

EXPLORING THE IMPACT OF COWORKING “SPACE AS A SERVICE (SPAAS)” BUSINESS MODEL ON THE COMMERCIAL REAL ESTATE SECTOR: A SYSTEMATIC LITERATURE REVIEW

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Abstract

In the last decade, the development of flexible workspaces has become a global phenomenon. It is forecasted that by 2030, buildings will quickly and flexibly respond to the demands of those who occupy them. Indications of such transformations are evident even in the contemporary real estate arena. Coworking which is defined as the ‘third wave of virtual work’ is paramount in such transformations. However, despite this advancement and acknowledgment of success of these workspaces in the commercial real estate market, a limited number of academic studies exist. Further, attempts made on consolidating the existing knowledge base is not adequate. Thus, the aim of this paper is to review the existing literature and identify common themes and interesting research gaps in the coworking space business model for future research. Through this systematic review, 24 articles were reviewed. This review included quantitative, qualitative and mixed approach research articles published on coworking space context during the past five years. A comprehensive review was done using eight key rubRoyal Institute of Chartered Surveyors . Finally, many important gaps in the existing literature were identified on the coworking space context and sharing economy and directions for future investigations were provided.

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Keywords: Flexible Workspaces; Coworking Space; Future of Work; Commercial Real Estate Industry; Systematic Literature Review

Introduction

The flexible or fluid workspace is the leading prediction made in the “Age of Responsive Real Estate” that will be promoted widely in the coming decade (CBRE Research, 2020) along with the paradigm shift of Space-as-a-Service (SPaaS) in the commercial real estate industry around the globe. These trends that are defining the future of work have been accelerated as organisations have had to adjust during the Covid -19 pandemic (Beck, 2020). Further, it is forecasted that by 2030, buildings will quickly and flexibly respond to the demands of those who occupy them. Indications of such transformations are evident even in the contemporary real estate arena. For instance, the emergence of different innovative working models is spreading at an accelerating speed with the expansion of smart cities, emergence of sharing culture, advancements in digital technology, (Yu, Burke and Raad, 2020), growing preferences for flexibility and increasing number of remote workers, startups and entrepreneurs, etc. (Gibson and Lizieri, 1999; Laterveer, 2011). These changes in working models have enabled more flexible work while facilitating people to work outside of traditional workspaces (Garrett, Spreitzer and Bacevice, 2017). Consequently, the office market has transformed providing a

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number of new forms of multi-tenant offices. Coworking which is defined as the ‘third wave of virtual work’ is paramount in such transformations (Johns and Gratton, 2013). Coworking spaces offer a community-driven environment with services and activities that stimulate relationships and collaboration among tenants (Sykes, 2014).

The eighth goal of the sustainable development goals (SDGs) also reveals the importance of promoting decent work and economic growth which will lead to improved sustained economic growth, higher levels of productivity and technological innovation (UNDP, 2015). Therefore, studying these modern concepts and trends in the real estate industry is essential to be updated with the existing condition as well as to capitalize future potentials. Thus, this paper can make a valuable contribution. The rest of the paper is structured as follows: problem identification, objective of the study, research questions, literature search, methods, and rubRoyal Institute of Chartered Surveyors selected for the analysis, results and discussion and the conclusion.

Problem Identification

These trends toward flexible working models including coworking spaces inevitably have a significant impact on the economy and environment, as well as future urban designing and planning (Yu, Burke and Raad, 2020). Despite the advancement and acknowledgment of success of these flexibility trends in the commercial real estate market, scholars have paid scant attention to the coworking context (Johns and Gratton, 2013, Spinuzzi, 2012). Thus, limited academic literature exists on the characteristics of flexible space users, coworking spaces, flexibility elements included and also on the impact of coworking spaces on the organisational context such as work productivity, community building, and collaboration. Further, evidences are not strong on the impact of flexible workspaces on urban designing, planning as well as on the real estate market context. Thus, it is imperative to have a comprehensive outlook to consolidate the existing knowledge base as only a very few studies have attempted to consolidate the prevailing literature on this area (e.g. Yu, Burke and Raad, 2020). There are only a very few critical reviews of the coworking to date (Gandini, 2016; Waters-Lynch and Potts, 2017). However, they have not covered and identified all the trends in flexible workspace studies. Hence, a review connecting expected business models, estimated demand and anticipated outcomes with identified impacts is a necessity, as it fosters a more holistic approach and reveals interesting research gaps.

Objective of the Study

Given the variety of perspectives represented, there is a great need to collect and connect what has been done, and to identify some common themes, which will serve as a basis for future discussions on the crucial roles played by coworking spaces in the access-based and sharing economy. Accordingly, the purpose of this study is to consolidate the existing knowledge base on coworking spaces which will reveal interesting research gaps for future research.

Research Questions

Using a systematic review technique, this paper assesses the extent of academic literature to answer four research questions:

- I. What are the common research questions and aims set on coworking space communities and its related fields?
- II. What research designs have been used in studies on coworking space communities?
- III. What are the research findings and trends found in the field of coworking space?
- IV. What are the significant impacts of coworking space to urban designing and planning?

Methods

The systematic literature review process is used as the methods for this review. A systematic review is a review of the research literature whose aim is to arrive at conclusion about the state of knowledge on a topic based on a rigorous and unbiased overview of all the research that has been undertaken on that topic. For this purpose, the selection of the articles was based on the research areas of business, building, urban planning and management, smart sustainable communities and technology. In line with best practice (Short, 2009), Web of Science, Science Direct, Emerald Insight, Jstor, and related databases were used to identify peer-reviewed articles published during the last five years with flexible workspaces including coworking spaces and related terms in their title or keywords.

Literature Search

Working models are facing a rapid evolution towards flexibility and mobility due to various reasons including the rapid technological development, changing organization structure and work requirements (Morrison and Macky, 2017). Therefore, traditional workplace transforms to flexible workplace models such as co-working spaces, teleworking, digital working hubs, on demand spaces, etc. (Yu, Burke and Raad,2020). Coworking involves 'a diverse group of people who don't necessarily work for the same company or on the same project, working alongside each other, sharing the working space and resources' (De Guzman and Tang, 2011, p. 22). To search literature on this innovative business model, a total of four scientific databases were chosen to search for articles, namely; Emerald Insight, Science Direct, Directory of Open Access Journal and Research Gate. This section covers all relevant aspects of the literature search (search words, databases, inclusion and exclusion criteria and the number of papers found at each state) and description of how the analysis is based. Tables 01, 02 and 03 summarizes the articles reviewed.

Royal Institution of Chartered Surveyors Selected for the Analysis

The literature search was done based on the Royal Institute of Chartered Surveyors ; research objectives and research questions, material included, population/ sample, research design, measures/analytical tools (data analysis), results and conclusions, credibility and reliability (validity and dependability) and future research areas. The articles reviewed for writing this paper basically include quantitative and qualitative research while some articles have used a mixed approach. Table 01 shows the terms and concepts extracted from the exploratory search, whereas Table 02 lists down the qualitative, quantitative and mixed approach studies and Table 03 summarizes the main Royal Institute of Chartered Surveyors applied with overall reference to articles reviewed.

Results and Discussion

The review consisted of three phases: an initial exploratory investigation was done to bring conclusions about the existing body of knowledge. As the initial phase of the review, the researchers followed the terms "coworking," and "flexible workplace" in order to identify a first set of articles. The main aim of the first phase of literature search is to generate "entry terms" (see Table 01) that support literature review (Bates, 1976). The search was carried out only in Emerald Insight, Science Direct, Directory of Open Access Journal and Research Gate in order to make use of standardized articles. There are a number of associated terms in literature since the flexible workplace concepts are changing unceasingly (Weijs-Perrée, Appel-Meulenbroek, Vries and Romme, 2016) and a strong consensus about the boundaries between those concepts was not available. "Coworking" is the key terms used to formulate subsequent entry terms for

instance, “sharing economy”, “activity-based workplace”, “collaborative workplace”, “Nordic workplace”, “service office”, “business centers” and “business hubs”. Due to the ambiguity of some of the search terms, the result set contained some irrelevant papers. For instance, the term ‘hybrid workplace’ returned publications on information technology had no relation to the coworking spaces. Furthermore, some result sets occur difficulty to differentiate relevant articles due to similarity of terms. As an example, the term coworking returned publications on coworking concepts which are not relevant to coworking spaces or flexible workplaces. To address this, papers which did not concern coworking spaces or flexible workplace in any way were removed from the review manually.

Second and third phases of the analysis were done using the articles collected through the first search. In the second phase of the review research articles were coded into three categories based on research approach (refer Table 02). This systematic review included both quantitative and qualitative research while some of them are based on a mixed approach. The third phase of the analysis of the articles indicates how important it is to introduce different theoretical concepts, models and research methodologies to study emerging coworking space concepts. The systematic review was done based on the rubRoyal Institute of Chartered Surveyors ; research objectives and research questions, material included, population/ sample, research design, measures/ tools, results and conclusions, credibility and reliability and future research area.

Table 1: Terms and Concepts Extracted from the Exploratory Search

Term/ Concept	Example Studies
“Coworking”	(e.g. Ivaldi, Galuppo, Calvanese and Scaratti, 2020; Luo and Chan, 2020; Rese, Kopplin and Nielebock, 2020; Perera, Perera and Jayasena, 2019 ;Walden, 2019; Orel and Kubátová, 2019; Bouncken and Aslam, 2019; Bueno, S., Rodríguez-Baltanás, G. and Gallego, M. D, (2018); Bianchi, Casnici and Squazzoni, 2018; Seo, Lysiankova, Ock and Chun, 2017; Jakonen, Kivinen, Salovaara and Hirkman, 2017; Garrett, Spreitzer and Bacevice, 2017)
“Service office ”	(e.g. Appel-Meulenbroek, van de Kar, van den Berg and Arentze, 2019)
“Sharing economy” + “Coworking”	(e.g. Bouncken, Ratzmann, Barwinski and Kraus, 2020)
“Activity-based workplace”	(e.g. Clifton, Fuzi and Loudon, 2019)
“Collaborative workplace”	(e. g. Orel, 2020; Orel and Almeida, 2019 ; Weijs-Perrée, van de Koeving, Appel-Meulenbroek and Arentze, 2019; Oliva and Kotabe, 2019; Durante and Turvani, 2018; De Vaujany, Dandoy, Grandazzi and Faure, 2018)
“Nordic workplace”	(e.g. Nenonen and Lindahl, 2017)
“ Business centers”	(e.g. Mayerhoffer, 2020; Weijs-Perrée, Appel-Meulenbroek, Vries and Romme, 2016)
“Business hub”	

Source: Analysis Data, (2020).

Table 2: Summary the Qualitative, Quantitative and Mixed Approach Articles

Approach	Articles
Qualitative	Orel, M., (2020). Supporting work-life balance with the use of coworking spaces.
	Luo, Y. and Chan, R. C. K. (2020). Production of coworking spaces: Evidence from Shenzhen, China.
	Mayerhoffer, M. (2020). Growth factors of the coworking industry: the case of Prague.
	Ivaldi, S., Galuppo, L., Calvanese, E. and Scaratti, G. (2020). Coworking space as a practiced place between welfare working and managerial challenges.
	Perera, W. Y., Perera, B. A. K. S. and Jayasena, N. S. (2019). Adaptability of the shared workspace concept, for office buildings in Sri Lanka.
	Orel, M., Kubátová, J., (2019). Coworking as a model for conscious business.
	Bouncken, R. and Aslam, M. M., (2019). Understanding knowledge exchange processes among diverse users of coworking-spaces.
	Orel, M. and Almeida, M. M. A. (2019). The Ambience of collaboration in coworking environments.
	Walden, J. (2019). Communicating role expectations in a coworking office.
	De Vaujany, F. X., Dandoy, A., Grandazzi, A. and Faure, S. (2018). Experiencing a New Place as an Atmosphere: A Focus on Tours of Collaborative Spaces.
	Bianchi, F., Casnici, N. and Squazzoni, F. (2018). Solidarity as a byproduct of professional collaboration: Social support and trust in a coworking space.
	Nenonen, S. P. and Lindahl, (2017). Nordic workplace concept development from office as a city to city as an office.
	Jakonen, M., Kivinen, N., Salovaara, P. and Hirkman, P. (2017). Towards an Economy of Encounters? A critical study of affectual assemblages in coworking.
	Garrett, L. E., Spreitzer, G. M. and Bacevice, P. A. (2017). Co-constructing a Sense of Community at Work: The Emergence of Community in Coworking Space.
	Rese, A., Kopplin, C. S., and Nielebock, C. (2020). Factors influencing members' knowledge sharing and creative performance in coworking spaces.
Weijs-Perrée, M., van de Koevering, J., Appel-Meulenbroek, R. and Arentze, T. (2019). Analysing user preferences for co-working space characteristics.	
Appel-Meulenbroek, R., van de Kar, M., van den Berg, P. and Arentze, T. (2019). Employees' preferences for services and facilities offered in serviced offices.	
Quantitative	Clifton, N., Fuzi, A., and Loudon, G. (2019). Coworking in the Digital Economy: Context, Motivations, and Outcomes.
	Durante, G. and Turvani, M. (2018). Coworking, the sharing economy and the city: which role for the coworking Entrepreneur.
	Bueno, S., Rodríguez-Baltanás, G. and Gallego, M. D. (2018). Coworking spaces: a new way of achieving productivity.
Mixed	Weijs-Perrée, M., Appel-Meulenbroek, R., Vries, B. D. and Romme, G. (2016). Differences between business center concepts in The Netherlands.
	Bouncken, R., Ratzmann, M., Barwinski, R. and Kraus, S. (2020). Coworking spaces: Empowerment for entrepreneurship and innovation in the

digital and sharing economy.

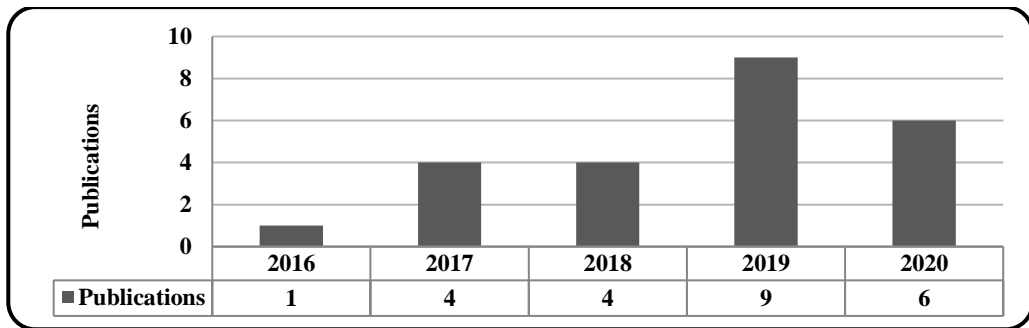
Oliva, F. L. and Kotabe, M. (2019). Barriers, practices, methods and knowledge management tools in startups.

Seo, J., Lysiankova, L., Ock, Y. S. and Chun, D. (2017). Priorities of Coworking Space Operation Based on Comparison of the Hosts and Users' Perspectives.

Source: Analysis Data, (2020).

According to the details mentioned in Table 02, majority of the related research was done using a qualitative approach since coworking space is an emerging research area.

Figure 1: Reviewed Articles by Year



Source: Author, (2020).

As shown in the Figure 01, a clear and significant increase in the publications on coworking space concept can be seen during the past two years; 2019 and 2020.

Table 3: Summary of Reviewed Articles based on the Main Royal Institute of Chartered Surveyors Applied

Royal Institute of Chartered Surveyors Used	Main Areas of Concentration
Research Objectives and Research Questions	It was revealed that most studies have been conducted focusing on organisational contexts while a few have done focusing on commercial real estate, urban planning and designing. The publications done in 2016 and 2017 have focused more on exploring the concept of coworking and its transformation and development in different countries. Most studies done in 2018 have focused on the impact of this transformation on elements in the organisational context. Comparatively, a higher number of studies are done in 2019 and 2020. With the expansion of coworking spaces, scholars have directed the studies, towards identifying success factors, barriers, user preferences, etc. Importantly, they have attempted to explore the impact of coworking space models on productivity, knowledge sharing, attitude, behavior and individual creativity, positive outcomes of coworking spaces and the ways that can be used to promote these services.
Material included	Most of the research is based on either models or descriptive patterns. Further, mathematical and computer models were

extensively used.

Population/ Sample	<p>Most studies are done in European, American and Asian regions. Samples include users, operators and experts, however, most of recent research has taken coworking space users as the sample rather than operators and other related parties. Sample size of studies that have adopted a qualitative approach ranges from 15 to 30 whereas samples in other studies range from 130 to 220.</p>
Research Design	<ul style="list-style-type: none"> ▪ Philosophy: majority have adopted positivism philosophies ▪ Approach: majority have adopted inductive approaches ▪ Strategy: extensively used strategies are surveys (through structured questionnaires), interviews (through semi-structured questionnaires), case studies and observations ▪ Methodical Choice: majority have used a mono method ▪ Time Horizon: almost all the studies are cross-sectional ▪ Technique: commonly used techniques are narrative analyses and statistical analyses
Measures/Analytical Tools (Data Analysis)	<p>As mentioned in Table 02, it was observed that most researchers have used qualitative data analysis tools while some other significant studies have used quantitative tools as well. In the meantime, several studies which have used mixed methods combining qualitative and quantitative methods were also observed. Narrative analysis, content analysis and model building were commonly used in data analysis</p> <p>Article review reveals that scholars have found the followings;</p> <ul style="list-style-type: none"> ▪ Coworking does not always support start-ups ▪ Coworking does not always ensure satisfaction ▪ Visual and acoustic security issues are the paramount barriers in coworking spaces ▪ Knowledge sharing and collaboration among users depend on various other factors ▪ the key motivation of working in coworking spaces is to have a better balance between work and personal life ▪ Other motivations include; physical proximity, socialization, collaboration opportunities, facilitate tacit knowledge exchange, ignite the social disembodiment of ideas, synthesize domain-related knowledge sharing and promote inter-domain learning ▪ Several amenities such as gym and childcare were not deemed as important by users ▪ The positive influence of social interactions and coworking environment on productivity is confirmed ▪ Intentional spatial design, curation of a space and the architecture of the building are important and those make a significant impact on the way that people move and encountered each other ▪ Endorsing, encountering and engaging are the key interactions that contribute to building a sense of community ▪ Relationship facilitation, service diversity, and price plan as having the highest priorities for sustainable coworking space operation
Results and Conclusions	

Credibility and Reliability (Validity and Dependability)

It has been able to identify that each research is equipped with almost all information to check 'validity and reliability.

Following areas have been suggested for future/ further research;

- Explore if coworking spaces should be promoted or not, if yes, how?
- Identify the best and most sustainable ways of promoting entrepreneurship through coworking spaces
- Analyse which preferred aspect of co-working spaces actually stimulates the interaction between co-workers, eventually creating a community.
- Gather data on other characteristics such as personality, activity profiles and actual use of each service and facility to identify evaluate effect of serviced office users' motives, activities and needs, both on organisational and end-user level
- Explore the influence of coworking on start-up rates
- Explore the influence of coworking on smart cities
- Explore the role of urban planning on promoting commercial real estate trends
- Further research should conduct considering more case studies basis
- Identify characteristics of coworking users to investigate whether the success of coworking business is also related to topology, structure and operating condition of start-ups.
- Explore how embodied phenomenological processes and practices impact customer relationships in contexts, such as after the signature of a membership contract
- Determine more about the advantages and disadvantages of coworking spaces in the development of new ways of doing business.
- Try in different countries to identify the cultural differences that affect the rankings of the users and the hosts' priorities.
- Consider parties other than start-ups as users within the coworking space, and the hosts' role as a control.
- Explore how organizations can strategically facilitate community work without causing a tension with members' felt authenticity.

Future Research Areas

Source: Analysis Data, (2020).

Conclusion

Scholars have identified that the development of flexible workspaces has become a global phenomenon during the last decade. Coworking which is defined as the 'third wave of virtual work' is paramount in such transformations (Johns and Gratton, 2013). Coworking spaces offer a community-driven environment with services and activities that stimulate relationships and collaboration among tenants (Sykes, 2014). Although the success of these flexibility trends is acknowledged in the commercial real estate market, a limited number of academic studies exist. Thus, this paper consolidated the existing literature to identify common themes and interesting research gaps for future research. Through this systematic review, over 24 articles were reviewed. This review was done using the rubRoyal Institute of Chartered Surveyors ; research objectives and research questions, material included, population/ sample, research design, measures/ analytical tools (data analysis), results and conclusions, credibility and reliability

(validity and dependability) and future research areas in the field of urban planning with special reference to smart sustainable communities. Accordingly, many important findings were recorded, and areas were identified for future/ further research. To conclude, although these trends in flexible workspace have a significant impact on urban designing and planning and also the commercial real estate industry, studies on these is scant. Most studies have done based on the organisational context. Thus, future research may consider studying these new trends focusing more on its impact on urban designing, planning and commercial real estate industry.

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