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A Taxonomy of Coworking Space: Manhattan, NYC

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Abstract
The growth in the coworking inventory has accelerated over the past years, with more than 5 million square feet of new space flooding into the market in each of the past three years (Cushman & Wakefield, 2018). In 2018, over 200 coworking companies that operated in the U.S. had at least one location larger than 5,000 square feet. As competition increases, coworking markets enter periods of "specialization" in spaces of various size, business plans and clientele (Brown, 2016; Diduch, 2018), however, the lack of analysis of these characteristics make it difficult to understand the current supply of coworking space on the market.

Keywords
WeWork, Regus, Yaoyi Zhou

A Taxonomy of Coworking Space: Manhattan, NYC

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INTRODUCTION

The growth in the coworking inventory has accelerated over the past years, with more than 5 million square feet of new space flooding into the market in each of the past three years (Cushman & Wakefield, 2018). In 2018, over 200 coworking companies that operated in the U.S. had at least one location larger than 5,000 square feet. As competition increases, coworking markets enter periods of "specialization" in spaces of various size, business plans and clientele (Brown, 2016; Diduch, 2018), however, the lack of analysis of these characteristics make it difficult to understand the current supply of coworking space on the market.

Gandini's (2015) definition that "*Coworking spaces are shared workplaces occupied by different sorts of knowledge professionals, mostly freelancers, working in various degrees of specialization in the vast domain of the knowledge industry*" is growing in acceptability although the interpretation of "coworking" never stops shifting between "freelancer community" and "sheer office subleasing business." As the largest coworking providers continues to expand their portfolio at a dramatic pace, it is now more difficult to identify the difference between traditional shared offices and coworking spaces. The definition of coworking is becoming more ambiguous as the clienteles change so rapidly, with a decreasing ratio of freelancer tenants (CB Insights, 2018). At Bond Collective's five locations, only 10 to 20 percent of the space is dedicated to open coworking, and 90 percent of WeWork's space is occupied by private offices (Kessler, 2017). The meaning of coworking might already have changed as a significant number of space providers plan to scale-up their businesses by introducing more long-term private offices lease to sustain their cash flow.

New York City, especially Manhattan, is the most prosperous market for coworking space (Cushman & Wakefield, 2018; Moriset, 2014). For the first eight months of the year 2018, coworking space companies leased a total of 1.9 million square feet in Manhattan, which accounts for nearly 10 percent of all new leases in the year (Hall, 2018a). Manhattan coworking spaces occupied 10.7 million sf., or about 2.6 percent of the total office inventory (Figure 1). CoWorker.com, the largest online coworking space search website and coworking community, indicated that 176 coworking spaces existed in the great New York City area in November 2018. This study explores the common and different characteristics among the coworking spaces in different submarkets and brands in Manhattan in 2018.

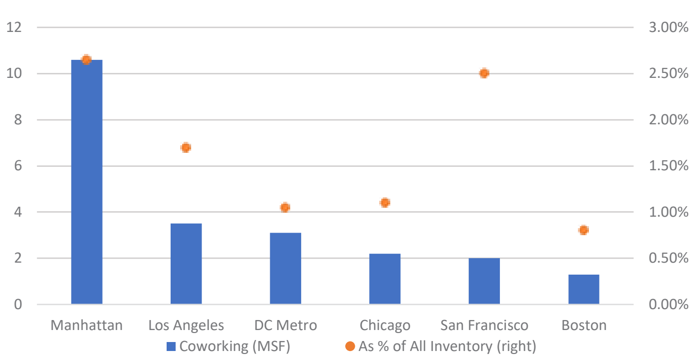

Figure 1: Coworking inventory in Gateway Markets (Cushman & Wakefield, 2018).

PRICE IN THE MANHATTAN OFFICE SUBMARKETS

Office properties and markets differ in the different areas of Manhattan. There the office spaces are concentrated in three major submarkets: Midtown, Midtown South and Downtown (JLL, 2018). Among the three markets, Midtown South experienced the most dramatic rent increase in the past decade. Google first leased space at 111 Eighth Avenue in 2006, paying in the mid-to-upper $30 per square foot. The company bought the space in the building for almost $1.9 billion in 2010, and the ripple effects followed. Facebook and other Silicon Valley companies boosted the tech companies' presence in this submarket, turning the former district of storage and showcase buildings into a new hub (Lash, 2015). In part due to Mayor Bloomberg's Five Borough Economic Opportunity Plan in 2009, the growth of companies in technology, advertising, media, and information, or "TAMI" industries, have driven the Midtown South market to a new height (Lash, 2015; Satow, 2014; Weiss, 2015). This has lifted the cost per square foot of Midtown South offices over the Downtown financial district since 2015, and the vacancy rate dropped to 5.4 percent in the third quarter of 2018 as a new post-recessionary low. The average asking rent of Midtown South office space is $83.57 per square foot, surpassing the Midtown market $76.60 and Downtown market $61.08 in the third quarter of 2018 (JLL, 2018). It is now the priciest office market in the nation. The TAMI expansion has made coworking spaces a viable option for many tenants. The dramatic rent increase in the Midtown South area makes the long-term leases that coworking companies signed before 2015 bargains. The question is where are the locations today? Where will they be tomorrow?

BUILDING CHARACTERISTICS

The characteristics of the host buildings are an important part of the price being paid by coworking companies, and this could reveal the potential stratification of coworking spaces depending on the clientele. Office building classification represents a subjective quality rating of buildings, which indicates the competitive ability of each property to attract similar types of tenants (BOMA International, 2018). Real estate managers understand the strength of the property by monitoring a combination of factors including rent, building finishes, system standards and efficiency, building amenities, location/accessibility, and market perception. "Class A" are the most prestigious properties competing for premier office users with rents above average for the area. "Class B" are properties competing for a wide range of users with rents in the average range for the area. The building finishes are fair to good, and systems are adequate, but the building does not compete with Class A at the same price. "Class C" are properties competing for tenants requiring functional space at rents below the average (BOMA International, 2018). Because no current study exists indicating the building classes of existing coworking spaces, the question arises what are the differences between the coworking spaces located in Class A, B and C buildings regarding membership plans and at what price?

COWORKING BRANDS: WEWORK VS. REGUS

With a focus to service large block tenants as its growth strategy, WeWork has surpassed J.P. Morgan to become New York's largest tenant (Hall, 2018). With a $2 billion investment from Softbank in Jan. 2019, the company was valued at a blended valuation at about $36 billion (Prang & Brown, 2019). Yet WeWork had difficulty in 2018. The company lost about $2 billion in 2018 and its largest backer, Softbank's Vision Fund, also expressed its concern that WeWork's model could leave it exposed if the economy weakens (Hoffman, Brown, & Farrell, 2018). As Softbank balked its planned $16 billion acquisition of WeWork at the end of 2018, the discussion of the future became controversial. Although WeWork has spent years marketing itself as a tech company which professionalizes in cultivating coworking culture, its business model was still considered by many analysts as an old-school office-leasing company like Regus, the other key player in shared office business (Brown, 2015).

Before WeWork formed, the service-office-space industry underwent a spectacular rise and fall when the tech bubble burst in 2001. The most common concern is that if the demand for office space and rent prices fall, WeWork could be stuck with its long-term lease obligations for years just as Regus was. While WeWork now operates 52 locations in Manhattan, Regus operates in 46 locations. Taking a closer look at the locations of the two companies, it is apparent that Regus's host buildings are slightly different from WeWork's. By investigating the difference between the coworking spaces' sizes, locations, and characteristics of the host buildings, it is possible to learn more about the difference and similarities between these two office subleasing giants.

METHODS: DATA COLLECTION AND ANALYSIS

The location data of coworking spaces was collected through the website CoWorker.com, which is the largest coworking space platform in the world. By December 2018, CoWorker.com was listing more than 6,000 coworking spaces in 158 countries, with 1719 spaces located in the United States. The 116 locations in Manhattan provide the ability to search each coworking spaces' website and check its existence, membership plans and prices. To compare

	Midtown	Midtown South	Downtown	Others
OFFICE MARKET (Q3 2018*)				
Current inventory	281,132,601	67,972,208	99,638,656	-
Overall vacancy	7.3%	5.3%	11%	-
Overall asking rent (gross $/sf.)	76.60	83.57	61.08	-
COWORKING SPACES (CS)				
Number of Coworking Spaces	42	42	20	7
Total Space occupied by CS (sf.)	2,576,322	1,713,395	1,243,269	81,547
% of total inventory	0.916%	2.521%	1.248%	-
Average size of CS (sf.)	61,341	40,795	62,163	11,649

"*" Note: Data retrieved from (JLL, 2018)

Table 1: Coworking location and the office market (Not Include Regus n =111).

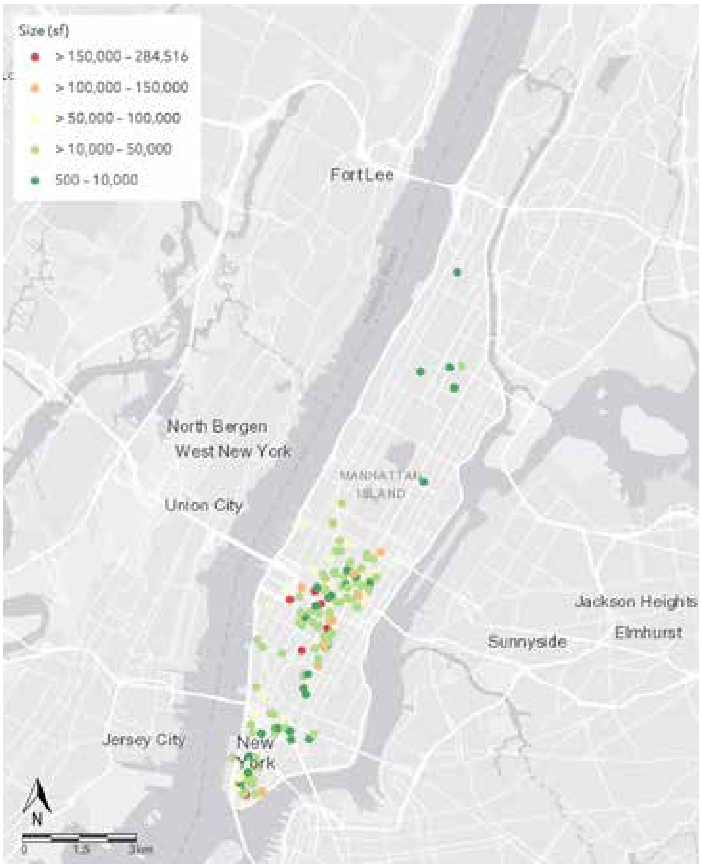

Figure 2: Location and size of coworking spaces (n=111).

building area, the area of spaces leased by the coworking space company, and the lease start date was also collected from the CoStar Database. Information about the lease term and the price of the leases was provided for some sites. The data was then analyzed in JMP Pro, a graphical statistical analysis application, and mapped in ArcGIS to study coworking spaces' spatial distributions.

RESULTS

Total inventory: The result shows that a 5,614,533 square feet are leased for coworking spaces in Manhattan in January 2019, not including Regus and other shared office companies. If the total square footage of Regus space is added, the number rises to 6,903,646 square feet. This is still less than the 10.2 million square feet estimated by Cushman & Wakefield (2018).

The inconsistency in the definition of coworking might explain the difference. If all coworking and shared office space is considered coworking space, it is easy to overestimate the market share of the coworking space. Not every square foot of space that a coworking company leases could be counted as coworking space. Earlier in 2017, IBM leased all of WeWork's space at 88 University Place, and Amazon leased all of WeWork's 122,000 square feet at 2 Herald Square. The result suggests that, if coworking space is defined as shared offices space which professionals and freelancers occupy, the current estimation of coworking spaces might be much smaller than the estimations made in previous reports (Gandini, 2015). While WeWork continues to sign large chunks of office space and increase its focus on the enterprise business and long-term leases, the uncertainty around the terminology of coworking evolves and makes the estimation of coworking space market share more difficult.

Regarding lease start time, the oldest coworking spaces in Midtown South opened in 2003, while the oldest coworking space in Midtown started in 2009. The number and average size in both Midtown and Midtown South has increased in recent years. The coworking spaces in Downtown are the newest and the largest in size among all submarkets, with most of them larger than 50,000 square feet. Figure 3 demonstrates that, among the current opened coworking spaces, the majority of coworking spaces started their leases after 2011. The more recent starts occupy larger square footage. Most spaces that occupy an area larger than 50,000 square feet were leased after 2015.

Host buildings: Our data shows that there are 37 coworking spaces located in Class A office building, 43 in Class B, 25 in Class C and 7 in mixed-use property's retail or

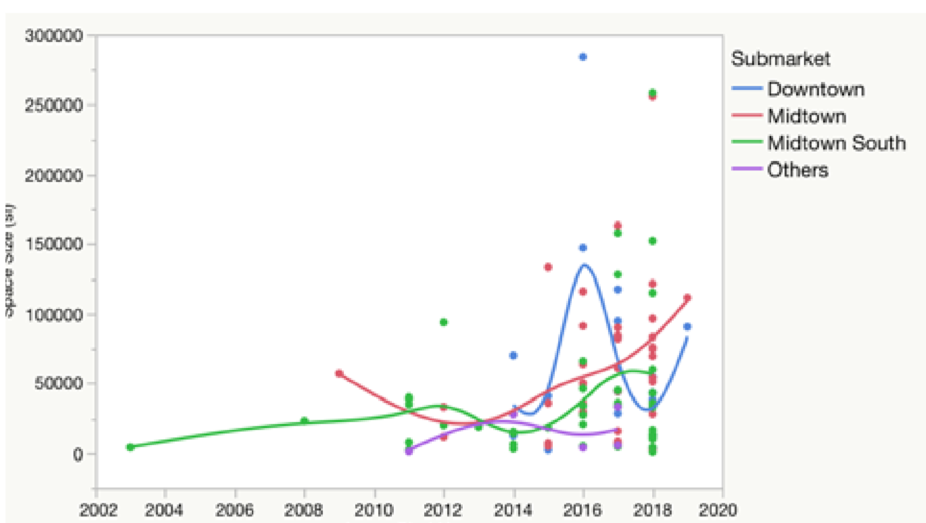

Figure 3: Space size and the lease start year in different submarkets.

residential spaces. As the retail rents across Manhattan dropped 25 percent in the last three years, retail property landlords adjusted to the rapidly changing environments (Hall, 2018b). Coworking spaces became an option for some retail property landlords who wanted to control vacancies. Taking a closer look of the markets, the data in Table 2 indicates that coworking spaces are located in significantly smaller host buildings in Midtown South. The host buildings in Midtown South are all Class B and Class C, while those in Midtown and Downtown area are mainly Class A. The differences in building class might reflect the difference in clientele. It is reasonable to expect that the clients who enroll in coworking memberships are diverse when considering their occupations.

While the average estimated rent of the host buildings in Midtown South is lower than Midtown, the average price for a private office plan is the highest in Midtown South among all submarkets. The high price for private offices reflects that shortage of quality office space supply and high demand in this area. It also suggests that in Midtown South, coworking serves as a strategy to increase the cash flow for the host buildings in Class C. Thriving coworking spaces might contribute to the rise of office rents in Midtown South, which means that companies looking for long-term leases face even fewer choices.

Percentage of space occupied by coworking: Figure 4 suggests that host buildings with Rentable Building Area (RBA) less than 500,000 square feet are more likely to lease a large portion of the building to coworking companies. This corresponds with the idea that signing long-term leases is a strategy by property owners to control the vacancies. Since its peak of 92 percent in 2000, the current occupancy in the top 50 markets is roughly 85 percent according to the research firm Green Street Advisors (Grant, 2018). As WeWork's recent expansion involves more and more large size spaces, it is timely to explore how landlords benefit from leasing large space to coworking companies. Cushman & Wakefield (2018) studied 17 transactions with coworking tenants from the past two years, and found that there is a slight negative relationship between the reported cap rates and the proportion of a building's square footage allocated to coworking. Its study suggests that the market currently seems to be comfortable with 15 to 30 percent of a building being allocated to a coworking provider with relatively strong credit, but a percentage above that may be viewed adversely. The result of this study indicates that 43 out of 111 coworking spaces in Manhattan now occupy more than 30 percent of their host

	Midtown	Midtown South	Downtown	Others
HOST BUILDINGS				
Average RBA of the host building (sf.)	456,319	120,641	638,718	43,475
Average stories of the host building	24.12	9.93	26.8	8.71
Average class of the host building*	2.43	1.58	2.6	1.67
Average year the host building was built	1944	1917	1938	1953
Average COSTAR estimated rent ($/sf.)	67.87	59.76	56.25	52.25
COWORKING SPACES (CS)				
Number of Coworking spaces	42	42	20	7
Average size of CS (sf.)	61,341	40,795	62,163	11,649
Average % space leased to coworking	23.38%	39.10%	19.28%	32.10%
Average lease begin year	2016.3	2015.2	2016.8	2015
Average Price: Hot-desk ($/mon)	482.40	414.03	383.17	327.5
Average Price: Private office ($/mon)	978.33	996.32	896.27	802.5

"*" Note: Class of building is coded as: (A) =3, (B) =2, (C) =1.

Table 2: Coworking locations and the office market (Not Including Regus n =111).

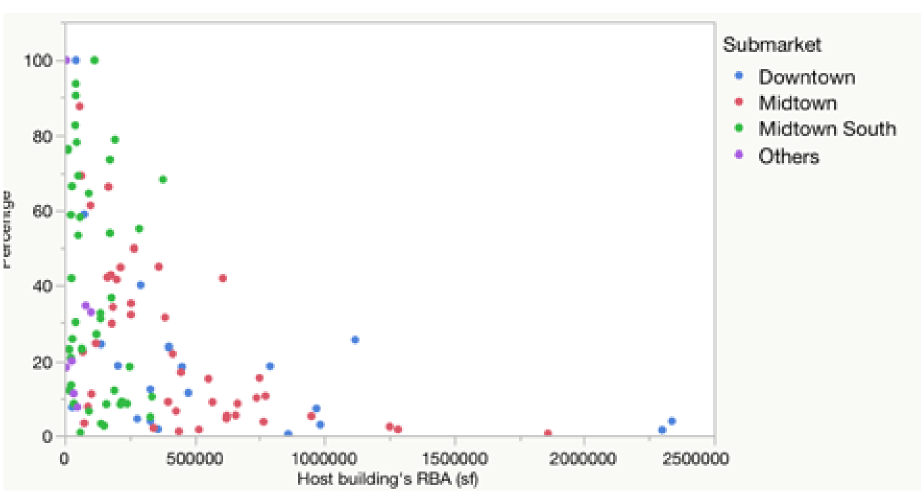

Figure 4: Host building's RBA (sf.) and Percentage of the building occupied by coworking.

buildings' total rentable area. The effect of coworking on valuation needs more in-depth investigation.

WeWork vs. Regus: Table 3 shows that there are now 52 locations listed by WeWork, with a total of about 4.5 million square feet leased in Manhattan. Regus currently operates 42 locations and has leased about 1.3 million square feet. There are 59 locations managed by other coworking space providers, with about 1.1 million square feet of leased space. WeWork's portfolio is double the size of all the other coworking spaces and Regus added together. At some WeWork's locations, the spaces were solely occupied by large corporations, such as IBM at 88 University Place and Amazon at 2 Herald Square, but WeWork's total portfolio in Manhattan is larger than this study estimates.

Description	Location	WeWork (n=52)	Regus (n=43)	Others (59)
Number	Midtown	24	29	18
	Midtown South	18	6	24
	Downtown	9	8	11
	Others	1	0	6
Average size (sf.)	Midtown	90,883	31,551	21,951
	Midtown South	75,599	32,908	14,692
	Downtown	102,584	22,082	29,092
	Others	33,344	0	8,033
Total square footage (sf.)	Midtown	2,181,203	915,003	395,119
	Midtown South	1,360,776	197,450	352,619
	Downtown	923,257	176,660	320,012
	Others	33,344	0	48,203
	Total	4,498,580	1,289,113	1,115,953

Table 3: Coworking brands & location (Include Regus n=154).

As corporate tenants and long-term lease business are vital to the recent WeWork strategy, its average size for each location is significantly larger than that of the other coworking companies in all markets. About half of its total leased space in Manhattan is located in Midtown, where the supply of office space is the most abundant. Although the growth of corporate tenants helps WeWork to improve financing and lower risks, there is a common concern that the increase in corporations might impact its coworking culture (Wright, 2018).

It is noticeable that Regus offices generally locate in Midtown Class A buildings, while WeWork's inventory is more diverse regarding location and class (Figure 5). WeWork often occupies Class A and B office buildings in Midtown and Class B and C office buildings in Midtown South. The companies' differences in clienteles could explain the variation. While Regus sets its main market in Midtown, WeWork occupies Midtown South where the TAMI industries flourish, and adopts a different type of design that appears to be more appealing to start-up workers. Figure 6 shows that WeWork's spaces with longer operational history located in Midtown South, while Regus started 12 years earlier than WeWork in Midtown. This suggests that before 2014, the two companies located in two different markets and leased different classes of buildings. After 2015, there is a significant

Figure 5: Building class in different submarkets, by different coworking companies.

change in WeWork's portfolio, and the company started to sign large leases in Midtown and Downtown. With a focus to service large block tenants as part of its growth strategy, WeWork's recent movements are blurring the boundary between coworking space and traditional shared-office.

DISCUSSION

The concern of increasing supply. A general concern for coworking in Manhattan is the lack of new tenants as much of the new demand has been absorbed by existing tenants in the city. The overall lack of demand is reflected by the sales market. According to Colliers International, $30 billion worth of investment-grade commercial real estate was sold in Manhattan, which is only about 50 percent of the sales volume during the market peak of 2015 (Hall, 2019). The overall vacancy rate has remained close to 9 percent over the past five years, and new supply may stress the vacancy level. With an unprecedented amount of office space delivered by new projects such as Hudson Yards and the World Trade Center, office rents may be threatened (CoStar, 2019). An increase of vacant space is anticipated. Although WeWork has started its leasing competition in 2018 by offering hefty broker commissions (Stribling, 2018), the company might face increasing pressure on leasing as much of its portfolio is located in Midtown and Downtown.

Coworking's size and culture. The difference between shared office and coworking space is the difference between monetizing merely the use of space and the access to an appealing community with coworking culture. One dilemma WeWork and other coworking companies will face continually is how to maintain the culture while expanding and staying accessible to different kinds of clientele. As WeWork keeps expanding and absorbing large spaces, how will these large coworking spaces which occupy over 200,000 square feet deal with their community culture? Previous studies have suggested that cultured coworking space is different largely because of their variety of sizes. Taffet (2014) found that coworking space comes in many sizes, and the scale appears to play a role in the ethos of their respective environments. The small scale coworking spaces that Taffet (2014) investigated exhibit a sense of activism in their operation, while the large operators showed a specialized form of property management and business networking. There is an urgent need to study the effect of coworking spaces' sizes on its members' social behavior and community culture.

CONCLUSION

A detailed analysis of Manhattan coworking spaces has several implications for interpreting the trends of the supply market. First, the market share of coworking spaces in commercial real estate might be easily overestimated because of the ambiguity in the definition. The increase in total spaces leased by coworking companies might serve as a "selective disclosure" strategy (Marquis, Toffel, & Zhou, 2016), which reveals partially benign growth but obscures the less impressive overall performance. Second, the result of this study suggests that coworking spaces vary in sizes, and are located in different classes of buildings in different markets. Tracking the differentiation of current coworking spaces reveals that the previous understanding of coworking as "freelancers working together" is threatened by the market's shift to long-term office subleasing, which

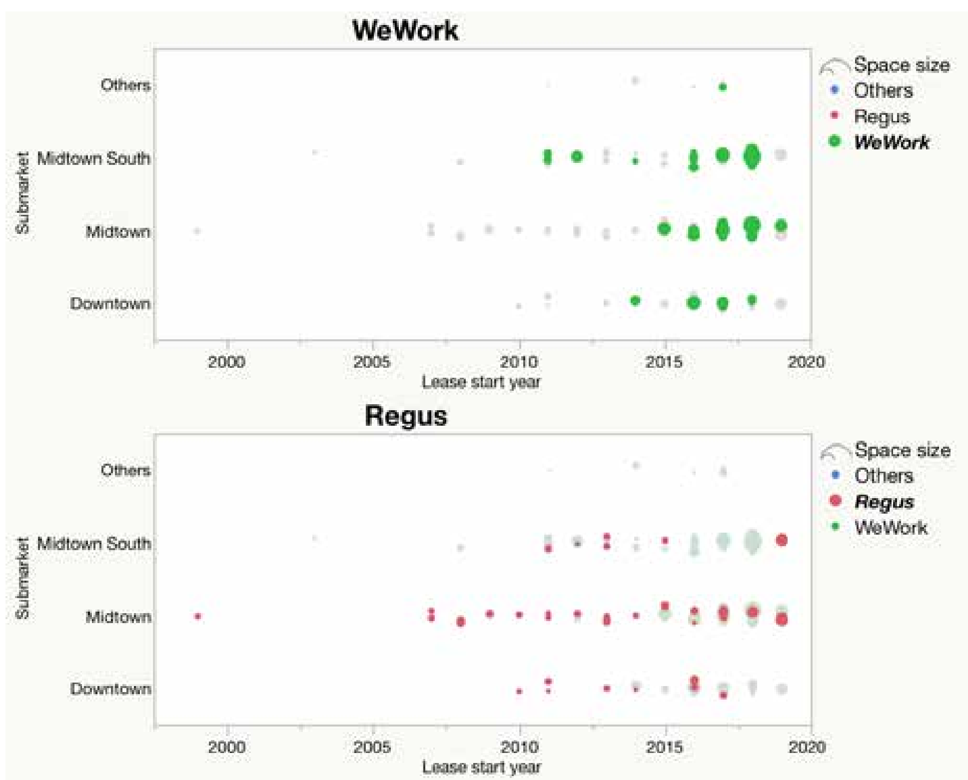

Figure 6: Lease start year in different submarkets, by different coworking companies.

allows lower risks. With an unprecedented amount of new constructed office space gradually delivered to Manhattan, the coworking companies might face more intense competition in the coming years. It is time to reevaluate the demand side of coworking as it is driven by the needs and wants of its target audiences.

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