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COVID-19 PANDEMIC AND CO-WORKING ENVIRONMENT: ANALYSIS OF SHARED OFFICE SPACE IN FEDERAL CAPITAL TERRITORY (FCT), ABUJA, NIGERIA

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The study examined the impact on Covid-19 pandemic of shared office spaces business in FCT, Abuja. The host (managers) and the customers (users) of shared office spaces constitute the study population. A total of 16 shared office spaces selected participated in the survey exercise. The choice of selection was based on location i.e. those operating within Central Business District, Abuja and showed interest to participate. All the 16 managers (host) and 58 customers (users) that gave attention to participate were administered with questionnaire. The study employed descriptive statistical tools such as frequency distribution, percentage and weighted mean score (WMS) to analyse the data. The study found that majority of the managers i.e. 56.27% were female, 43.75% were of age bracket 31-40years and 81.75% were HND/B.Sc. school certificate holders. The users were more of male gender (63.79%) with dominance age group of 21-50years representing 89.64% and about 79.31% were holders of HND/B.Sc. certificate. Professions in the real estate industry accounted for 55.75% of the managers ' professional background. The start-up/entrepreneurs and freelancer were the major users of the shared office facilities. The reasons for high rate of patronage by the users (WMS) were affordability (4.069), concentration (3.879) and flexibility of time/price plan (3.793). The managers ranked challenges (WMS) such as low patronage/demand (4.688), passive economic activities (4.063) and users 'psychological effects (4.000) as the prominent ones faced during the pandemic period. Meanwhile, the COVID-19 safety measures that exhibited prominent impact on the business activities were stay-at-home order and social/physical distancing with respective WMS of 4.438 and 4.125. The study concluded that the negative effects on property market and by extension shared office spaces businesses suggests the need for sustainable policy framework that will protect the economy and by extension real estate sector from the future occurrences of any outbreak of global pandemic

Keywords: challenges, co-working, covid-19, health, shared office

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INTRODUCTION

The outbreak of Covid-19 pandemic is rapidly changing the ways of doing business in all sectors of global economy. The increasing fatality rate associated with the novel coronavirus in both the developed and developing countries has necessitated the need for structural adjustment in social interaction especially at crowded places. Local and international health organizations have put in place safety and regulatory measures aimed at reducing the fatality and the widespread of the novel virus. The introduction and strict enforcement of the measures such as stay-at-home order, restrictions on social gathering and crowded places among others have direct or indirect effects on economic sustenance (NDCC, 2020; WHO, 2020).

Meanwhile Verschuur, Koks and Hall (2021) explained that the introduction of Covid-19 health safety protocol and guidelines to be strictly adhered to by the citizens were meant to ensure balance between survival of lives and livelihoods. However, the author further expressed that some measures including ban on movement of goods and services except the essential products, economic short-down, restriction on social gathering, discouragement of crowded places including physical/social distancing have made it difficult for some business such as aviation, transportation, hospitality, agro-allied and real estate businesses to strive amidst the pandemic period.

For instance Maliszewska, Mattoo and Mensbrugghe (2020) study reports 2.0 and 2.5% fall in the respective global and the developing countries below benchmark.Verschuur, Koks and Hall (2021) added that global maritime recorded loss in revenue estimated to be 7.5-9.% and amount to 255-412 US$ billion. In Nigeria Andam, Edeh, Oboh, Pauw and Thurlow (2020) discovered that for 8-week of lockdown (March-June, 2020) the country GDP fell by 23% at the pandemic period, agro-food system alone fell by 11% and the lockdown scenario contributed 9% to rise in the nation poverty level

The resultant adverse effects of the Covid-19 safety measures were not limited to Nigerian real estate sector. For instance in Lagos State, Oyedeji (2020) reported that real estate market experienced static business transactions at the pandemic period. Similarly, a study by Olanrele and Thontteh (2020) on Covid 19 and new normal in Nigeria property market showed that, at the demand side, the property market experienced low demand of real estate products, while at the supply side; there is a drastic reduction in the investment confidence during the pandemic outbreak.

The attendant effects of the novel coronavirus tend to vary in magnitude and level of significance across the property sub-markets (Deloitte, 2020a). The effects may seem to be more felt on some property sub-market such as co-working shared office facilities. Co-working office space is a new growing concept in real estate industry. The ideal is to provide sharing office facilities for different individuals to work outside conventional office on time schedule and rental basis (Robelski, Keller, Harth and Mache, 2019). The concept was introduced to ensure flexibility of workspace, cost effective and social/business interaction among the co-workers in the community. However, the consequential effects of the deadly coronavirus may

not only defeat the primary objectives of the emerging innovative flexible workplace but can also mar the viability of the investment.

Asides that there is limited empirical studies on relationship between covid-19 and property market compare to a large body of empirical studies in other fields such as medical and science related professions. The few available local studies investigated the impacts on general property market. Therefore, a study to investigate the effects of Covid-19 pandemic on shared office space market especially in one of the Nigerian epicenters such as Federal Capital Territory (FCT), Abuja becomes pertinent; owing to the peculiarities of the co-working environment; and to reveal the emerging issues in the fragile property market.

LITERATURE REVIEW

Impact of Covid-19 pandemic on economy: from global and local perspectives

Amidst the global discussions on the outbreak and dynamics in the widespread of the novel coronavirus, studies have examined the impact of the global health crises on different economies the across globe. For instance, Ozli and Arun (2020) studied the spillover impact of Covid-19 pandemic on global economy. The authors attempted to know how social distancing policies affect pricing of stocks in capital market. The study discovered that monetary policy decisions, increasing number of lock-down days and travel restriction on international movement have prominent adverse effects on economic activities in the stock market.

In East Asian and Pacific region, Maliszewska, Mattoo and Mensbrugghe (2020) modeled the interaction of potential impact of Covid-19 with gross domestic product (GDP) and trade. The study reported that the resultant effects of the global health challenges cause 2% fall in the global GDP below its benchmark. Also about 2.5 and 1.8% decreased in the GDP below minimum benchmark for developing countries and the industrial world respectively. On trade, the authors noted that the worst hit trade were outputs of domestic services and traded tourist services. Similar report was given by Verschuur, Koks and Hall (2021) study. The author revealed that, ports in China, Middle-East and Western Europe were collapsed. Loss of revenue in the global maritime trade was estimate to be 7.5-9.6% and amount to 255-412 US$ billion

In Nigeria, Andam, Edeh, Oboh, Pauw and Thurlow (2020) studied the impact of Covid-19 on food system and poverty. The authors assessed the implications of lockdown polices on agro-food supply system in the country. The reviewed periods were 8-week lockdown (March-June) and economic recovery period till December, 2020. The study found that the country GDP fell by 23% at the pandemic period, while agro-food system alone fell by 11% and the lockdown scenario contributed 9% rise in the nation's poverty level. Ozili (2020) attempted to examine the interaction between Covid-19 pandemic and economic crisis with a focus on Nigeria experience. The author discovered that spillover effect of Covid-19 pandemic cause a decline in the demand for oil product and disturbed economic activities from taking place.

The negative effects of the pandemic were also empirically noted in the Nigerian real estate market. For instance, Oyedeji (2020) studied how real estate transactions

are being affected by the attendant consequences of COVID-19 health challenges in Lagos property market. The author sampled opinion of estate surveying and valuation firms practicing in Lagos and discovered that office property was the 3rd hardest hit by the pandemic after hospitality and retail property types. Also 77.632% of the respondents agreed to static condition of real estate transaction at the pandemic period. The findings corroborate the result of a study by Olanrele and Thontteh (2020). The study investigated the implications of COVID-19 and 'New Normal 'policy for the Nigerian real estate sector. The authors observed a negative effect of the global health crises on property market, with a plunge at the short run, and a capital flight from real estate to digital services investment due to changing working style of people (new normal).

Co-working space: concept and characteristics

Co-working space is a new concept in real estate; changing the working lifestyle of private individuals and corporate organizations in the vast knowledge based economy (Foertsch, 2014 and Spinuzzi, 2012). Co-working space is a shared workspace, office environment, joint use of spaces practically conceived as office renting facilities where different groups such as freelancers, remote workers, start-up entrepreneur and other independent professionals working together in various degrees of specialization (Seo, Lysiankova, Ock, and Chun, 2017 and Foertsch, 2017). The Co-working spaces in a simple form comprises of rented office facilities such as a desk with a wi-fi connection hire by an independent professional to carry out its official daily work.

In the work of Vanichvatana (2018), three major forms of setting up co-working spaces were identified. The first form is shared office which is referred to a situation where a business let/sublet a desk to outsider. The second form is co-working business where a business set-up an office spaces to be hired out by outsider and the third form is co-working incubators i.e. office spaces that are set-up in a form that will accommodate services such as advertising, promotion and training in the rented working space. The author stressed that traditional office space differ from co-workspace in the sense that the conventional workspaces encompass the workspace itself and other complementary offices such as meeting, circulating, waiting, filling and storage spaces which are virtually not part of co-workspace..

In literature, authors from academics and practitioners have shared similar viewed on the purpose of co-working business but divided thoughts on the origin of the concept. For the later, authors including Foertsch and Cagnol (2013) and Spinuzzi, (2012) have linked the origin of co-workspace to recent development in San Franisco in 2005, while Bunnell and Linden (2011) argued that the origin of the concept can be traced backed to DeKoven in 1999. Fost, (2008) and JLL (2016) explained that, co-working environment was first noticed in Berlin in 1995 as a physical location for hackers community, later in New York in 1999 with appreciable co-working environment at West Street, before the concept was officially launched in 2005 in San Franisco following the designated co-working community located in Brad Neuber. However, the concept of co-working spaces has witness appreciable increase in its adoption in most capital cities of the world including the United States, United Kingdom, Asia, Thailand etc. (JLL, 2016; Creffield, 2016; Ewart-James, 2016). The reviewed literature on the impact of COVID-19 pandemic on the global and local economies were summarized in Table 1

Conventional office vs. Shared office workspace

The need to provide flexible work place that is cost effective to accommodate self-employed small/medium business owners that cannot afford bigger office deals fortified the widespread adoption of shared office workspace in many cities of the world. Vanichvatona (2017) opined that conventional office spaces are characterized with huge operational costs such as electricity, telephone and communication costs, management fee, service charges, and local property tax. However, the huge cost involved in renting and maintaining conventional offices especially in central business districts may overwhelm some categories of office users; denied them of having access to office facilities in some core urban centers to underdo their daily business activities.

The emergence of co-working office space has brought a paradigm shift to office property market. The shared office spaces offer the small/medium scale enterprises that cannot afford to rent an office but are in dire need of office facilities a temporal office accommodation to carry out their business activities at the city centers on time sharing basis. Spinuzzi, Bodrožić, Scaratti and Ivakli (2019), Gandini, (2015) and Spreitzer, Bacevice, and Garrett (2015) posited that some set of users prefer co-work office space to their conventional office settings for some reasons. They include conveniences, concentration, networking and collaboration in co-working community. Other users enjoy patronizing co-working spaces because of their strategic locations to place of interests e.g. independent professionals, freelancers, employee of corporate organizations/company, NGOs and government officers. Yank and Bisson (2019) added that the desired outcomes of either the users or the work engaged within the co-working spaces are geared towards innovations, creativity, collaboration and social well-being of the participants. The concept of co-working space is better explained by the flowchart model developed by Yank and Bisson (2019) shown in Figure 1.

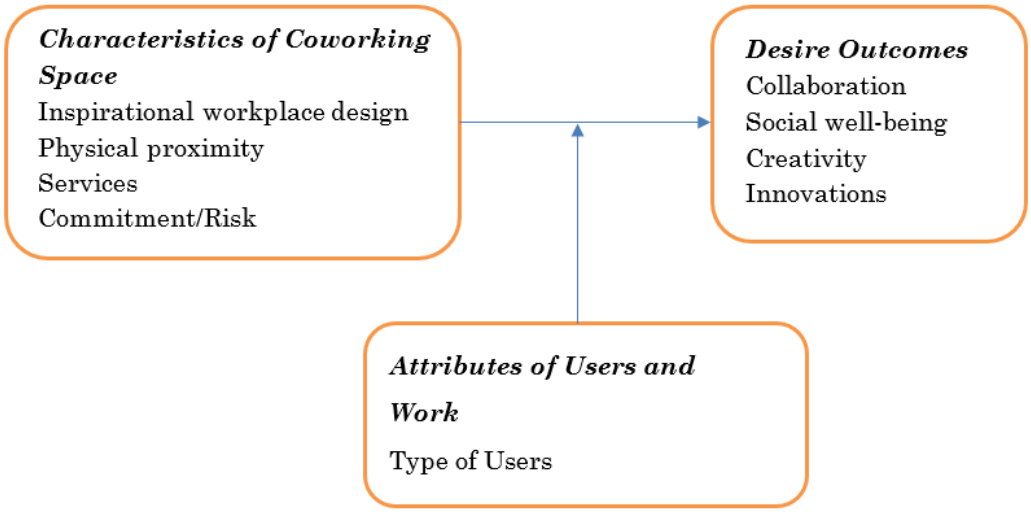


Fig. 1 Co-working space concept

Source: Yank and Bisson (2019)

Vanichvatona (2017) pointed out that, the flexible working environment has its own disadvantages. The author identified the disadvantages of working in co-workspace to include time wasting for unwanted socialization, constant change of

non-fixed chair, privacy, noise and sometimes high cost of renting and commuting to centers where most of the facilities were located especially for small scale business owners. Soe et. al. (2017) surveyed the opinions of both the managers and the users of co-working spaces in South Korea on the important influencing factors. The authors concluded that both the hosts and the users identified relationship facilitation, service diversity and flexible price plan as the prominent influencing factors of sustainable co-workspace operation. The unique characteristics of the co-workspace have strengthened the popularity and widespread adoption of the concept in both development countries and the emerging economies including Nigeria.

For instance, in Nigeria capital territory, Abuja, more than twenty-three (23) shared office spaces are available for patronage. Some of them include Regus City Centre, Ventures Park, Davelt Cospace, Smart Office, Rutyono Office, Work and Connect, Novare Shared Offices, Harmony Innovation Hub, Savvy Instant Offices, Pin Co-working/Co-living, Box Office Hup, Aiivon, StoneBricks Hub, Savy Innovation offices, The Ruby centre, Redwoof Place, Civic Innovation Lab etc. all located in Abuja, Nigeria. The shared office spaces are rented on daily, weekly and monthly basis. The rent charge varies across the shared office and largely depends on available facility in the apartment. The range of rent charged par day is #2,000 - #5,000 and for month is #20,000 - #40,000. Figures 3&4 show the example of the settings of shared office space facilities in FCT, Abuja, Nigeria.

Table 1 Summary of literature reviewed

Authors	Research Focus	Major Findings	Gap
COVID-19 and Global Economic Crises			
Verschuur, Koks and Hall (2021)	Global economic impacts of COVID-19 lockdown measures stand out in high-frequency shipping data	The authors discovered that manufacturing companies are the hardest hit sector, total collapse of value-chain in the port industry, attributed the negative Covid-19 impact to closure of school and public transport.	The study concentrated on the impact of Covid-19 on shipping service industry
Ozili P. and Arun T. (2020)	Spillover of COVID-19: impact on the Global Economy	Increasing number of lockdown days, monetary policy decisions and international travel restrictions severely affected the level of economic activities and the closing, opening, lowest and highest stock price of major stock market indices	The study examined the global economic situation amidst Covid-19 pandemic.
Maliszewska, Mattoo and Mensbrugghe (2020)	The potential impact of COVID-19 on GDP and trade	The study reported a decrease in the global domestic output below global GDP benchmark, with output of domestic services and traded tourist services having the biggest negative impact.	The authors did not examine real estate services in isolation.
COVID-19 Implications on Local Economy: Nigeria Experience			
Andam, Edeh, Oboh, Pauw and Thurlow (2020)	Impacts of COVID-19 on food systems and poverty in Nigeria	The study found that the country GDP fell by 23% at the pandemic period, while agro-food system alone fell by 11% and the lockdown scenario contributed 9% rise in the nation poverty level	The study is limited to food-system sector of the economy

Table 1 cont'd Summary of literature reviewed

Ozili (2020)	COVID-19 pandemic and economic crisis: the Nigerian experience and structural causes	The author discovered that spillover effect of Covid-19 pandemic cause a decline in the demand for oil product and disturbed economic activities from taking place.	The result did not specifically address the condition of property market at the pandemic period
Oyedeji (2020)	The Impact of COVID-19 on Real Estate Transaction in Lagos, Nigeria	Transaction in hospitality, retail and office property markets experienced prominent impact of COVID-19 pandemic and about 77.63% attested to the static condition of real estate transactions at the pandemic period.	The office market considered is general and may not depict the true condition of shared office spaces sub-market experience
Olanrele and Thontteh (2020).	COVID-19 and the 'New Normal': Implications for the Nigerian Real Estate Sector	The authors observed a negative effect of the global health crises on property market, with a plunge on the short run, and a capital flight from real estate to digital services investment due to changing working style of people (new normal).	The result lacks empirical basis of assessing real estate sector
Co-working Offices Space: Concept and Characteristics			
Yank and Bisson (2019)	Coworking space as a third-fourth place: changing models of a hybrid space in corporate real estate	The study pointed out that, co-working spaces will grow worldwide reasons attributed to increase in knowledge based economy, digital working lifestyle and mobile technology.	The investigation of co-working spaces is limited to its concept and characteristics
Spinuzzi Bodrozic, Scaratti, and Ivakli (2019)	Community in coworking	Co-working space is driven by the logic of coexisted with another and the logic of collaborative community	The study assessed the attributes of co-working spaces.
Vanichvatana (2018)	Investigating users' Perspectives of coworking Space: Cases of Bangkok CBD	80% of the users visited co-working space, spent minimum of 1 hour per visit with average of 3-4 time per week, while the choice of place is largely depend on location	The users' perception of Bangkok on co-working space is limited to the case study
Seo, Lysiankova, Ock, and Chun, (2017)	Priorities of Coworking Space Operation Based on Comparison of the Hosts and Users' Perspectives	The most important success factors by the hosts were community, communication, space and interior, service diversity and price plane. While the users prioritized relationship facilitation, service diversity, price plane and networking	The study did not considered the impact of external forces on the business performance
Vanichvatona (2017)	Characteristics Of Co-Working Spaces In Bangkok	Most co-working spaces are fixed/hot desk, located at central business districts (CBDs), often provided with Wi fi, snacks, drinks, printing, mail box and projector	Limited to characteristics of co-working space.
Gandini, (2015)	The rise of coworking spaces: A literature review	The study concluded that manifestation of a rethinking work to facilitate network of collaborative production in the core urban centres.	The study deployed context review approach and lack empirical findings

Sources: Authors 'Compilation from reviewed literature, 2021

MATERIAL AND METHOD

Study Area

The study used FCT, Abuja, Nigeria as the case study. FCT Abuja is a cosmopolitan city and the seat of federal power in the country. The city has witnessed a strong wave of physical, demographical, social and infrastructure growth and development in the recent decades. FCT Abuja is the home of affluence, political and individual, conglomerate of top government offices, head offices of organisations and potential real estate investment destination. The Abuja property market is characterised with high rent/value. The office sub-market of the city comprises sky scrapers super structure and command higher market rent.

The choice of using FCT, Abuja is attributable to the fact that, FCT has often times reported by the concerned authorities as the second epicenter since the outbreak of the coronavirus after Lagos. For instance, NCDC reported a total case of 67,412 and 87,510 at month end of November and December 2020 respectively. Lagos state recorded the highest case of 23,238 and 30,188 in those two months; followed by Abuja having cases of 6,770 and 11,705. In January 2021, Abuja has 16,565 Covid 19 cases next to Lagos with 47,819 cases out of a total case of 128,674 reported across the country (Nigerian Centre for Decease Control; NCDC, 2020, 2021). The upsurge in the number of cases is attributed to non-adherence to the safety protocol on the part of citizens. This has further strengthened the advocacy on Covid 19 safety protocol particularly in the epicenter with more emphasis on social distancing, wearing of facemasks in the public places, intermittent stay-at-home order among others. As a result, the economic activities in all sectors experienced huge setback including property market such as hospitality, leisure, recreation and shared office facilities but at varying degrees.

Method

The study is descriptive and non-probabilistic in nature. A purposive sampling technique was used to elicit data from 16 managers (host) and 58 users of selected shared office facilities. The choice of selection was based on location (central capital), those in operation and are willing to participate in the survey exercise. A total of 16 managers (host) of shared offices spaces were administered questionnaire, while some of them that showed interest to be interviewed (less than 20%) were engaged with discussions on the subject matter of the study. For the users, a total of 58 questionnaires were distributed to them with the aid of two trained research assistants, on the permission of the host. Some users declined to participate and gave reasons such as tight schedule and limited time, while other users see the survey as a means of distraction. Therefore, the questionnaire survey was not done proportionately but consideration was given to users that showed interest to participate, and their size vary across the sampled shared office spaces. Also, the period of the field survey exercise which was towards the end of the first wave of the novel coronavirus (September to October, 2020) contributed to the few number of the shared office spaces that opened for business activities and low response rate recorded during the field survey exercise.

The responses gotten from the survey exercise were analyzed by descriptive statistical tools such as frequency distribution table, percentage and weighted mean score (WMS). The study measured the respondents' options on 5-point Likert

scale. The scale with corresponding assigned weight is given as Strongly Disagree (SD: 1); Disagree (D: 2); Unsure (U: 3); Agree (A: 4) and Strongly Agree (SA: 5). The weighted mean score (MWS) can be expressed mathematically as:

Weighted Mean Score (WMS) = $\frac{\sum TWF}{N}$ ---------- eqn (i)

(1≤ MWS≤5)

Where

w = assigned weight ranges from 1 (least) to 5 (highest)

TWF = total weighted frequency

N = total number of respondents.

However, for clarity of boundary for proper ranking and rating of the estimated weighted options, the study adapted the ranking demarcation of Rooshdi, Majid, Sahamir, and Ismail (2018). The ranking style was modified to suite the study analysis (see Table 2).

Table 2: Scale for weighted options

Likelt Scale	Authors' Specification for RI		Modifications by the study	
	Scale Range	Remarks	Scale Range	Remarks
5	0.8 ≤ RI ≤ 1.0	High	4.1 ≤ WMS ≤ 5.0	Strongly Agreed
4	0.6 ≤ RI ≤ 0.8	High-Medium	3.1 ≤ WMS ≤ 4.0	Agreed
3	0.4 ≤ RI ≤ 0.6	Medium	2.1 ≤ WMS ≤ 3.0	Unsure
2	0.2 ≤ RI ≤ 0.4	Medium-Low	1.1 ≤ WMS ≤ 2.0	Disagreed
1	0 ≤ RI ≤ 0.2	Low	0 ≤ WMS≤ 1.0	Strongly Disagreed

RESULTS AND DISCUSSION

The study examined the socio-demographical distribution such as age, gender, marital status and highest educational qualification of those who manage as well as the users of shared office facilities in FCT, Abuja; and the results were presented in Table 3. The age bracket of the managers with highest parentage (43.75%) is 31-40yrs. Second to the age group is 41-50yrs with 37.5%. Age range of 21-30yrs and 51-60yrs represent 12.5 and 6.25% respectively, while none of the managers were found within the age ranges of less/equal to 20yrs or more than 60yrs. For the users of the office facilities, 36.20, 31.03 and 22.41% of them were in the age range 31-40yrs, 21-30yrs and 41-50yrs respectively. Age bracket 51-60yrs accounts for 6.90%, less than equal 20yrs is 3.45% while users' in the age group above 60yrs were not represented.

The gender type of those who manage the facilities are more of female (56.27%) than their male (43.75%) counterpart. While 62.50% of the managers are married; 37.50% are yet to be married. However, the male category of users recorded higher

percent (63.79%) than the female users (36.20%). Lager percent of the users were married (48.27%) and 37.93% of them were singles. Divorce accounted for 8.63% while 5.17% were either widow or widower. Managers that have obtained HND/B.Sc. and M. Sc. account for 81.25 and 18. 75%. For the users, 79.31% have possessed HND/B.Sc. while those with M. Sc. degree represent 18.96%.

By implications, the shared office facilities are patronized by all age brackets, whether married or single but at varying degrees; with dominant age group 31-50yrs. This age group dominated the country's workforce in the labour market. The management of the facilities are more of females than the male counterpart and majority of them are single. This may be due to the less rigour and energy demand task characterized with the operations of the time sharing office space system. Also, the unique nature of feminine gender in the area of warm reception could make business owners prefer female to male managers.

Table 3 Socio-demographical characteristics of the respondents

Profile	Category	Managers		Users	
		Freq.	%	Freq.	%
Age	<20yrs	-	-	2	3.45
	21-30yrs	2	12.50	18	31.03
	31-40yrs	7	43.75	21	36.20
	41-50yrs	6	37.50	13	22.41
	51-60yrs	1	6.25	4	6.90
	>60yrs	-	-	-	-
	Total	16	100.00	58	100.00
Gender	Male	7	43.75	37	63.79
	Female	9	56.27	21	36.21
	Total	16	100.00	58	100.00
Marital Status	Single	10	62.50	22	37.93
	Married	6	37.50	28	48.27
	Divorcee	-	-	5	8.63
	Widow/widower	-	-	3	5.17
	Total	16	100.00	58	100.00
Highest Educational Qualification	NCE/OND	-	-	-	-
	HND/B.Sc.	13	81.25	46	79.31
	M.Sc.	3	18.75	11	18.96
	Ph.D	-	-	1	1.73
	Total	16	100.00	58	100.00

Source: Authors 'Field Survey, 2020

In Table 4, the study looked into the areas of specialization of the managers especially in the built environment on one hand and the nature of the business activities engage in by the users of the shared office space on the other hand. The result of the analysis showed that, managers with expertise in estate/property management account for 43.75%; those with specialties in facility management profession represent 12.50%. Number of personnel from engineering related field was examined in the course of survey while those managers in the category of 'others' represent 43.75%. This implies that the employment of management

personnel of shared office space facilities is not limited to estate/property management field, as other professions can be employed for the job. Low employment of experts in facility management profession is attributable to the less qualified professionals in the field; and most of the qualified ones engage in managing sophisticated and equipped quipped property such as high rise buildings. Those managers whose their specialization falls in the category of 'others' indicates experts from other professions such as architecture, quantity surveying, building etc. and by extension from accounting, law, businesses administration etc.

From the users' perspective, the study investigates the nature of business engaged in while making use of the facilities. The study found that, 36.21% of the users work as an independent professional/freelance. Users who are identified as start-up/young entrepreneurs represent 25.86%. Those that work with corporate organizations/businesses and the governments represent 22.42 and 20.34% respectively; while 5.17% of the users fall in the 'others' category as shown in Table 4 This result implies that, shared office space facilities are mostly used by individuals who are working independently either as a professional such as experts in ICT related businesses or as a freelance in mass communication/advert industry. The patronage of some users working with national/international corporate bodies and non-governmental organizations (NGOs) were also noted to be substantial. Officials from government ministries, departments and agencies also patronized the office facilities though at relatively lower rate. Therefore, the facilities are available for use to people from all works of life though the rate of patronage vary and largely dependent on their nature of the business activities.

Table 4 Managers area of specialization and users' nature of business

Response	Category	Freq.	%
Manages area of specialization	Estate/Property Management	7	43.75
	Facility Management	2	12.50
	Engineering	-	-
	Others	7	43.75
	Total	16	100.00
Users nature of business	Independent professionals/ Freelancer	15	25.86
	Start-Up/Young Entrepreneurs	21	36.21
	Corporate Businesses/ Organizations	13	22.42
	Government Officers	6	10.34
	Others	3	5.17
	Total	58	100.00

Source: Authors 'Field Survey, 2020

Table 5 presents the opinions of the managers on the general performance of the business especially amidst the rising Covid 19 related cases in the epicenter of Abuja. The study examines the public awareness, performance and consequential impacts as well as the likelihood prospects of the business especially at the post Covid era. The managers agreed on the competitive performance (WMS: 4.313) of

the business in the study area though the business was identified to be a young and evolving concept in the office property market (MWS: 3.063). The managers expressed strong agreement on the negative impact of Covid-19 pandemic being felt by all business concerns (WMS: 4.689). However, the manager were optimistic about the possibility of the shared office spaces market to come out stronger and perform better at post-Covid 19 era (WMS: 4.563).

Table 5 Operations of shared office space market amidst Covid 19 pandemic 19 in FCT, Abuja

Statements	SD	D	U	A	SA	TWF	WMS	Rating
Covid19 pandemic has negative effects on the operation of the business	-	-	-	20	55	75	4.689	Strongly Agreed
High optimistic about the performance of the market at post-Covid 19	-	-	-	28	45	73	4.563	Strongly agreed
The market perform competitively	-	-	-	44	25	69	4.313	Agreed
Increasing rate of adoption of the office type in FCT, Abuja	1	6	18	24	-	49	3.063	Unsure

Source: Authors 'Field Survey, 2020. Note: SD-Strongly Disagreed; Disagreed-D; Unsure-U; Agreed-A; Strongly Agreed-SA; Total Weighted Frequency-TWF; Weighted Mean Score-WMS

In Table 6, further analysis was carried out to know the major reasons why the users prefer the co-working environment like shared office space to conventional office type. The result of the analysis shows that, people choose to patronize and work in shared office space due to some prominent reasons. They are (WMS): affordability (4.069), concentration (3.879), and flexibility of time/time plan (3.793) and strategic location (3.707) ranked 1st, 2nd, 3rd and 4h position respectively; while reasons such as convenience and networking have 3.672 each and occupied 5th position. However, some reasons relating to relaxation/recreation activities (2.448) and study/researching (2.431) were identified to be the least forms of reasons in the study area.

The increasing rate of patronage and users' preference for shared office space in FCT, Abuja is strongly linked to affordability and flexibility of time/price plan in terms of letting and other incidental costs of getting shared office accommodation. Most of the users are either independent professionals/freelance or start-up/young entrepreneurs. These categories of private individuals are attributable to low earning capacity, little capital/finance and largely small scale businesses; and they may not be able to afford the rental price and maintenance of conventional office property especially those located at strategic places in the Central Business Districts (CBD). The users also rate conveniences and concentration as part of the major reasons of patronage; users in this category may include those working with corporate bodies/ NGOs. Some of them secured the office facilities to avoid distraction from friends and colleagues in their conventional office (head/branch offices), while some that considered convenience as top priority could be either those who enjoy working independently or in collaboration with others in such co-working environment.

Another prominent reason that is been considered by users is the strategic location of the facilities to place of interest. Almost all the shared office spaces are located at prime location within the capital territory where economic activities and business

transactions is at pick. However, those small scale business, contracts, professionals, or freelancers that cannot afford to get conventional office space at the city centers of commercial activities often leverage on shared office space facilities present around those areas to do their office work. However, reasons such as relaxation/leisure activities were less important for visiting shared office space. The less significant of these reasons may be attributed to the fact that, share office spaces do not have complementary accommodation to enjoy quiet time for leisure and recreational activities. Studying/researching in a co-working environment may not be encouraging due to the nature of the activities that the facilities were made for. Rather people prefer to visit leisure/recreational centers for fun play or library for academic work.

Table 6 Reasons for patronage of the shared office facilities by the users

Reasons	SD	D	U	A	SA	TWF	WMS	Ranking
Affordability	-	-	33	128	75	236	4.069	1
Concentration on job	-	-	57	108	60	225	3.879	2
Flexibility of time/price plan	2	4	48	96	70	220	3.793	3
Strategic location	3	16	18	108	70	215	3.707	4
Convenience	-	-	69	124	20	213	3.672	5
Networking	1	6	48	128	30	213	3.672	5
Office facilities	-	10	42	140	20	212	3.655	7
Recreation/leisure	13	44	21	64	-	142	2.448	8
Studying/research	7	58	36	40	-	141	2.431	9

Source: Authors 'Field Survey, 2020 Note: SD-Strongly Disagreed; Disagreed-D; Unsure-U; Agreed-A; Strongly Agreed-SA; Total Weighted Frequency-TWF; Mean Weighted Score-WMS

On the other hand, the views of the managers were examined on some challenges encountered in the operations of the business amidst the rising cases of Covid 19 in the study area. Their submissions were analyzed via WMS and presented in Table 7. The result of the analysis showed that low patronage/demand and passive economic activities were ranked in the 1st and 2nd position having WMS of 4.688 and 4.063 respectively. Users' psychological effects (4.000); increase in maintenance cost (3.873) and decrease in lettable space capacity (3.250) occupied the 3rd, 4th and 5th position. The least challenge experienced by the managers is the low compliance of the users to Covid-19 safety protocol and overstressed office facilities with WMS 1.938 and 1.438 respectively.

Generally, the adverse effects related to Covid 19 outbreak are felt in all sectors of the economic activities across the country. The strong indication of the managers experiencing low level of patronage/demand as a result of passive economic conditions signals that business operations in co-working office sub-market is not an exception to the global health pandemic effects. Like other business, the health crisis caused drastic reduction in the level of users of shared office facilities, which will in turn have negative effect on the return on investment.

Some other prominent challenges are increase in cost of maintenance, users' psychological effect and decrease in lettable space capacity. The need to procure some Covid-19 safety protocol kits such as hand sanitizer, nose mask, water stand for regular washing of hands etc. as mandated by concern authorities will result

into adding extra-cost to the business operations. Also, the regular public orientations about how to contact and preventive measures to be observed to avoid being contacted contribute to reduction in the patronage. The increase in lettable space capacity of the office sharing could be as a result of the need to increase spacing to ensure social distancing.

However, the least forms of challenges identified by the managers are accessibility to safety kits, low compliance with the safety protocol and over stretched facilities. The managers witness less challenges in these area of their business operations because people have been well informed and sensitized through all available media; especially the educated ones, who are extra conscious of getting contracted with the novel coronavirus. To ensure public/community health safety, the non-pharmaceutical Covid 19 prevent kits were made available at affordable rate and accessible to all. Challenges such as overstretched office facilities become insignificant due to low level of patronage experienced as a result of the rising wave of the pandemic.

Table 7 Challenges of encountered in the operation of shared office space market amidst covid 19 pandemic in FCT, Abuja

Challenges	SD	D	U	A	SA	TWF	WMS	Rank
Low patronage/demand	-	-	-	20	55	75	4.688	1
Passive economic activities	-	-	6	44	15	65	4.063	2
Users' psychological effects	-	-	9	40	15	64	4.000	3
Increase in the cost of business operation	-	-	12	40	10	62	3.873	4
Decrease letable space capacity	-	8	18	16	10	52	3.250	5
In accessibility to Covid preventive kits	2	12	9	20	-	43	2.688	6
Low compliance of users' with Covid 19 safety protocol	7	12	3	4	5	31	1.938	7
Overstressed office facilities	10	10	3	-	-	23	1.438	8

Source: Authors 'Field Survey, 2020, Note: SD-Strongly Disagreed; Disagreed-D; Unsure-U; Agreed-A; Strongly Agreed-SA; Total Weighted Frequency-TWF; Mean Weighted Score-WMS

Analysis in Table 8 aims at revealing the prominent components of non-pharmaceutical Covid-19 safety measures that affect the operations of shared office space market and to what extent in the study area. The components are stay-at-home order, social distancing, regular washing of hands, use of hand sanitizer and wearing of face mask in public places. The managers ranked the adverse effects of stay-at-home order (4.438) and social distancing (4.125) relatively higher and occupied 1st and 2nd position in that order, while the impact of hand sanitizer (1.567); wearing of face mask in public (1.438) and regular washing of hands (1.375) were rated relatively low and occupied 3rd, 4th and 5th position respectively on the ranking table.

The strict enforcement of stay-at-home order and social distancing become necessary owing to the rising cases of the deadly novel virus in the country. Government was forced to compel people to stay at home and strongly discouraged social gatherings/events in a bid to curtail the virus. But the measures have negative impact on the economy at aggregate level and operation of

businesses including shared office space ventures. However, the less prominent effects of non-pharmaceutical Covid 19 safety measures such as hand sanitizing, washing of hands and the wearing of face mask in public places can easily be complied with without having serious havoc on economic activities.

Table 8 Non-pharmaceutical Covid 19 protocol affecting operation of shared office space in FCT, Abuja

Covid 19 Safety Measures	SD	D	U	A	SA	TWF	WMS	Ranking
Stay-at-home order	-	-	-	36	35	71	4.438	1
Social/physical distancing	-	-	9	32	25	66	4.125	2
Hand sanitizing	8	14	3	-	-	25	1.563	3
Wearing of facemask	9	14	-	-	-	23	1.438	4
Washing of hand regularly	10	12	-	-	-	22	1.375	5

Source: Authors 'Field Survey, 2020 Note: SD-Strongly Disagreed; Disagreed-D; Unsure-U; Agreed-A; Strongly Agreed-SA; Total Weighted Frequency-TWF; Mean Weighted Score-WMS

CONCLUSION AND RECOMMENDATIONS

The study analyzed the attendant effects of Covid-19 pandemic on co-working environment of shared office spaces using FCT, Abuja as a case study. The primary objectives of the study include the operations of the business, users' preference for patronage, impact of the novel coronavirus and associated challenges encountered by the managers. Opinions of the managers and the users of shared office space facilities office were sampled and analysed via descriptive statistics. The study found out that shared office space market is worst hit by Covid-19 pandemic most especially the consequent effects of non-pharmaceutical Covid 19 safety measures such as stay-at-home order and social distancing. However, the users who are majorly independent professionals/freelance and the start-up/young entrepreneurs prefer the co-working environment to conventional office type due to some prominent reasons such as affordability, conveniences, flexibility of time/price plan, concentration on job and strategic location of shared office space facilities to individuals place of interests. The prominent challenges experienced by the managers are low patronage/demand, passive economic activities, increased maintenance cost; while issues relating to adherent to the safety protocol, accessibility to safety kits and overstretched on office facilities were the least challenges in the study area. Conclusively, the wrath of the novel coronavirus dose not spare the emerging and innovative flexible working environment; as worst hit was felt on operations of the shared office spaces and by extension the real estate market generally.

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