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The Impact of Changing Work Arrangements on the Fiscal Base of Urban Government: Prospects for Adaptation and Mitigation

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Abstract

The pandemic has brought about various changes, such as work-from-home or telecommuting, and an increase in online shopping for day-to-day necessities. These changes have had a sizeable impact on commercial real estate businesses and, to a varying degree, on the fiscal base of local governments, especially in large cities. As the world settles into the post-pandemic era, flexible working arrangements such as remote work, hybrid work, and telecommuting are expected to become the new normal. As a result, large and small corporates have been reviewing policies on remote working. Some of them have either dialled back their office expansion plans or have shown preference for premium office spaces. This move is expected to weigh on tax revenue collections from property rentals for cities. Also, revenue from transportation services and restaurant businesses would decline. Hence, local governments would have to redesign their fiscal policies and invest in new opportunities, such as creating recreational facilities and converting old office structures into residential buildings. This paper uses available literature, media references, and industry and government reports to identify the potential impact of changing work arrangements on the office market in Hong Kong, New York, and London. We further attempt to understand the impact of this transition on the fiscal base of cities and the actions that policymakers can take to mitigate and adapt to this new economic situation.

Keywords

Covid-19, work-from-home, remote working, telecommuting, fiscal policy, real estate

Introduction

The covid-19 pandemic ushered in several changes across multiple levels, changing how we live or look at life. Some say that covid-19 has only acted as a catalyst for what would eventually occur. One such change, a much-debated topic, is accepting the work-from-home model. At the onset of the pandemic, to maintain 'business as usual,' several companies (that could) switched to the work-from-home mode. Around March 2020, several offices globally suspended operations or switched to the work-from-home model, which had few takers in the pre-pandemic world (Choudhury, 2020). Three years into the pandemic, with employees demanding flexibility and better work-life balance, businesses have been changing their working arrangements, such as allowing work-from-home for a few days a week, remote jobs, and switching to coworking spaces (Alexander et al., 2020). Initially, the expectation was that post-pandemic, everything would go back to how it was before, i.e., how it was in the pre-pandemic world. It was expected that people would resume going to offices. However, during the pandemic, employees noted improved work-life balance, comfortable working environment, and savings in terms of cost and time from reduced travel (Waltower, 2023). The corporates, which were not initially enthusiastic about the work-from-home model, saw some improvement in productivity, happier employees, and lower operating costs (Choudhury, 2020; Alexander et al., 2020). Moreover, even though most of the world has removed its masks and reverted to the old ways, this new operating model is here to stay.

The question of whether the work-from-home model will be adopted as a permanent solution, which would lead to drastic changes in the operating models of companies and cities, is still being evaluated. Nevertheless, some changes are visible. Research has shown that the pandemic has imposed a sizeable change in the relative productivity of work-from-home, which has resulted in an increase in housing prices with a permanent impact on income inequality and city structure (Davis et al., 2021). Our understanding is that the impact of changing demand for commercial real estate has a subsequent bearing on an urban region's fiscal base or municipal revenues primarily dependent on revenue from properties/land. This paper reviews the existing literature on changing work arrangements to explore the impact of the increased use of the work-from-anywhere model on commercial real estate and its resulting impact on municipal revenues, and then proposes remedial measures for policymakers. For this purpose, we focus on Hong Kong, New York, and London on account of their high-value office properties, diversified workforce, and relevance in the global economy.

Background: Developments in Working Styles Across the Globe

In this section, we have summarized the existing literature available online pertaining to the subject of work from home or remote working, and its impact on the office market and fiscal base of urban governments, with a specific focus on those pertaining to Hong Kong, London, and New York.

Various authors have studied the impact of the widespread acceptance of remote working or work-from-home. These papers have focused on the increase in adoption of changing work models both pre-pandemic and post-pandemic, the difference in productivity from work-from-home, the technology boom and its consequences, the benefits of remote jobs, and the implications on corporate real estate among others. For instance, a study by Brynjolfsson et al. (2020) conducted a survey in two waves in 2020 to understand the response of employers and employees to the pandemic and resulting remote working arrangements in the United States. They found that half of those employed pre-pandemic were working from home. They also

highlighted that American states with a higher employment share in information and related occupations showed higher potential to shift towards remote working.

Galanti et al. (2021) investigated the impact of aspects such as family-work conflict, distractions, and job autonomy on the productivity, work engagement, and stress levels of work-from-home employees during the pandemic. Further, a study by Sanchez et al. (2021) explored the jobs that can be executed from home and the variance of work-from-home in countries with different socioeconomic statuses. A study by Davis et al. (2021) investigated the impact of work-from-home on increased technology usage and the related consequences. Vyas & Butakhieo (2021) found that interest in work-from-home remains, but better guidelines and policies from the government are needed to make it feasible.

While the authors do not expect this to be a permanent solution due to the lack of adequate policies, they believe that in the post-pandemic situation, there would be more flexibility in working options (Vyas & Butakhieo, 2021). A study by Wong et al. (2020) on the effectiveness of work-from-home in Hong Kong found that women and front-line and middle-grade workers preferred work-from-home after experiencing higher effectiveness. The work-from-home model allowed them to balance their work and life more effectively. Through an online survey, the authors found that female workers preferred to work from home at least twice per week. Further, men preferred the work-from-home option once every week. Also, front-line and middle-grade workers preferred remote working more than management (Wong et al., 2020). Similarly, Brynjolfsson et al. (2020) found that younger individuals were more likely to transition to a remote work model compared to their older peers. Kylili et al. (2020) studied the involvement of remote working models in resolving challenges pertaining to energy and the environment in the transition of European cities to smart energy regions.

Another observation is that the existing studies have primarily focused on identifying the changes in urban regions due to increasing remote jobs and their impact on residential real estate. However, only a few have considered the impact of these changes on commercial real estate and the fiscal revenues of municipal units. The papers about Hong Kong have primarily focused on the impact of work-from-home on work-life balance, reduction in vehicle emissions, technology changes, and related challenges. They do not explore the impact of the changing work arrangements on Hong Kong's real estate and its municipal revenues.

Few academic papers have looked at New York and London. Althoff et al. (2022) studied the implications of the increasing adoption of remote work on the consumer services industry in the United States. They believed that if business services continued to adopt remote work options and left the big cities to work from elsewhere, it would pose a risk to consumer services' workers who depend on the revenue from these businesses. Funderburg et al. (2023) studied the impact of increasing work-from-home arrangements as a response to the pandemic on the local government revenues in Illinois, United States. The authors found that the increasing adoption of work-from-home arrangements may lead to a significant decline in commercial and industrial property values. This decline in property values could result in a substantial loss in tax revenues (Funderburg et al., 2023).

Hence, this paper aims to fill this gap and specifically examines the impact of changing work arrangements due to the pandemic on the demand for office space, the shrinking rentals and, consequently, municipal revenues, with specific focus on Hong Kong, New York, and London.

Methodology and Data Collection

Research Method

The main objective of this paper is to identify the impact of the changes in working arrangements on the fiscal governments of urban areas. For this purpose, this study applies qualitative analysis of available secondary data and academic papers on these issues. Our research methodology focused on a thorough literature review of relevant academic papers, media articles, and data from government agencies and industry bodies. The initial review of relevant academic papers formed the basis for understanding the existing knowledge on the subject. Following this, we conducted a review of media articles and other verifiable online information to gather insights into the varied dimensions of changing working arrangements and their subsequent fiscal implications on the cities.

The academic papers for the literature review were selected based on their relevance to the subject and timeliness. We also ensured to select credible media articles that explore diverse perspectives of key stakeholders, including government agencies, employers, employees and real estate agencies. We prioritized publications that highlight or discuss the impact of changing work arrangements in the target regions, including Hong Kong, New York, and London. We systematically sought to identify pertinent literature using electronic databases such as JSTOR and Google Scholar to retrieve academic papers. We also explored reputable news websites, government reports, and industry reports to identify relevant information. The search terms included “flexible work,” “remote work,” “telecommuting,” “work from home” and “hybrid work model” in combination with regions, “fiscal policy,” “office market,” and “economic impact”, among others. The information thus collected aimed to provide a holistic view of the subject from diverse perspectives.

Considerations for Selection of Urban Regions

For the study of the impact of changing work arrangements on fiscal governments, we have narrowed our focus to Hong Kong, London, and New York. This section explains the strategic considerations for the selection of these regions. According to Thai (2023) and Westgard (2018), Hong Kong, New York, and London are ranked among the world’s most expensive office markets. Furthermore, all three regions are referred to as prominent global financial centers given their economic significance and diverse workforces. As a result, these cities attract a skilled and global talent pool.

In addition, the three cities differ in aspects such as urban density and infrastructure. The diversified workforce, different infrastructure, and varied economic structures of these regions provide a comprehensive understanding of potential implications and resulting responses. Because of these factors, the three regions are relevant in assessing the impact of the changing work environment and related policies on office market demand and subsequent implications on the fiscal base of urban governments. To summarize, we selected Hong Kong, London, and New York based on their global presence, workforce diversity, and office market value to study the implications of changing work arrangements on the fiscal base of the urban governments.

Changes in Work Arrangements Expedited by the Pandemic

In this section, we initially explore the trend of global telecommuting and work-from-home before the pandemic. Following this, we look at the impact of the pandemic and related changes on work trends in Hong Kong and global cities in the United States and Europe and the responses of corporates to flexible working arrangements or a hybrid work-from-home model

during the pandemic. Subsequently, we attempt to address the gap in research by analysing the impact of changing demand for commercial real estate on the municipal revenues of Hong Kong and propose remedial measures for policymakers.

Pre-covid Trend in Global Workplace Locations

Even pre-pandemic, some companies were experimenting with the notion of work-from-home or remote working. Flexibility at work has become a determining factor for job satisfaction and performance (Grant et al., 2019). The work-from-home approach typically requires an employee to live within the same region or city where the office is situated. At the same time, the remote working concept allows the employee to be based anywhere within the country or even in another country. While the advancement of technology has allowed these concepts to be implemented by certain companies, it has been on a case-by-case basis and only in select professions.

The idea of telecommuting dates back to the 1960s as a measure to tackle automobile travel and traffic congestion, thereby reducing energy use and improving air quality (NAE, 1969; Nilles et al., 1976). Since then, researchers have conducted studies to identify the impacts or benefits of remote working or work-from-home. These studies have found that work-from-home leads to higher productivity and lower costs. Olson (1983) surveyed 32 employees who worked from home to examine their behavioural, organizational, and social issues. The study found that these remote workers had more individual control over their work pace. Another study, based on a randomized experiment involving around 250 workers of a call center in Shanghai, China, found that work-from-home led to a 13% increase in performance because of fewer interruptions and a quieter, more comfortable working environment (Bloom et al., 2013). Choudhury et al. (2019) also found that allowing employees to work from anywhere resulted in an output increase of 4.4-5%. In terms of other impacts of telecommuting on transportation and housing, a study by Zhu and Guo (2022) identified more complex trip-chaining patterns due to the shift to telecommuting, resulting in a potential reduction in total daily travel demand. As telecommuting becomes more popular in the post-pandemic era, complex trip-chaining could become another persistent feature of future travel preferences. More recently, Zhu, Guo, and Maghelal (2023) analyzed the 2009 and 2017 U.S. National Household Travel Surveys data and found that households with telecommuters are more inclined to own houses compared to their counterparts. They are also more likely to live in detached houses or duplexes. This study has provided important insights into the fast-evolving post-pandemic housing markets as telecommuting continues to influence people's housing preferences.

Several organizations have acknowledged certain benefits of telecommuting and voluntarily offered remote working options to those employees whose work could be done from anywhere, be it at home, in nearby cafes, or in a different region. Data from the National Household Travel Surveys (NHTS) shows increasing telecommuters over the last two decades. While in 2001, those respondents telecommuting at least four times a month stood at 4.6%, this percentage had increased to 7.6% by 2017. Additionally, around 8.3% of workers telecommuted at least once a month in 2001. This percentage increased to 8.8% in 2009 and 13.3% in 2017 (Zhu, 2011; Zhu, 2012; Zhu, 2013; Zhu & Guo, 2022). Studies also show an upward trajectory for preference to work from home in the United States, where the percentage of individuals working from home stood at 24.1% in 2015 compared to 19.6% in 2003 (BLS, 2016). A similar trend can be seen across Europe. For instance, in Sweden, the share of individuals favouring work-from-home (at least partially) increased to 19.7% in 2012 from 5.9% in 1999 (Vilhelmsen & Thulin, 2016). In the United Kingdom, around 4.7% of working people switched to remote

working the year before the lockdown, a sizeable increase from the 1.5% reported in 1981 (Felstead & Reuschke, 2020).

Though various corporates had previously tested the remote working model, its application to densely populated regions such as Hong Kong seemed impractical. Hong Kong has long struggled to meet the housing needs of its growing population. It has been known to need help with housing issues, with the average living space per person being around 215-237 square feet (HK Development Bureau, 2021). Hence, it became essential for workers throughout Hong Kong to be physically present in the office, as their living conditions made it challenging for them to work from home.

Pandemic-influenced Response to Flexible Working Arrangement During Covid-19

The pandemic brought sizeable challenges to the working environment of various corporates. In 2020, with governments globally requiring people to stay home as a response to the pandemic, companies were inadvertently forced to accept work-from-home, and with it, innovative methods of staying connected. One of the first major organizations to make this move was Facebook. In April 2021, Facebook announced that its employees could work from home permanently, given the continued stress of operating during the pandemic. Its founder, Mark Zuckerberg, had also stated that Facebook was considering a 'work-from-anywhere' policy and that around 50% of Facebook's employees could work remotely within ten years (Lerman & Dwoskin, 2020).

More and more employees prefer to continue with the work-from-home or remote working model. They now request greater flexibility or the adoption of a hybrid model (a mix of in-office and remote workers). Even as employers contemplate flexible working arrangements in their working style, governments have designed relevant policies. Pugh and Cohen (2022) believe that the global shift toward remote working is "likely irreversible" and that supportive legislation will soon follow. For instance, the Netherlands became the first country to consider making remote working a legal right. In July 2022, a bill stating that employers must consider remote working requests from workers was approved by the lower house of the Dutch parliament and now awaits the Senate's nod (The Business Standard, 2022).

In recent times, there seems to be a growing acceptance of this new model (Zhu et al., 2023). Various studies conducted in the last three years comment on the changes in productivity and workload of employees on account of remote working (Wu & Chen, 2020; Galanti et al., 2021). The reason for accepting flexible work arrangements, such as remote work or work-from-home, is that a sizeable portion of jobs across industries, such as knowledge workers, technicians, and some other portfolios, have become non-analogue in nature. According to Sanchez et al. (2021), of every five jobs, at least one can be performed from home. In Hong Kong, more than 88% of the workforce is employed in the services industry, according to the Census and Statistics Department data (2023).

Further, during the past two years, companies have realized that it can be cheaper and more productive to allow some of the workforce to be flexible in terms of location and time. A series of virtual options, such as Zoom and Microsoft Teams, have replaced the initial need for in-person connection or discussion. Also, the data collected in the last three years of the work-from-home trial shows that remote work can be more productive (Swisher, 2021). Based on this data, more innovative work solutions could be designed and customized to meet the needs of corporates.

While work-from-home trends during the pandemic show an upward trajectory, the question of post-pandemic trends remains. Aksoy et al. (2022) found that, on average, employers from different countries will gradually adopt the work-from-home model and plan 0.7 days of remote working per week. Specifically, they expect Greece, Serbia, and Taiwan to switch to 0.3 days of work-from-home per week, South Korea and Ukraine to 0.4, and Australia to 1.0. Nevertheless, employees showed a preference for higher levels of work-from-home options post-pandemic, averaging 1.7 work-from-home days per week. The conditional mean value for desired work-from-home days at the country level at the low end ranged from 1.1 to 1.3 for China, South Korea, France, and Taiwan. At the high end, the mean value was around 2.1 for the United States, around 2.2 for Canada, and 2.3 for Brazil and Singapore (Aksoy et al., 2022).

Similar to other regions, Hong Kong has adopted telecommuting as a solution to social distancing measures. In 2020, Hong Kong implemented norms for special working arrangements for the government staff and encouraged corporates and private organizations in the region to undertake similar measures (HK Government, 2020a, 2020b, 2020c, 2020d, and 2020e). As one of the social distancing measures, in January 2020, the Hong Kong government asked 176,000 civil servants to work from home (Tsang & Yau, 2020). Simultaneously, various corporates have also implemented similar work-from-home arrangements. According to its Environmental, Social and Governance (ESG) Report 2021, Hang Seng Bank has established a formal policy to allow flexible working arrangements. Depending on the nature of the job, business requirements, and employees' preferences, workers could work from home one to four days per week (Hang Seng Bank, 2021).

A survey conducted two years ago by an independent research agency, Censuswide, found that the pandemic was a catalyst for Hong Kong businesses to accelerate their digital transformation plans (HK Business, 2021). Around 67% of the businesses in Hong Kong had adopted remote working, and around 82% intended to continue the practice post-pandemic. Businesses in Hong Kong noted that remote working had improved employee productivity and business continuity since the pandemic ended (HK Business, 2021).

Compared to other regions, Hong Kong appears to be more interested in flexible working arrangements rather than a permanent work-from-home solution. A study by Zhu and Li (2023) conducted a demographically representative survey of households in Hong Kong to understand the behavioural patterns pre-pandemic, during, and post-pandemic. Based on the data collected through the survey, we studied the work-from-home trends in Hong Kong. Respondents, who were employed between June and September 2022, were asked about aspects such as telecommuting and online meetings. While work-from-home may not be accepted as a permanent solution in Hong Kong, businesses must consider flexible work schedules. The proportion of respondents telecommuting increased during the pandemic, but almost reverted to pre-pandemic levels. During the normalization period, the proportion of respondents working from home at least once a week or thrice a week was only marginally higher than pre-pandemic levels.

In comparison, the proportion of respondents who participated in online meetings was significantly higher during the normalization period than during the pre-pandemic duration. According to the survey data, before the pandemic, nearly 39% of respondents had at least the possibility to work from home. This percentage increased slightly to over 61% during the fifth wave from February to April 2022. However, during the normalization period from June to September 2022, it almost reverted to pre-pandemic levels and was a bit above 40%. We noticed a similar trajectory for work-from-home at least once a week and at least thrice a week (as

detailed in Table 1 below).

Table 1. Summary Statistics on preferences of work-from-home and online meetings

Option	Pre-pandemic (Second half of 2019)	First wave (February to April 2020)	Fifth wave (February to April 2022)	Period of normalization (June to September 2022)
Number of observations	2251	2127	2060	2131
At least have the option to work-from-home	38.83%	57.36%	61.60%	40.36%
Work-from-home at least once per week	27.90%	53.50%	56.50%	28.86%
Work-from-home thrice per week	12.75%	29-90%	37.09%	14.83%
Have an online meeting at least once a week	27.32%	44.76%	49.66%	39.04%
Have an online meeting thrice a week	10.71%	19.32%	25.10%	17.13%

Source: Zhu and Li (2023)

In contrast, as shown in Table 1, the proportion of respondents who had online meetings at least once a week or thrice a week was significantly higher during the normalization period compared to pre-pandemic. During the pre-pandemic period (i.e., the second half of 2019), 27.32% of respondents had online meetings at least once a week. This percentage increased during the pandemic, when a sizeable portion of employees was working from home. The proportion of respondents participating in online meetings at least once a week increased to 44.76% during the first wave of the pandemic and to 49.66% during the fifth wave. Similarly, 10.71% of respondents reported participating in online meetings thrice a week pre-pandemic, 19.32% during the first wave of the pandemic, and around 25.10% during the fifth wave. During the normalization period, around 39.04% of respondents still participated in online meetings at least once a week, while 17.13% had online meetings at least thrice a week.

The study also found that women were more inclined towards work-from-home than men during the pandemic. In the pre-pandemic period, while 38.56% of female respondents had the option to work from home, the percentage of male respondents who had this option was slightly higher at 39.09%. During the pandemic, however, more women worked from home.

This difference is more pronounced for the option of working from home thrice per week. Pre-pandemic, around 13.52% of female respondents worked from home thrice a week against 12.01% of male respondents. During the fifth wave of the pandemic, around 41.06% female respondents worked from home thrice a week against 33.37% of male respondents. However,

this percentage drastically declined during the normalization period, with 14.41% of female respondents against 15.23% of male respondents working from home thrice a week. Nevertheless, during the normalization period from June to September 2022, the proportion of both genders – women and men – working from home at least thrice a week was higher than the pre-pandemic levels (as shown in Table 2). The study also shows that men were more likely to conduct online meetings at least thrice a week.

Table 2. Summary Statistics on preferences of work-from-home and online meetings in terms of gender

Option	Pre-pandemic (Second half of 2019)		First wave (February to April 2020)		Fifth wave (February to April 2022)		Period of normalization (June to September 2022)	
Income	Female	Male	Female	Male	Female	Male	Female	Male
Number of observations	1110	1141	1038	1089	996	1064	1041	1090
At least have the work-from-home option	38.56%	39.09%	58.09%	56.66%	64.16%	59.21%	39.96%	40.73%
Work-from-home at least once per week	27.84%	27.96%	54.43%	52.62%	59.94%	53.29%	27.47%	30.28%
Work-from-home thrice a week	13.52%	12.01%	32.46%	27.45%	41.06%	33.37%	14.41%	15.23%
Have an online meeting at least once a week	25.95%	28.66%	44.61%	44.90%	51.20%	48.21%	38.33%	39.72%
Have an online meeting thrice a week	9.64%	10.69%	19.65%	19.01%	25%	25.19%	15.76%	18.44%

Source: Zhu and Li (2023)

Impact of Changing Work Trends on Real Estate and Fiscal Revenues

Impact On the Commercial Real Estate Market

The impact of advances in information and communications technologies on real estate has already been well documented by examining the impact of e-commerce on retail real estate. Due to cost-effectiveness, low prices, convenience and ease of access, online shopping has gradually replaced shopping at the stores (Weltevreden & Rietbergen, 2007). According to Zhang, Zhu, and Ye (2016), given the low cost of operating internet, online shopping platforms offer more competitive prices than brick-and-mortar stores. Their study, which examined e-commerce impact on China's commercial real estate, found an "obvious relation" between e-commerce and the demand for commercial real estate. Traditional brick-and-mortar formats, such as departmental stores, appeared to be more affected than modern shopping complexes. An oversupply of traditional retail stores and higher vacancy rates resulted in the closure of some of these stores or their conversion to other uses. A similar trend of pushing out the old and creating new operating methods can now be seen in the corporate space.

Commercial real estate, which had already taken a hit from rising e-commerce activities globally, suffered another blow during the pandemic as more people switched to online options for regular activities such as grocery shopping, medical consultations, banking, schooling, and work. Real estate properties in the hospitality sector such as hotels and restaurants were also negatively affected following the policy measures to curtail covid. Nevertheless, the impact would be short-lived as regular activities such as shopping, tourism, and others would resume once the world reopened. However, this revival may not extend to office spaces. Remote work or hybrid working models have disrupted the commercial office real estate space (Gupta et al., 2022). As companies gradually inch towards telecommuting or remote working, the demand for commercial office spaces is decreasing. Some corporates may maintain an office space only for meetings and data storage.

So, what does the increase in flexible working arrangements mean for the office real estate market? According to Aksoy et al. (2022), "the scope for positive agglomeration spillovers in *virtual space* is expanding, even as the shift to WFH (work-from-home) diminishes agglomeration spillovers in *physical space*." The increasing adoption of flexible working arrangements, such as the work-from-home model, allows individuals to move out of cities to neighbouring towns or regions. A study by Delventhal et al. (2022) explored the potential changes in the Los Angeles metropolitan area following an increase in the work-from-home trend. The study found that while jobs moved closer to the city core, residents moved towards the periphery. This change has resulted in an ease in traffic congestion and decreased travel times. Further, the average price of real estate properties also declined as property costs of core locations fell and those of the periphery rose. Delventhal et al. (2022) also found that remote or telecommuting workers benefited in terms of time and cost savings from reduced travel and relocation to more affordable neighbourhoods. Hoesli & Malle (2022) found that the effectiveness of work-from-home policies has led to price decreases in office markets. This has raised concern over the future demand for office space and rental levels. However, the authors believe that it is difficult to estimate the lasting impact on the real estate market, as it remains unclear to what extent, and how quickly, work-from-home policies and business travel will evolve in the years ahead.

While it is too early to quantify the exact impact of this shift across the globe, we are already seeing a trend of people moving out of cities. From the onset of the pandemic in 2020 to 2021, around 68% of "urban counties" – cities with at least 250,000 people – saw a decline in population globally (Ozimek & O'Brian, 2022). Remote work has been cited as one of the factors driv-

ing outmigration as the pressure to live closer to work has reduced. Ramani and Bloom (2021), who studied the effect of COVID-19 on migration patterns in large cities in the United States, highlighted the 'donut effect' – an evolving trend of households, businesses, and demand for real estate moving away from dense central business districts towards low-density suburbs. As people opt to work from home or take advantage of remote working options and relocate out of urban areas, there is a direct impact on 'the commercial real estate sector in some cities, which has seen a decline in demand. The shift to telecommuting is expected to continue to weigh on the demand for office space and associated parking space. Additionally, restaurants and cafes that depend on officegoers as their primary clientele are also likely to be affected (Salon et al., 2021).

The trend of increasing remote jobs and falling demand for commercial real estate can be witnessed in various parts of the world. In our assessment, the extent of the impact varies across regions depending on population density, technology adoption, housing facilities and the characteristics of the job market. Specifically, this section looks at Hong Kong, New York City (hereafter referred to as New York), and London to understand the impact. According to CBRE (2022), a global real estate company, most employers in the United States support a flexible or hybrid work model. This change will negatively weigh on the overall demand for corporate real estate or office space. Specifically, cities such as New York, which are home to large business districts, have "more riding" on officegoers returning to work than any other city in the United States (Crain's New York Business, 2022).

As people prefer to stay at home to work, there has been a fall in the demand for corporate space in the United States, especially in New York. In December 2021, corporate job postings for work-from-home positions increased to 10.6% of all available openings – i.e., around 25,800 jobs out of 243,000 openings that allowed work-from-home. In comparison, the remote job offerings in early 2020 were around 4%. Also, some studies by job-tracking firms predict that by 2025, as many as 41 million Americans will be working from home or remotely (Campanile, 2022).

The new normal has allowed corporates to reassess their demand for workspace, and the leading global investment bank, J.P. Morgan Chase & Co, has jumped at this opportunity. JP Morgan Chase & Co. is considering a model in which employees alternate between working remotely and in the office. The company is the largest tenant in New York (TRD, 2022). It is also considering leasing some of its office space in New York as part of its transition to a hybrid working model (Elstein & Sachmechi, 2022; TRD, 2022). In 2022, JP Morgan reduced the size of its New York office by 22% to 6.8 million square feet. (Elstein, 2023; TRD, 2023). It had earlier leased 8.7 million square feet in New York (TRD, 2022). The major American media organization – Spotify – which has a 16-story headquarters in New York's World Trade Center, has allowed its employees to work from anywhere, including home or another state in the United States. Similarly, advertising technology company MediaMath, which also leases office space in the iconic World Trade Center, is considering vacating its space and permanently allowing work-from-home (Zaveri, 2021).

Data from CBRE, a global commercial real estate firm, shows that the office availability rate in Midtown Manhattan, i.e., vacant or soon-to-be vacant commercial space, increased to 19.2% from 18.7% in December 2021 (CBRE, 2023). A study conducted by Gupta et al. (2022) found that the United States saw a \$506.3 billion decline in office property values between the end of 2019 and 2022. Specifically, during this period, the office values for New York recorded dropped by \$ 69.6 billion.

Even though commercial space owners have been offering concessions on the lease, the value of office space is not expected to return to pre-pandemic levels. The other side-effect is the drop in earnings of small businesses within the vicinity of office areas that are reliant on daily office-goers. The value of commercial properties in New York was estimated to be around US\$301 billion for the fiscal year 2022-2023. This estimation predicts a fall of around 8.3% in the value of commercial properties from pre-pandemic levels – when it was around US\$326 billion (Zilberman, 2022). Gupta et al. (2022) estimate a significant reduction in the value of office stock in New York at the outset of the pandemic. The value of office stock in New York is expected to drop nearly US\$50 billion by 2029 from pre-pandemic levels, due to remote work (Gupta et al., 2023; Kane, 2022; Vinopal, 2022).

Similarly, in London, the patterns of office space usage have undergone several changes with the increasing demand for flexibility to work from home. As employees refuse to return to the office, employers in London are considering continuing the work-from-home option. A survey conducted by Bloomberg Intelligence showed that 76% of respondents would look for alternative opportunities to secure hybrid or fully remote work arrangements if forced to return to the office (Bouzid & Munden, 2022). While COVID-19 restrictions have been largely eased in the United Kingdom, only 23% of workers had returned to the office as of November 2021 (Hammond, 2021).

The changes in demand for commercial real estate, primarily office space, on account of the gradual acceptance of the new normal and the transition to the work-from-home mode of operating are also being witnessed in Hong Kong. As flexible working arrangements are adopted by several companies in Hong Kong, concerns over the demand for office space and its rental levels have been prevalent. While the impact on the office market may have been lower than that on retail properties and hotels, the decrease in the price level of office space has been higher than the latter due to the increasing work-from-home trend. According to Microsoft's Work Trend Index report, around 65% of corporate leaders in Hong Kong planned to redesign their corporate spaces in a bid to accommodate a flexible arrangement where both work-from-home and in-office arrangements would be adopted (Lam, 2021). As a result, the report highlighted the "precariousness" of Hong Kong's commercial property market. In 2021, some multinationals reconsidered their office designs, with a few surrendering their office space in light of employees working from home. The demand for office space in Hong Kong is expected to decline as companies continue to offer flexible working arrangements (Lam, 2021).

For Hong Kong, multiple factors have changed the demand for office space. The pandemic-related challenges, geopolitical tensions, and uncertain economic conditions have prompted companies to undertake cost reduction measures (HK Property Review, 2023). As companies have already made specific changes, such as adopting digital technologies to allow for work-from-home or flexible working arrangements, it is easier for them to continue these measures rather than to invest in office space to save costs. Businesses have been reconsidering their need for large office spaces and exploring the potential for a hybrid or more flexible work model. A review of the Hong Kong property market for 2022 noted that the overall vacancy rate of office space in Hong Kong was at the highest since 1998 at 14.4% (HK Property Review, 2023). In addition, a decline in commercial property rentals, partially due to the changes arising from the transition to a hybrid working model, resulted in companies considering moving out of high-rental properties to cheaper and smaller properties with better amenities. In a bid to reduce costs, companies in Hong Kong have chosen to decentralize and downsize (The Economist, 2022; Knight Frank, 2021).

While the demand for office space in Hong Kong appears to be on the rise, as evidenced by increasing rental enquiries, this has been primarily for small and medium-sized office space. Some businesses have moved to coworking spaces to increase flexibility (Lam, 2023). As a result, the rentals for grade-A office space in Central Hong Kong have been dropping. At the end of the first quarter of 2021, rental rates saw a cumulative drop of 29.8% (Knight, 2021). Moreover, grade-A offices in all sub-districts in Hong Kong have recorded double-digit vacancy rates (HK Property Review, 2023).

Given the decline in demand for office space and changing market trends, multiple companies have taken advantage of the favourable tenant market to consolidate and upgrade their office space (Lam, 2023). In 2023, Canada Pension Plan Investment Board leased two floors in The Henderson, a commercial building with innovative and state-of-the-art sustainability features. This move consolidated their office space at York House (Lam, 2023 and The Standard, 2023). Similarly, in a move to consolidate its headquarters in Asia Pacific, Carlyle Group Inc. is relocating to The Henderson from its previous offices (The Standard, 2023 and Laothamatas, 2022). Another factor has been the increasing focus on improving connectivity between Hong Kong and Mainland China (Chia, 2022). UBS Group AG is expected to relocate in 2026 to a commercial building above the high-speed rail West Kowloon station to improve its employee's productivity and connectivity to the Greater Bay Area (Chia, 2022). The work-from-home trend is expected to be a long-term negative factor to the Hong Kong office sector as foreign enterprises will continue to implement it (Lam, 2022).

However, some experts do not expect a significant impact from this changing trend on commercial real estate. Some believe that working from home will be a temporary measure and that employees will return to the office once the situation has improved. Steve Cuozzo, a real estate expert from New York, believes that determining what will happen to the office space in New York is a complex question (Cuozzo, 2022). The extent of the impact is still being thoroughly analyzed, given that the leases signed in early 2020 are yet to come up for renewal. On average, a long-term lease for office space is signed for a duration of 3-5 years. Hence, the full impact of the work-from-home policy on corporate real estate will not be known for several years (Spencer & Ashburn, 2021). Specifically, office spaces with low quality, such as old structures and lack of technological features, have seen fewer lease renewals. In summary, given the declining demand and value for commercial space, relatively newer structures with better amenities are preferred.

Impact on the Fiscal Base of the Cities from New Workplace Arrangements

Widespread adoption of work-from-home or remote work could potentially change "urban fortunes" and prove to be a significant challenge for urban resilience (Glaeser, 2022). A combination of fewer people travelling to the city and the declining values of commercial properties, both resulting from the transition to work-from-home, has significantly impacted tax revenues in several cities. According to Aksoy et al. (2022), the decline in inbound travellers and the increase in city outbound immigration or movement implies a smaller sales tax base for local cities and reduces revenue from public transportation. Also, increasing usage of virtual technologies to conduct meetings and discussions implies lower revenues for the hotel industry and hence lower tax revenues. Declining rentals in the city and lower values also result in a dip in the local property tax base (Aksoy et al., 2022; Glaeser, 2022). For instance, in 2022, Hong Kong's office sector saw a drop of 38% in sales transaction volume to 667 transactions compared to 2021 (HK Property Review, 2023).

The other aspect would be a decline in the quality of local governance due to falling revenues from taxes and urban amenities, among others. This local governance quality would depend on the extent of the work-from-home impact on the city's tax base (Aksoy et al., 2022). Increasing office vacancy on account of a decline in sales transactions implies a contraction of tax revenues for cities that are dependent on such revenue to fund public services (The Economist, 2022). For instance, cities with a higher base of knowledge jobs amenable to remote work, such as San Francisco or Seattle in the United States and Hong Kong, among others, would see a greater impact. A consistent decline in tax revenues would result in an inability to sustain local governance, thereby causing outward migration and loss of inward commuters. This would result in a vicious cycle of continued decline in the city's performance due to low funds, leading to lower revenues, again prompting lower inward mobility and increased outward migration. Dormant offices result not only in declined revenue from property rentals but also lead to a decline in revenue from transport services and tax revenue from restaurant and café businesses dependent on officegoers. For instance, London's transport authority is expected to record a deficit of GBP 1.5 billion in finances by 2024 due to reduced passenger numbers (The Economist, 2022). Similarly, New York's Metropolitan Transportation Authority expects a deficit of around US\$1.4 billion in 2025 (Kaske, 2021). In such a scenario, cities could be urged to increase tax levies on wealthier residents, which may generate another downward spiral in the longer run. (Aksoy et al., 2022; Glaeser, 2022)

Such a trend is visible in the city of Saint John in Canada, which lost around 25% of its population between 1971 and 2016, resulting in a reduction of approximately 3 million Canadian dollars in unconditional grant funding from the province (City of Saint John, 2022). Due to a stagnant population base and increasing costs of municipal services, Saint John had increased its property tax rates, considered the highest in the country among the top 25 cities. These challenges were further exacerbated by pandemic-related measures such as work-from-home. The uptown localities of Saint John became deserted as people worked from home. With fewer people frequenting the uptown area, the local businesses that depend on the working clientele are considering closing or are barely surviving. Hence, Brunswick Square needs considerable re-investment. Concerns about the revival of businesses in the uptown area persist as people continue to work from home (Mills, 2021). Around 90% of survey respondents indicated that they would prefer to continue working from home because of reduced commuting time, financial savings and improved work-life balance (City of Saint John, 2022).

Policies To Mitigate And Adapt To The New Workplace Environment

As the changing trends in the workplace and lifestyles are expected to have a direct impact on the fiscal base of local governments, it has become essential for these authorities, especially in urban regions, to devise new strategies of mitigation and adaptation. The pandemic mitigation measures brought about a series of changes in the way society operates. Some of these changes include cost consciousness and a preference for working from home to economize on transport costs and time. They are also more focused on improving workers' mental well-being and quality of life, with a growing preference for open and greener spaces and flexibility in working situations. The changing trends can be viewed in the findings of a recent analysis by Saint John, which found that following the pandemic, Canadians had become more cost-conscious and budget-conservative and expected austerity and work-from-home to continue in the foreseeable future. Further, with declining disposable income, people sought more value and low-cost options (City of Saint John, 2022).

Based on these findings, we believe that it is imperative for local governments to consider innovative options for utilizing the office space that may not find takers and for investing in amenities essential to both businesses and individuals. Those who have the opportunity to work from home for 3-5 days do not have the pressure of living closer to work. Hence, their choice of residence may depend on different aspects such as the availability of leisure activities, good schools, rental costs and tax levies. Cities would have to consider such changes in demand for improved lifestyles in order to retain locals and ensure business continuity of local restaurants, hotels and other similar businesses in the service sector. This would also translate to added pressure on Hong Kong to improve housing facilities, an issue with which it has long struggled.

In this section, we draw lessons from other regions and identify strategies that could be considered in order to mitigate the potential impact of contracting tax revenues from dormant office spaces.

Flight To Quality – An Opportunity For Policies Of Real Estate Development

A common assessment across the board has been that the demand for office spaces would not disappear entirely. According to Glaeser (2020), transitioning to telecommuting in the post-pandemic world would have an immediate effect on urban rentals rather than on the urban form. With commercial rents higher than their maintenance costs in some of the world's most expensive cities, there is room for reduction. Hence, some offices will continue to remain occupied. However, Glaeser (2020) predicts that in the medium term, declining commercial rentals would lead to fewer constructions of high-rise buildings. Furthermore, certain office buildings in low-cost metropolitan areas will become vacant, while few will be converted to residential uses.

Even though there may be a resurgence in office occupancy, preference would be given to properties or assets which offer the “right mix” of location, design, and amenities (CBRE, 2022). Due to a combination of increased demand for flexible work arrangements on account of employees’ increased desire for a work-life balance and the move by Hong Kong businesses to save costs by downsizing, there have been demands for workplace redesign or new workspaces, which experts are calling flight to quality. Office spaces are expected to transform and propose fewer individual desk spaces and more shared open spaces for discussions and collaboration. Hence, the decline in demand for traditional real estate spaces would be offset by the rising demand for redesigned workspaces (CBRE, 2022). Data shows that while tenant demand for new spaces averaged between 8% and 12% from 2008 to 2012, this figure jumped to 28% of new space take-up in 2020 (Lim, 2021). This trend could be seen in the leasing activity in Manhattan, where 84% of total leasing had occurred in prime properties classified as ‘Class A’ or ‘trophy assets.’ In the United Kingdom, the share of prime offices in the total office market is only around 10-15% (Hammond, 2021).

So what would happen to old office structures or underinvested buildings in the event of flight to quality? The owners of non-prime or secondary building assets are expected to encounter several challenges in attracting tenants, even if they lower rents. As a result, they have begun to explore various options. One alternative is to upgrade the space with various amenities, such as an open floor plan and contactless technologies. In the Bloomberg Intelligence survey (2022), around 53% of respondents preferred office space with more amenities, such as gyms, terraces, or free meals. This is visible in the case of the old office properties on Third Avenue in Manhattan, where some corporates have relocated to a swankier skyscraper known as Spiral, which offers both indoor and outdoor terraces, hanging gardens, and a penthouse clubhouse with panoramic city views (Wong et al., 2022). Property owners Durst Organization have in-

vested approximately \$150 million in renovating a 40-story building on the Third Avenue and have added new heating and cooling systems, a renovated lobby, and an outdoor terrace. They expect these changes to bring tenants back to Third Avenue.

The popular out-of-the-box recommendation has been to restructure them to cater to the growing demands for housing needs. Some of the cities in the United States and Canada have been exploring options to convert rundown or sub-prime office structures into residential buildings. Calgary, a cosmopolitan city in Canada, has designed an incentive program for such redevelopment. This redevelopment addresses two issues: the declining value of office space and the increasing demand for improved housing facilities. The Real Estate Board of New York, an industry trade organization, has suggested that older office buildings, measuring around 220 million square feet, i.e. 40% of the available office space, be converted to residential use. The alternative use would be housing or recreational structures, such as indoor amusement parks. Recently, New York proposed a state bill to convert underutilized or vacant hotels into affordable and supportive housing. The conversion framework proposed by the bill will allow authorities to develop affordable housing units at two-thirds the cost and at one-third of the time required for ground-up construction.

In addition, New York could consider transforming its older office buildings to residential use. One estimate suggests that even if 10% of the less desirable or older commercial buildings in Midtown Manhattan were to be converted, around 14,000 new apartments could be constructed in neighbourhoods such as Midtown East, Flatiron, and the Garment District. Some projects are already underway as property owners look to transform traditional 'obsolete' offices into 'multifamily, industrial¹ and life sciences' (CBRE, 2022). In the United States, planned projects of converting offices into life sciences' laboratories have already been commenced or are underway (Desmond, 2021). For instance, a few office spaces in New Jersey, San Francisco, and Phoenix are being transformed into multifamily² and residential structures (CBRE, 2022).

In addition, as corporates transition to the work-from-home model, new work models, such as coworking and shared office spaces, have attracted some attention as they provide flexible, cost-effective alternatives to traditional office spaces. Owners of non-prime assets could also consider converting their large office buildings into coworking spaces, thereby providing access to smaller companies with lower rental budgets. Coworking spaces have already started cropping up in various cities around the world, including Mumbai, Hong Kong, New York, Paris, and London, among others. Compared to the previous options of renovating the entire office building for residential use, converting an existing office space into a coworking space requires little preparation. As the existing building already has the basic amenities for an office, such as internet access and on-site printing facilities, only a few improvements would need to be made, such as more conference rooms and common activity spaces for discussions or lunch. The coworking space could be extended to include the pay-as-you-go option, providing a steady stream of revenue.

Potential for Supporting the Economic and Fiscal Base of the Cities

Work-from-home and changing perspectives of consumers pertaining to spending and investments have created a new range of challenges and opportunities. According to Glaeser (2020), however, this does not necessarily imply an urban exodus for all urban areas. While remote working may result in people relocating to metropolitan areas with robust consumption amen-

1 – Office space converted into industrial or logistics space.

2 – Multifamily is a residential property comprising of more than one housing unit such as duplex, condominiums etc.

ties, the allure of city life may see the young, in particular, continuing to stay in cities, even if they work from home. The role of cities would gradually shift from production to consumption, thereby leading to an increase in intra-urban trips for leisure rather than work (Glaeser, 2020).

Hence, in addition to the aforementioned measures pertaining to commercial real estate, there may be other opportunities in the housing and leisure sectors that local governments, especially in large cities, could identify for fiscal growth. In 2021, as part of its ten-year strategic planning process, the City of Saint John sought independent assessment and recommendations pertaining to its future priorities for growth as an input to this planning process (City of Saint John, 2022). In its findings presented in 2022, the review found that following the pandemic, the citizens of Saint John are now more focused on physical and mental well-being and staying connected to their families. Also, with the flexibility of working from home, more people sought to invest in housing in suburbs and regions closer to big cities. For instance, given the lower cost of living and affordability combined with the potential to work from home, people sought to move to Oshawa, a city in Ontario, Canada, close to Toronto and the Greater Toronto Area (City of Saint John, 2022). A primary recommendation was to develop communities and neighbourhoods through various measures, such as creating a range of housing options and investing in the development of recreational community spaces in order to attract people to live in the city. Also, cities should focus on developing properties with mixed usage, i.e. for both commercial and residential use. Other recommendations included identifying and investing in the development of new industries, enhancing business conditions to allow anchor industries to expand their businesses, and retaining supply chain businesses around those industries (Tassonyi et al., 2022).

Conclusion

In conclusion, this paper has examined the impact of the increasing adoption of flexible working arrangements or remote working models on the corporate real estate space and the subsequent impact on the fiscal base of municipal bodies. Even as reports have begun to surface about employees returning to work and a slight reduction in vacancy rates, the broader concept of flexibility in the workplace is here to stay. This includes a hybrid work model, where employees can work partly at home and in the office, and remote working, where an employee is allowed to work from anywhere.

This change in working patterns will have an impact on the demand for office space and, consequently, on the municipal revenues of a local city. This paper has been unable to quantify or assess the extent of the impact due to a lack of adequate information. Although it is still too early to gauge the impact of this transition, as leases signed pre-pandemic are yet to expire and as companies finalize their operational policies, the larger sense is that prime offices or those office spaces with improved amenities will be given preference. Also, corporates will leverage the new working parameters to downsize and reduce expenses. Hence, the traditional office space is likely to be replaced or closed down. Urban researchers and policymakers need to be aware of the changing needs of people in the context of emerging new technologies to adapt changes to the way the city functions. The city as a center is becoming less important with work being managed remotely, and travel becoming more cost-effective and environment friendly. Policymakers will need to review their strategies. The alternatives for property owners of older structures or non-prime offices include renovation or conversion to residential or industrial units. Policymakers could consider developing strategies to incentivize redevelopment and undertake massive corporate-to-residential transformation.

In addition, our understanding is that as more and more corporates adopt the remote working model, they would have to redesign their office space usage, including reducing the amount of office space leased and favoring prime assets. As a result, the value and rents of corporate real estate, especially those in the sub-prime or old construction categories, would decline, thus lowering property tax revenues for local governments. Also, as the preference for work-from-home increases and fewer people commute to the office, the demand for the service sector, including restaurants, hotels, and parking garages, among others, is likely to take a hit. Hence, it is essential for local governments to design policies to adapt to this new environment.

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