional data sources. Early on, the sharing of mobility reports from Apple and Google helped to show dramatic mobility declines at the urban scale. At the same time, an urgent need for information does not negate the need for ethical use. As researchers gather big data to analyse urban issues, they must ensure these efforts are geared towards social good (Poom et al., 2020).

Conclusion
One year on, we know some things for certain. We know that an end to the pandemic is in sight. And we know that to respond to the spatial, sectoral, interconnected, and unequal impacts of the pandemic on cities, we need reliable, granular data. We must understand the shifts underway, and we must strategically plan and prepare for the urban future that we want.

If Arundhati Roy is correct, then COVID-19 ‘is a portal, a gateway between one world and the next’ (Roy, 2020). How can we leverage this knowledge to ensure that our post-pandemic urban future pushes cities towards truly better outcomes?

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