Coworking space users: a literature review on characteristics, motivations and workplace preferences in urban and non-urban areas

Thomas Vogl and Monique Hendrina Arkesteijn

Department of Management in the Built Environment, Faculty of Architecture and the Built Environment, Delft University of Technology, Delft, The Netherlands

Abstract

Purpose – This study aims to analyze and compare three dimensions of coworking space (CS) usage: user characteristics, motivations and workplace preferences, comparing the literature on urban vs non-urban CSs.

Design/methodology/approach – The methodological approach follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, known as PRISMA. Following the PRISMA checklist items, this study presents aspects from cross-sectional studies published over 13 years (2010–2023).

Findings – The research reveals user characteristics, motivations for choosing a CS and workplace preferences of users of urban and non-urban CSs. Even though user characteristics in urban and non-urban CSs appear similar, the literature highlights differences: studies on urban CSs often emphasize increased productivity as a motivator to rent a workplace in a CS. In contrast, literature on non-urban CSs focuses on the reduced time spent commuting. Furthermore, literature on urban CSs prioritizes affordability and neighborhood image, while users of non-urban CSs focus on service offerings and proximity to nature. These findings suggest that CS operators should tailor their value propositions based on location, with urban CSs emphasizing cost-effectiveness and non-urban CSs focusing on comprehensive services and natural settings.

Practical implications – The study's findings provide a practical lens for understanding the differences between CS in urban and non-urban areas from a user perspective. The insights from this research could inform the evolution of workplace requirements and strategy adaptations, with particular relevance for CS providers and organizations with CSs as part of their Corporate Real Estate Management (CREM) portfolio.

Originality/value – The existing body of literature has yet to explore the workplace preferences of CSs in non-urban locations. As CSs grow in non-urban areas and their characteristics may differ from their urban counterparts, this study sheds light on an under-researched area. Furthermore, no study has investigated the literature on CS user preferences systematically and compared the perspectives of urban and non-urban CS users.

Keywords User preferences, Urban areas, PRISMA, User characteristics, Coworking space, Non-urban areas

Paper type Research paper

1. Introduction

Coworking spaces (CSs) are collaborative and flexible working spaces with a community character (Avdikos and Merkel, 2020; Orel and Bennis, 2021). Since the mid-2000s, the

coworking model has gained popularity as an alternative to traditional office spaces and rigid working hours, first appearing in large metropolitan cities with concentrations of urban amenities, proximity to high-skilled workers, business hubs and public transportation (Mariotti *et al.*, 2017). Although empirical studies confirm that coworking is primarily an urban phenomenon (Merkel, 2019), CSs have increasingly emerged in non-urban areas, including peripheral, peri-urban and rural locations (Mariotti *et al.*, 2021; Vogl and Micek, 2022). Understanding CS adoption requires examining three interconnected dimensions. First, user characteristics encompass demographic and professional profiles, including age, gender, profession, industry sector and educational background. Second, motivations refer to the underlying drivers that lead individuals to choose coworking over alternative work arrangements such as home offices, traditional offices or other third places. Third, workplace preferences include specific location aspects (accessibility, affordability, neighborhood characteristics) and physical workspace attributes (layout, facilities, infrastructure) that influence CS selection.

Since Bouncken *et al.* (2016) identified limited understanding of how CS operators can design workspaces to meet varying user demands, researchers have investigated user motivations for choosing CSs (Appel-Meulenbroek *et al.*, 2021; Gauger *et al.*, 2020; Weijs-Perrée *et al.*, 2018) and identified commonalities and differences in workplace preferences among users of urban CSs (Appel-Meulenbroek *et al.*, 2021).

However, although recent studies indicate marked discrepancies between urban and non-urban CS characteristics (Vogl *et al.*, 2024a; Hölzel *et al.*, 2022), a significant knowledge gap remains regarding non-urban CS contexts. The majority of previous research has investigated CSs within urban districts (Nagy and Lindsay, 2018; Merkel, 2019; Gauger, 2021), with limited studies examining non-urban areas (Gabrielli and Fiorentino, 2022; Bosworth *et al.*, 2023). While Vogl and Akhavan (2022) systematically reviewed the scientific literature on economic and socio-cultural effects of CSs on non-urban areas, and Vogl and Orel (2024) systematically reviewed the scientific literature on CS impacts on residential areas, no study has systematically investigated the scientific literature on user characteristics, motivations, and workplace preferences while comparing users of urban vs non-urban CSs. This gap is particularly significant given that non-urban CSs demonstrate high organizational diversity in strategy, location, organizational forms, and functions (Bouncken *et al.*, 2020b; Vogl *et al.*, 2024a; Vogl and Micek, 2023; Migliore *et al.*, 2021).

Hence, this research contributes to the growing body of literature on non-urban CSs by systematically identifying differences between urban and non-urban CS users and, therefore, differs substantially from investigations with a general focus on workplace preference of CS users (among others Appel-Meulenbroek *et al.*, 2021; Weijs-Perrée *et al.*, 2018).

To address this research gap, this study uses a systematic literature review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology (Liberati *et al.*, 2009) to differentiate urban and non-urban CS users' perspectives and answer three research questions:

RQ1. What are the characteristics of the users of urban and non-urban CSs, and how do they differ?

RQ2. What are the motivations of the users of urban and non-urban CSs for choosing to work in a CS, and how do they differ?

RQ3. What are the workplace preferences of the users of urban and non-urban CSs users, and how do they differ?

The theoretical contributions of this research are threefold: first, the PRISMA approach enables systematic integration of globally significant studies to illuminate CS users characteristics, motivations and workplace preferences while identifying research gaps; second, this study provides the first systematic comparison between literature on urban and non-urban CSs, identifying which aspects remain consistent and which vary by spatial classification; and third, given that attracting members remains a key challenge for CS operators (Appel-Meulenbroek *et al.*, 2021; Deskmag.com, 2018), particularly in non-urban areas (Vogl *et al.*, 2024a; Bosworth *et al.*, 2023), enhanced understanding of spatial differences could inform value propositions for CS business models (Vogl, 2024).

2. Research method and data sources

To ensure compliance and increase the research value, this article follows the 27-item defined protocol developed by the PRISMA method to perform a qualitative literature review (Prisma History, 2022).

The aim was to systematically investigate the academic community's research on CSs, explicitly focusing on the workplace preferences of CS users in urban and non-urban locations to ascertain whether the spatial classifications demonstrate differences. The term "coworking space" has become a popular umbrella term and is frequently misused by media and related businesses, such as the serviced office industry, to label their products as modern workplace concepts, even when key features of CSs are missing, such as an actively managed community (Orel and Bennis, 2021; Vogl and Micek, 2023). Hence, the search terms "co-working" and "coworking" were deliberately chosen to be narrower. At the beginning, a scoping search was conducted in Google Scholar using the keywords "coworking OR co-working AND workplace AND (peripheral OR rural)" to identify scientific databases for the screening process. As a result, databases such as Emerald and Scopus were identified as containing a sufficient number of relevant academic records.

To develop an appropriate search string for identifying relevant records in these databases, a set of deductive English-language terms was derived from the existing literature. Beyond the core terms "coworking (space)" and "co-working (space)," additional terms related to occupants and spatial categories were selected and implemented in the search string. This study differentiates between two spatial categories: urban and non-urban. Non-urban locations encompass all rural, suburban and peripheral areas as well as small towns, while urban locations include medium-sized and large cities, central business districts (CBDs), urban centers and metropolises. Figure 1 provides an overview of the search terms extracted from the literature and their combination within the search strings. Wildcards (asterisks) were integrated to retrieve variations of individual search terms, while Boolean operators (AND and OR) were used to logically link the terms into search strings that facilitate the research objective. Finally, two master search strings were developed and adjusted according to the specific search requirements of each database (see Figure 1).

This study examines representations of CS users in academic literature rather than observing CS user populations directly. The analysis focuses on how CS users in urban and non-urban locations are characterized, what motivations are discussed and which workplace preferences are emphasized across different studies. The final 20 articles were analyzed using thematic coding to identify user characteristics, motivations and workplace preferences, with frequency analysis used to quantify how often different aspects were mentioned in literature on urban vs non-urban CSs. The thematic coding was based on 27 individual codes representing relevant user characteristics, motivations and workplace aspects, which were deductively derived from literature, as shown in Table 1.
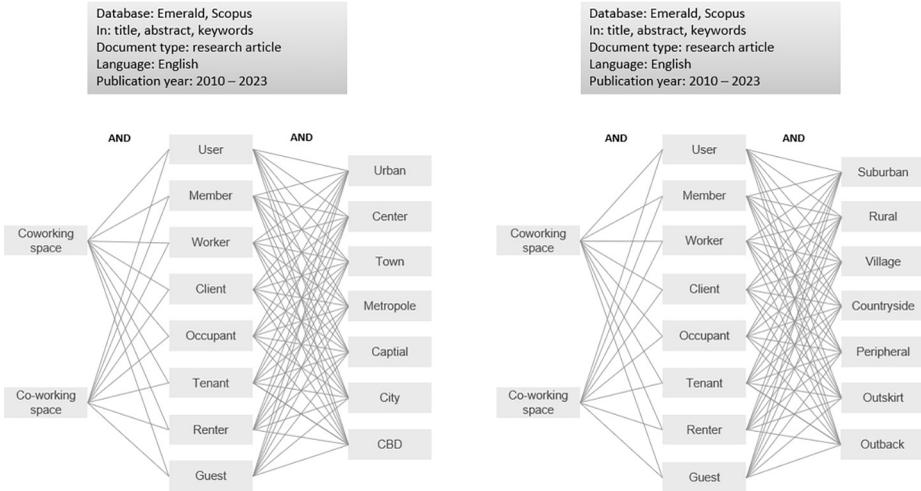
Figure 1. Search strategies for urban vs non-urban CSs
Source: Authors' own work

Table 2 shows the details of the selected articles and their urban categorization, which were analyzed further in this work.

Several filters were applied within the databases to refine the data selection:

- the timeframe was restricted to 2010–2023;
- the terms had to appear in the title or abstract or, in the case of Scopus database, in the keywords;
- the written language had to be English.
- search was limited to research or reviewed articles as well as EarlyCite publications.

Two search strings were applied to the databases on January 15, 2024, and the identified records were then exported to individual .ris files. Afterward, these .ris files were transferred to the reference manager Citavi and combined into a summary file, which was exported to an Excel workbook. The results for urban CSs and non-urban CSs were imported into two separate workbooks (one for urban and one for non-urban CSs) and evaluated accordingly to better differentiate the results in the further course of the work. Inside these separate files, the identified articles for each database were cleaned up from duplication and subsequently transferred into one list for urban and non-urban literature. The final data list included 224 articles, from which 32 belong to non-urban and 192 to urban literature. Among these publications, the authors could identify 17 duplicates, for a final total of 206 articles at the beginning of the screening process.

For the screening process, a set of eligibility criteria were defined along with the research questions. Studies were included if they:

(1) reported on workplace preferences of CS users in urban and non-urban locations;

(2) investigated CS users' perspectives, especially when they measured a specific outcome from a workplace perspective; and

Table 1. Overview of coding scheme

Research question	Group	Deductive code	Source
RQ1	Characteristics	Age Gender Profession Industry sector Educational level	Appel-Meulenbroek *et al.* (2021)
RQ2	Motivation	Social interaction Knowledge exchange Spatial differentiation Productivity Inspiration/creativity Clients (B2B) Well-being Flexible contract Reduced commuting	Appel-Meulenbroek *et al.* (2021) Vogl and Akhavan (2022) Hölzel and de Vries (2021)
RQ3	Location preferences	Affordability Accessibility Image of location Services offered Proximity to home Availability Proximity to nature	Tomaz *et al.* (2023) Vogl *et al.* (2024b) Hölzel *et al.* (2022)
RQ3	Workplace preferences	Workplace infrastructure Facilities Acoustics Workplace layout Catering Workplace policies	Bouncken *et al.* (2020b) Appel-Meulenbroek *et al.* (2021)

Source(s): Authors' own work

(3) investigated user and location aspects, as most users' preferences (Weijs-Perrée *et al.*, 2018) are also location factors. Studies were excluded if they:

- reported on the effects of CSs on the users;
- investigated exclusively location factors;
- analyzed workplace aspects from a CS operator or organizational perspective; and
- the distinction between urban and non-urban study areas is not made clearly.

Two independent reviewers screened the identified articles (Figure 2). Disagreements between the reviewers were resolved by consensus. In the first phase of the screening process, the titles of the identified articles were examined to ascertain their thematic fit with the defined eligibility criteria. Thus, the number of articles was reduced to 22 investigations dealing with non-urban CSs and 71 with their urban counterparts. In the second phase of the search process, the abstracts were screened and checked for thematic fit with the eligibility criteria, whereby a total of 39 articles were excluded. Thus, in the third phase of the search process, the full texts of the remaining 54 (13 non-urban and 41 urban) articles were screened and checked for their thematic eligibility, the use of the English language throughout them and their availability. As a result, 34 articles were excluded due to a lack of thematic fit or the unavailability of their full-text documents. Finally, a total of 20 relevant articles were included; of which, 5 belong to the non-urban and 15 belong to urban literature. It should be noted that one of the articles counts twice, as it contains both content for urban and non-urban CSs. Figure 2 summarizes the findings of each phase.

3. Results
First, the overview of frequencies of the investigated characteristics will be given (Section 3.1), followed by the characteristics of the CS users (Section 3.2), their motivations

Table 2. Overview of selected articles

Author	Title	Year	Country	Journal	Method	Sample	Urban	Non-urban
Pan, J., Cho, T.Y., Sun, M., Debnath, R., Lonsdale, N., Wilcox, C., Bardhan, R.	Future workspace needs flexibility and diversity: a machine learning-driven behavioural analysis of co-working space	2023	UK	PLoS ONE	Quantitative (sensor-tracked occupancy data and observation)	$n = 1{,}902$ observations (approx. 80 individuals)	x	
Rådman, E., Bosch-Sijtsema, P., Raharjo, H.	In search of member needs in coworking spaces	2023	Sweden	Review of Managerial Science	Qualitative (interviews and observation)	$n = 16$	x	
Clifton, N., Reuschke, D.	The diverse coworking landscape and implications for commercial real estate provision: lessons from individual preferences and practice	2022	UK	Journal of Property Investment and Finance	Mixed methods (interviews, survey and observation)	$n = 45$ (interview) $n = 52$ (survey)	x	
Ayodele, T.O., Ogunbayo, O.T., Kajimo-Shakantu, K., Babatunde, T.	Coworking space practices: assessing space users' preferences and challenges in Ibadan, Nigeria	2022	Nigeria	Journal of Corporate Real Estate	Quantitative (survey)	$n = 45$	x	
Konecka-Szydłowska, B., Czupich, M.	Coworking — a New Entrepreneurship Model in the Sharing Economy	2022	USA, Italy, irland, Serbia, Poland	Economy of Regions	Qualitative (literature review and case study)	$n = 5$ (cases)	x	x
Flipo, A., Lejoux, P., Ovtracht, N.	Remote and connected. Negotiating marginality in rural coworking spaces and "tiers-lieux" in France	2022	France	Region	Mixed-methods (interviews and survey)	$n = 19$ (interview) $n = 59$ (survey)	x	x
Rodríguez-Modroño, P.	Non-standard work in unconventional workspaces: Self-employed women in home-based businesses and coworking spaces	2021	Spain	Urban Studies	Mixed-methods (interviews and survey)	$n = 18$ (interview) $n = 43{,}850$ (survey)*	x	
Cruz, R., Franqueira, T., Pombo, F.	Furniture as feature in coworking spaces. Spots in Porto city as case study	2021	Portugal	Res Mobilis	Mixed-methods (interviews and survey)	$n = 10$ (interview) $n = 21$ (survey)	x	

Table 2. Continued

Author	Title	Year	Country	Journal	Method	Sample	Urban	Non-urban
Lashani, E., Zacher, H.	Do We have a match? Assessing the role of community in coworking spaces based on a Person-Environment fit framework	2021	Germany, Austria	Front Psychol	Quantitative (survey)	$n = 181$	x	
Buchnik, T., Frenkel, A.	The lifestyles of millennial coworkers in urban spaces: the case of Tel-Aviv	2021	Israel	European Planning Studies	Quantitative (survey)	$n = 62$	x	
Appel-Meulenbroek, R., Weijs-Perrée, M., Orel, M., Gauger, F., Pfnür, A.	User preferences for coworking spaces; a comparison between The Netherlands, Germany and the Czech Republic	2021	Netherlands, Germany, Czech Republic	Review of Managerial Science	Quantitative (survey)	$n = 396$	x	
Merrell, I., Füzi, A., Russell, E., Bosworth, G.	How rural coworking hubs can facilitate well-being through the satisfaction of key psychological needs	2021	Wales	Local Economy	Mixed-methods (interviews and survey)	$n = 48$ (interview) $n = 89$ (survey)		x
Hölzel, M., de Vries, W.T.	Digitization as a driver fur rural development—an indicative description of German coworking space users	2021	Germany	Land	Quantitative (survey)	$n = 32$		x
Rese, A., Kopplin, C. S., Nielebock, C.	Factors influencing members' knowledge sharing and creative performance in coworking spaces	2020	Germany	Journal of Knowledge Management	Quantitative (survey)	$n = 95$	x	
Zhao, F., Prentice, C., Wallis, J., Patel, A., Waxin, M.-F.	An integrative study of the implications of the rise of coworking spaces in smart cities	2020	Australia	Journal of Entrepreneurship and Sustainability Issues	Qualitative (interviews)	$n = 34$	x	
Grazian, D.	Thank God it's Monday: Manhattan coworking spaces in the new economy	2020	USA	Theory and Society	Qualitative (case studies and observation)	$n = 30$ (cases)	x	
		2020	Canada			$n = 25$		x

(continued)

JCRE

Table 2. Continued

Author	Title	Year	Country	Journal	Method	Sample	Urban	Non-urban
Tremblay, D.-G., Scaillerez, A.	Coworking spaces: New places for business initiatives?			Journal of Innovation Economics and Management	Qualitative (interviews)			
Walden, J.	Communicating role expectations in a coworking office	2019	USA	Journal of Communication Management	Qualitative (interviews and observation)	$n = 23$	x	
Brown, J.	Curating the "third place"? Coworking and the mediation of creativity	2017	England	Geoforum	Mixed-methods (interviews, survey and observation)	$n = 19$ (interview) $n = 19$ (survey)	x	

Note(s): *Not relevant in the course of this study as survey data are not dealing with coworking spaces
Source(s): Authors' own work
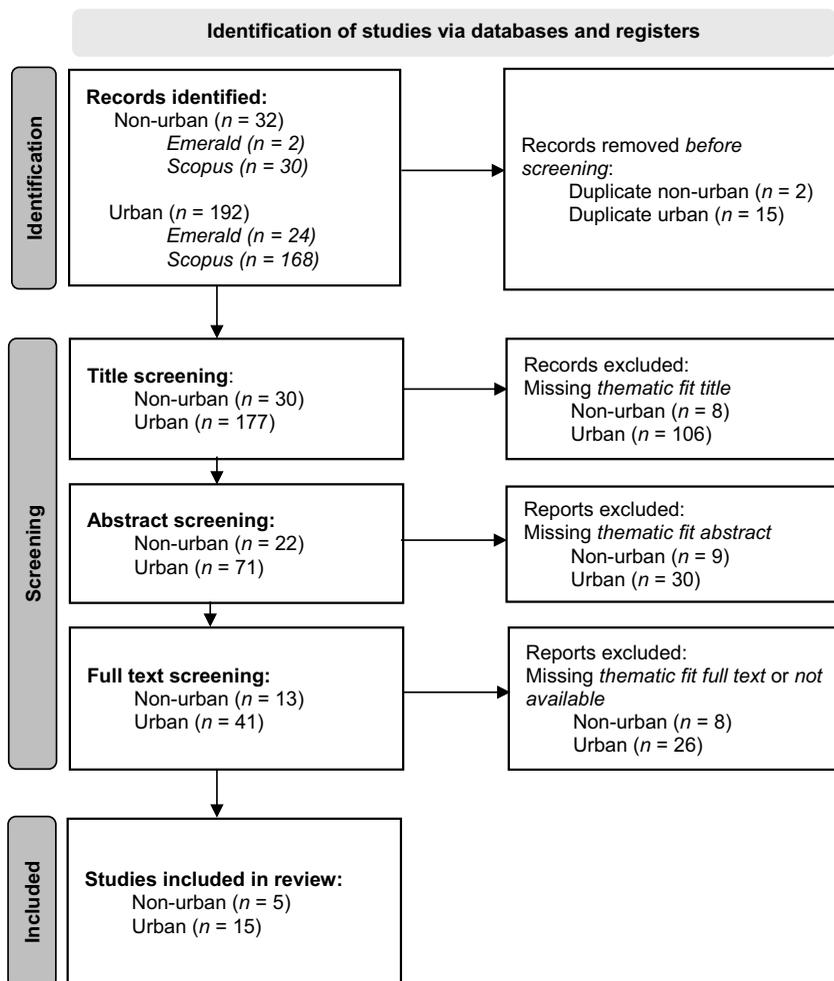
Figure 2. PRISMA flow diagram of the study selection process
Source: Authors' own work

to rent a workspace in a CS (Section 3.3) and, finally, their location and workplace preferences (Section 3.4).

3.1 Overview of frequencies of investigated studies

The results of the PRISMA analysis display a growing interest in user preferences of CSs in recent years as most articles were found between 2020 and 2023. Based on the frequency analysis of the publication years, it shows that little research has been conducted toward the user preferences of non-urban CSs (see Figure 3). These insights correspond with the findings of Vogl and Akhavan (2022) on the limited availability of research on CSs in peripheral locations.

Figure 3. Frequency of years of publication
Source: Authors' own work
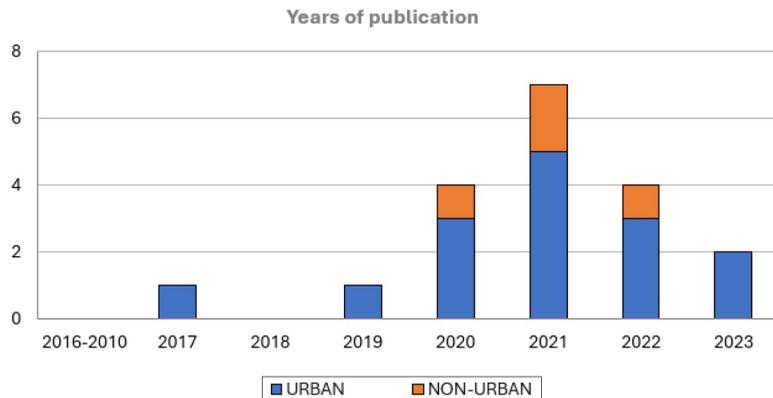
The graph shows that research on workplace factors of CSs remained non-existent until 2017 and just came into motion recently. The 19 studies were published in 18 different journals, particularly those concentrating on urban planning (8) and management and economics studies (6). The latter type can be further differentiated in journals focusing on sociology (3) and real estate management (2). Of the articles identified, 37% used a quantitative approach based on surveys; 32% used a qualitative approach, mainly in the form of interviews or narrative literature analysis; 31% used a mixed-methods approach. Geographically, the majority of the 19 studies were published by scientists from Western countries. The countries with the most research activities in the user preferences of CSs are the UK (4), followed by the USA, Germany, with three articles each, and France, Sweden, Spain, Portugal, Israel, Australia, Canada, and Nigeria with one. Furthermore, two articles were published by an international group of researchers.

3.2 Characteristics of CS users

Thematic analysis of the 19 studies identified 5 categories of user characteristics examined in the CS literature. These categories encompass demographic attributes (1) age groups, (2) gender distribution, (3) professional characteristics (occupation types including freelancers, startups, employees of organizations, unemployed, retired, students and digital nomads), (4) industry sectors (management and business services, information technology, creative industry, construction and architecture, education and science, tourism and hospitality) and (5) educational level (graduation levels, post-graduation qualifications and vocational training). This categorization framework enables systematic analysis of the characteristics of CS users in urban and non-urban locations and whether the spatial classification demonstrates differences.

Figure 4 shows the frequency of the five categories addressed in the studies.

The frequencies of both urban and non-urban perspectives show similar patterns. However, the age, gender and industry sectors of the CS users are investigated less by the literature on non-urban CSs. Thirty-three percentage of the studies on urban CSs dealt with the level of education of the CS users, which was not mentioned in the studies on non-urban CSs. This shows a research focus on urban CSs and implicates research potential regarding users of non-urban CSs.
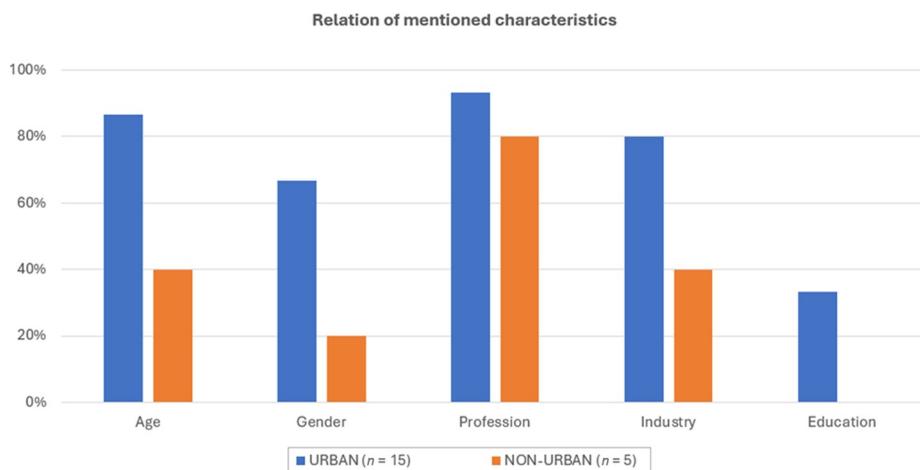
Figure 4. Frequency of user characteristics
Source: Authors' own work

3.2.1 Age. A total of 13 studies make statements about the age of the users of urban CSs, as shown in Table 3. Of these studies, 11 make precise statements about age. Calculating the mean value of the five articles providing the average age of their respondents, an urban CS user is 32.6 years old. Other articles describe age ranges that can be summed up to 25–40 years. Only Ayodele *et al.* (2022) report a narrow age group of 20–29 years, which may indicate cultural differences between Western and African countries.

Only two sources provide statements about the age of users of non-urban CSs. Hölzel and de Vries (2021, p. 12) stated that "the age distribution [in non-urban CSs] is broader than in coworking spaces in an urban environment," and Flipo *et al.* (2022) found in their study among 17 CSs located in rural areas in France that 96% of the respondents were between 26 and 55 years old. In summary, it can be concluded that the age demographics of users of urban and non-urban CSs are comparable.

3.2.2 Gender. The gender balance of users of urban CSs was derived from 10 articles, and the majority show a higher male ratio. The calculated average is an overall ratio of 53.9% male and 46.1% female CS users. Eliminating an outlier from a study focusing on female employees only (Rodríguez-Modroño, 2021), the figures show that, on average, urban CSs have a higher proportion of male users (59.3%).

One paper mentioned the gender of users of non-urban CSs, which found a balanced relation between male (51%) and female (49%) users. This means that users of non-urban CSs are more balanced in gender than users of urban CSs.

3.2.3 Profession. Overall, 14 articles mentioned the professions of users of urban CSs. Ten identified employees and remote workers from corporations, freelancers and entrepreneurs as CS users. Additionally, 6 articles reported on startups, and 5 articles mentioned small and midsize enterprises as users of urban CSs.

The available evidence about the profession of users of non-urban CSs was unequivocal and derived from four studies. Three studies identified entrepreneurs and employees of corporations as user groups– furthermore, freelancers and small and midsized local organizations, startups and digital nomads. Consequently, the occupational profiles of users

Table 3. Overview of CS user characteristics, breakdown by selected articles

Spatial category	Year	Author	Age (in years)	Gender male female	Employees and remote workers	Freelancers	Entrepreneurs	Start-ups	Profession Small and midsized organizations	Retired	Unemployed	Students	Digital nomads
Urban	2023	Pan et al.	25–34			x		x					
	2023	Rådman et al.			x	x			x				
	2022	Ayodele et al.	20–29	75.6% 24.4%	x	x	x	x					
	2022	Clifton and Reuschke	> 35	"more women than men"	x	x	x			x			
	2022	Konecka-Szydłowska and Czupich	"young people" (p. 293)		x	x	x	x					
	2021	Appel-Meulenbroek et al.	av. 29 (CZ) av. 33 (GER) av. 35 (NL)	52.0% (CZ) 48.0% (CZ) 57.0% (GER) 43.0% (GER) 68.0% (NL) 32.0% (NL)	x	x	x		x		x		
	2021	Buchnik and Frenkel	av. 31.5	64.0% 36.0%	x	x	x		x				
	2021	Cruz et al.	32–38	57.1% 42.9%		x	x	x	x				
	2021	Lashani and Zacher	av. 35.7										x
	2021	Rodríguez-Modroño	av. 32.5	0% 100%			x						
	2020	Grazian	"very young" (p. 1005)		x	x	x	x	x				
	2020	Rese et al.	< 40	50.0% 50.0%	x								
	2020	Zhao et al.	25–40	67.0% 33.0%	x	x	x					x	x
	2019	Walden	av. 31.7	65.2%* 34.8%*	x		x						
	2017	Brown		36.8% 63.2%				x			x		
Total (#) urban			12	10	10	10	10	6	5	1	2	1	2
Non-urban	2022	Flipo et al.	26–55	51% 49%	x		x	x	x				
	2022	Konecka-Szydłowska and Czupich											
	2021	Hölzel and de Vries	"age distribution is broader" (p. 12)		x	x	x		x				
	2021	Merrell et al.			x	x	x						x
	2020	Tremblay and Scaillerez											
Total (#) non-urban			2	1	3	2	3	1	2	0	0	0	1

Notes: *Authors calculated the percentages based on absolute numbers given
Source(s): Authors' own work

Table 3. Continued

Spatial category	Industry											Education	
	Information technology	Creative	Education	Management and business	Architecture	Author and translation	Health	Law	Tourism and hospitality	Science	Marketing and sales	Low education (pre-university)	High education (bachelor's or higher)
Urban		x											
	x			x							x		
	x	x	x	x	x	x				x	x	22.2%	77.8%
				x								0% (CZ) 8% (GER) 14% (NL) 26.0%	100% (CZ) 92% (GER) 86% (NL) 74.0%
	x			x									
		x	x	x	x	x	x	x			x		
	x			x							x		
	x		x	x							x		x
		x							x		x		
	x	x		x		x	x				x		
Total (#) urban	7	7	3	8	4	3	2	1	1	1	7	15.8% / 4	84.2% / 5
Non-urban	x	x		x	x				x		x		
	x			x		x				x	x		
Total (#) non-urban	2	1	0	2	1	1	0	0	1	1	1	0	0

of non-urban and urban CSs are analogous, with urban areas exhibiting a higher propensity for establishing startups and special user groups like students, retired or unemployed people. In contrast, non-urban areas tend to be more populated by employees from small to medium-sized companies.

3.2.4 Industry. Nine studies were identified with statements related to the industry sector of users of urban CSs. The most mentioned industries of CS users were the management and business sector, followed by the IT sector, creative industry and marketing and sales, education and architecture.

As demonstrated in two articles, these non-urban users were used in the information and technology (IT) sector or as management or business consultants. Furthermore, one paper also mentions creative industries, tourism, architecture, marketing and scientific fields. It can thus be concluded that the majority of users of both urban and non-urban CSs are working in the IT and management and business sectors. However, it is evident that users in the creative industry and marketing and sales are also significant user groups in urban CSs.

3.2.5 Education. As illustrated in Table 3, four articles from the literature on urban CSs provide information about the level of education in numbers. One article mentioned a general high level of education. Calculating the average, 85.7% of the users of urban CSs are university graduates, which indicates a high level of knowledge-intensive work activities.

At the same time, none of the studies on non-urban CSs mentioned the education levels, implicating research potential.

As shown in Table 3, research on urban CSs has examined user education levels more thoroughly (33% of studies) compared to research on non-urban CSs (0%), representing a significant knowledge gap. It can thus be concluded that the literature on both spatial categories shows largely similar patterns in terms of user demographics.

3.3 User motivations

A thematic analysis of 19 studies identified nine categories reflecting the motivations of CS users in choosing to work in such environments: (1) social interaction, (2) knowledge exchange, (3) spatial differentiation from work or private life, (4) increased productivity, (5) inspiration and creativity, (6) client impressions, (7) flexible contract terms, (8) enhanced well-being and (9) reduced commuting time.

Figure 5 shows the frequency of the aspects that have been addressed in the studies for each of the nine categories.

As shown in Figure 5, studies on urban CSs reveal a greater range of distinct motivational aspects ($n = 9$) than studies on non-urban CSs ($n = 5$).

In the literature on urban CSs, overall, the most frequent statements found were the search for a social network and knowledge exchange between CS users, which were addressed by 12 articles. The studies found that most participants were seeking a sense of belonging to a localized community through the use of a CS to have more social interactions (Zhao *et al.*, 2020; Grazian, 2020; Brown, 2017) and to avoid loneliness or social isolation (Ayodele *et al.*, 2022; Cruz *et al.*, 2021) brought about by working at home (Rodríguez-Modroño, 2021).

Startups and young professionals in particular have a great demand for developing a professional network to have access to knowledge (Rese *et al.*, 2020; Walden, 2019) and professional support (Ayodele *et al.*, 2022; Appel-Meulenbroek *et al.*, 2021). Another reason for using an urban CS identified by seven articles was the spatial differentiation between work and private life. The studies found that CS users value the variety of work environments in different locations (Clifton and Reuschke, 2022; Cruz *et al.*, 2021). Users of urban CSs see CSs as a professional alternative to home or other third places (Grazian, 2020;
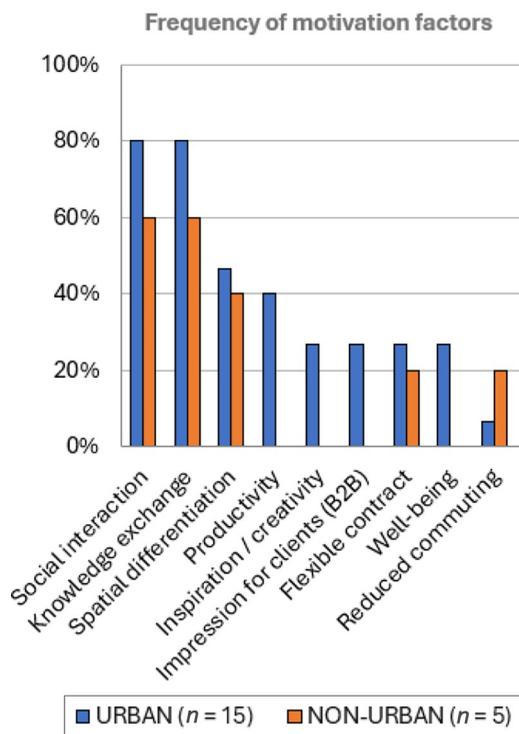
Figure 5. Frequency of identified motivation factors
Source: Authors' own work

Brown, 2017), which helps them to separate work and private life (Appel-Meulenbroek, 2021). Moreover, Rodríguez-Modroño (2021) found that young employed women use CSs to differentiate the workspace from the domestic space and avoid reinforcing traditional gender roles. Six studies addressed the hope for a positive impact on the user's productivity. As shown in Table 4, further drivers influencing the choice to use a CS mentioned in the identified studies on urban CSs, were the inspiring and creative work atmosphere and its perceived impact on the users' creativity or their mental well-being, having a professional space to create a more business-like image to potential clients and business partners as well as the short-term and uncomplicated leasing conditions.

As shown in Table 4, three studies show statements about social interaction as a motivating aspect for users of non-urban CSs. All these articles agree that corporate employees use non-urban CSs to maintain everyday social interaction and avoid isolation (Flipo *et al.*, 2022). This is particularly relevant for users living in non-urban areas, where social structures are often limited and commuting for work is common. As a result, users of non-urban CSs desire social networks (Hölzel and de Vries, 2021) and a deeper relationship with other CS members (Konecka-Szydłowska and Czupich, 2022). The importance of knowledge exchange for users of non-urban CSs was derived from three studies. Konecka-Szydłowska and Czupich (2022) conclude that users of non-urban CSs are more willing to cooperate in CSs and benefit from the existing business networks (Merrell *et al.*, 2021).

Table 4. Overview of user motivations, breakdown by selected articles

Spatial category	Year	Author	Social interaction	Knowledge exchange	Spatial differentiation	Productivity	Inspiration	Impression for clients (B2B)	Flexible contract	Well-being	Reduced commuting
Urban	2023	Pan et al.	x	x	x				x	x	
	2023	Rådman et al.	x	x		x	x	x	x	x	
	2022	Ayodele et al.	x	x		x	x		x		
	2022	Clifton and Reuschke	x	x	x	x					
	2022	Konecka-Szydłowska and Czupich		x							
	2021	Appel-Meulenbroek et al.		x	x		x		x		
	2021	Buchnik and Frenkel	x								
	2021	Cruz et al.	x	x						x	x
	2021	Lashani and Zacher	x								
	2021	Rodríguez-Modroño	x	x	x			x			
	2020	Grazian	x	x	x	x		x			
	2020	Rese et al.	x	x							
	2020	Zhao et al.	x	x		x					
	2019	Walden	x	x							
	2017	Brown	x	x	x	x	x	x		x	
Total (#) urban			12	12	7	6	4	4	4	4	1
Non-urban	2022	Flipo et al.	x	x	x						
	2022	Konecka-Szydłowska and Czupich	x	x							
	2021	Hölzel and de Vries	x								
	2021	Merrell et al.		x	x				x		x
	2020	Tremblay and Scaillerez									
Total (#) non-urban			3	3	2	0	0	0	1	0	1

Source(s): Authors' own work

The available evidence about the importance of the spatial differentiation provided by using non-urban CSs was derived from two studies. Both studies indicated that users of non-urban CSs choose to work in a CS to separate their private and professional lives, which is particularly relevant for CS users with young children (Flipo *et al.*, 2022). What is more, the flexible lease terms and the reduced commuting time are mentioned by one study. Hence, Merrell *et al.* (2021) stated that the short and flexible lease terms eased user's anxieties around expensive overheads, especially for those with fluctuating income or who were newly established.

It can thus be concluded that the literature on urban and non-urban CSs reveals similar motivations for users of urban and non-urban CSs. Table 4 shows that while social interaction is identified in the literature of both spatial classifications as a motivator for choosing to work in a CS, studies on urban CSs tend to emphasize productivity outcomes, whereas studies on non-urban CSs more frequently highlight reduced commuting time as motivating. This suggests differences between the two spatial classifications.

3.4 Preferences of CS users
A thematic analysis of 19 studies identified two main categories reflecting the preferences of CS users:

(1) location preferences, which consist of the following aspects: affordability, accessibility, image of the area, services offered, proximity to home, space availability and proximity to nature; and

(2) workplace preferences, which include the following aspects: infrastructure, available facilities, acoustics, layout, catering and governance.

Figure 6 shows the frequency of the aspects that have been addressed in the studies for each of the two main categories.

As shown in Figure 6, the *location preferences* represent the most significant differences between urban and non-urban CS literature, whereas the frequencies of *workplace preferences* are relatively similar across both spatial categories.

3.4.1 Location preferences of CS users. The category of "location preferences" is built on seven aspects. The most frequently stated location aspect for choosing a CS in the literature on urban CSs was affordability, identified by eight articles. Users of urban CSs perceive renting a workspace in a CS as significantly more affordable than leasing traditional office spaces in metropolitan areas (Rodríguez-Modroño, 2021; Zhao *et al.*, 2020), thereby reducing overall office overhead costs (Ayodele *et al.*, 2022). Given that users of urban CSs primarily commute by public transportation, good connectivity to public transportation infrastructure emerges as an important location aspect of urban CSs (Ayodele *et al.*, 2022), alongside accessibility and parking opportunities (Zhao *et al.*, 2020). The serenity of the neighborhood (Ayodele *et al.*, 2022) and the desire to work in representative city districts that are "close to the action without having to 'waste their time' on transportation" (Buchnik and Frenkel, 2021, p. 12) were top-rated aspects in four studies that investigated urban CSs. Additionally, users from urban CSs value opportunities to participate in networking events, workshops, business-related training, mentoring and ancillary services such as business mailing, fitness centers or hairdressers.

As shown in Table 5, only five of the seven location aspects are addressed in the identified studies on non-urban CSs. Three studies mentioned that non-urban CS users prefer CSs with good accessibility and connectivity. Flipo *et al.* (2022) found that most non-urban CSs are located along main local roads, close to shops and services and, therefore, conclude that connectivity remains an important aspect for users of non-urban CSs. Furthermore, the relation to a major city was seen as relevant for users of non-urban CSs

Figure 6. Frequency of identified user preferences
Source: Authors' own work

(Hölzel and de Vries, 2021). The majority of studies on non-urban CSs addressed the relevance of social events and services offered by non-urban CSs. Two studies on non-urban CSs identified 24/7 access as a beneficial feature for attracting users, while a similar number of studies stated proximity to nature as a location preference among non-urban CS users.

Consequently, the frequencies and nature of location preferences in the identified literature reveal a divergence between studies on urban and non-urban CS users, as shown in Table 5. Specifically, studies on urban CSs tend to emphasize cost-effectiveness and the image of the location, whereas those on non-urban CSs more frequently highlighted comprehensive service offerings and accessibility as decisive location aspects in the choice to work in a non-urban CS.

3.4.2 Workplace preferences of CS users. As illustrated in Table 6, the category of "workplace preferences" is built on six aspects. Most frequently mentioned aspects in the selected articles on urban CSs were the quality of the workplace infrastructure and the facilities. The former was generally described by good quality of the office facilities (Clifton and Reuschke, 2022; Lashani and Zacher, 2021), IT infrastructure (Rese *et al.*, 2020), uninterrupted power supply or internet connectivity (Ayodele *et al.*, 2022), but also by comfortable and ergonomic furniture (Cruz *et al.*, 2021).

In terms of facilities, the analyzed studies on urban CSs indicate that urban CS users prefer environments that offer spaces for both formal and informal meetings (Clifton and Reuschke, 2022; Zhao *et al.*, 2020; Cruz *et al.*, 2021; Appel-Meulenbroek *et al.*, 2021). Additionally, recreational or meditation areas, and functional amenities, such as receptions (Rådman *et al.*, 2023), changing rooms or shower facilities (Zhao *et al.*, 2020), were also valued. Furthermore, three studies on urban CSs stated the importance of facilities that support concentration work and minimize disturbances to other users (Cruz *et al.*, 2021; Lashani and Zacher, 2021; Rådman *et al.*, 2023).

Table 5. Overview of location preferences of CS users, breakdown by selected articles

Spatial category	Year	Author	Affordability	Accessibility	Image of location	Services offered	Proximity to home	Availability	Proximity to nature
Urban	2023	Pan et al.							
	2023	Rådman et al.	x			x			
	2022	Ayodele et al.	x	x	x				
	2022	Clifton and Reuschke	x				x		
	2022	Konecka-Szydłowska and Czupich				x			
	2021	Appel-Meulenbroek et al.	x	x					
	2021	Buchnik and Frenkel			x		x		
	2021	Cruz et al.							
	2021	Lashani and Zacher	x		x				
	2021	Rodriguez-Modroño	x		x				
	2020	Grazian							
	2020	Rese et al.							
	2020	Zhao et al.	x	x		x		x	
	2019	Walden						x	
	2017	Brown	x			x			
Total (#) urban			8	3	4	4	2	1	0
Non-urban	2022	Flipo et al.		x		x			x
	2022	Konecka-Szydłowska and Czupich		x		x		x	
	2021	Hölzel and de Vries		x		x			
	2021	Merrell et al.	x			x		x	x
	2020	Tremblay and Scaillerez							
Total (#) non-urban			1	3	0	4	0	2	2

Source(s): Authors' own work

Table 6. Overview of workplace preferences of CS users, breakdown by selected articles

Spatial category	Year	Author	Infrastruc-ture	Facilities	Acoustics	Workplace layout	Catering	Governance
Urban	2023	Pan *et al.*				x		
	2023	Rådman *et al.*	x	x	x			
	2022	Ayodele *et al.*	x		x			
	2022	Clifton and Reuschke	x	x			x	
	2022	Konecka-Szydłowska and Czupich						
	2021	Appel-Meulenbroek *et al.*		x		x		
	2021	Buchnik and Frenkel						
	2021	Cruz *et al.*	x	x	x	x		
	2021	Lashani and Zacher	x	x				
	2021	Rodríguez-Modroño						
	2020	Grazian						
	2020	Rese *et al.*	x					
	2020	Zhao *et al.*		x	x			
	2019	Walden						
	2017	Brown						
Total (#) urban			6	6	4	3	1	0
Non-urban	2022	Flipo *et al.*				x		
	2022	Konecka-Szydłowska and Czupich						
	2021	Hölzel and de Vries	x	x	x	x		x
	2021	Merrell *et al.*	x					x
	2020	Tremblay and Scaillerez						
Total (#) non-urban			2	1	1	2	0	2

Source(s): Authors' own work

Acoustic comfort was mentioned in four articles and was seen as a significant challenge for urban CS users. Of particular concern is the feeling of being constrained in one's ability to communicate freely about confidential information (Rådman *et al.*, 2023). Three papers investigated user preferences regarding the layout of the CS. Cruz *et al.* (2021) found that a layout with a balance between open and closed spaces that creates functional pathways and allows people to interact is preferred by users of urban CSs. Appel-Meulenbroek *et al.* (2021) confirmed this finding, who found that CS users preferred CSs with a semi-open layout.

As shown in Table 6, five of the six workplace aspects were mentioned in the identified literature on non-urban CSs. Two studies identified professional workplace infrastructure as an important attribute for users of non-urban CSs. Regarding facilities, Hölzel and de Vries (2021) reported that 70% of the surveyed users of non-urban CSs preferred conference rooms

for meetings and telephone booths for undisturbed calls. Two studies addressed the layout of non-urban CSs, noting preferences for small shared workspaces (Flipo *et al.*, 2022) as well as open-plan layouts that still provide opportunities for focused work (Hölzel and de Vries, 2021). One study stated the importance of a kitchen area for facilitating informal interactions among CS users. Finally, two studies addressed workplace governance, finding that while most users of non-urban CSs appreciate flexibility, they still prefer having a fixed desk.

In summary, both literature on urban and non-urban CSs emphasize the importance of high-quality infrastructure, semi-open workspace layouts and facilities that support undisturbed work. These findings suggest that certain workplace preferences are shared across the two spatial classifications, despite other location-specific differences. Table 6 summarizes the findings of the literature on urban and non-urban CSs.

4. Discussion

The systematic analysis of the identified academic literature on urban and non-urban CSs over the past decade reveals that the literature on urban CSs is more extensive ($n = 15$) than that on non-urban CSs ($n = 5$). Most studies were conducted in Western countries and published in Journals with a particular focus on urban planning or management and economics.

The literature analysis reveals that representations of urban and non-urban CS user characteristics appear largely similar, contrary to initial expectations. However, literature on non-urban CSs suggests broader age distributions than literature on urban CSs. Across both contexts, literature identifies freelancers, startups and employees of small and medium-sized enterprises focusing on management consulting, IT or creative industries as primary CS user groups. These patterns align with existing literature assumptions, although previous research emphasized the IT sector (Deskmag.com, 2018; Bouncken *et al.*, 2020a) rather than the management and business sectors. This shift may indicate growing corporate user demand (Nagy and Lindsay, 2018), representing movement from traditional freelancer-focused CSs toward more corporate-centric models (Vogl *et al.*, 2024a). Furthermore, digital nomads appear to represent a secondary user group in both spatial classifications, which aligns with existing literature that positions CSs as important hubs for the growing number of digital nomads (Vogl and Micek, 2023).

The motivations for renting a CS is relatively balanced across literature on urban and non-urban CSs, although the literature on urban CSs considers a greater number of aspects (8) compared to the literature on non-urban CSs (5). Thus, CS literature from both spatial classifications mentioned the need for social interaction as a motivation for renting a CS. Furthermore, the exchange of knowledge among CS users and the spatial separation between home and work were frequently stated in the selected studies as reasons for choosing to working in a CSs. Interestingly, the literature on urban CS users frequently mentioned perceived improvements in productivity, creativity or well-being as motivator. In contrast, none of the studies on non-urban CSs stated these aspects, instead emphasizing reduced commuting time as reason for choosing to work in a CS. This phenomenon may be attributable to the limited availability of living space and noise pollution in urban locations, particularly in metropolitan regions, which could have negative effects on work performance at home. Consequently, users of urban CSs who normally work from home seek work environments that stimulate output factors such as productivity, creativity and well-being. Conversely, the preferences of users of non-urban CSs may be more influenced by segregation and inadequate connectivity of peripheral regions, which particularly affects corporate employees living in non-urban areas. This fosters their aspiration for professional workplaces near their residences, thereby reducing their commuting times.

In terms of the location preferences, the selected studies on urban CSs frequently identified the affordability of membership and the image of the neighborhood as crucial

aspects in choosing a CS. In contrast, studies on non-urban CSs highlighted preferences for CSs that offer services and social events, are open 24 h a day and are located in proximity to nature. This leads to the assumption that the high real estate costs characteristic of metropolitan regions give rise to an increased demand for affordable workspace in urban areas. Conversely, the paucity of local supply and social networks in non-urban areas gives rise to an augmented need for social events and services. Due to their peripheral location, the proximity to nature could indicate that non-urban CSs have a similar effect on users as biophilic design in offices and support physical health and psychological well-being and may attract users with a specific profile (Barton and Le, 2023). It can thus be posited that non-urban CSs not only serve as a complement to the flexibilization of the corporate real estate portfolio (Vogl et al., 2024a), but can also be used as a retreat by individuals and corporate teams (Vogl and Micek, 2023) to capitalize on the favorable effects of biophilia on the mental health and productivity of the users (Bergefurt et al., 2022).

Interestingly, workplace preferences of non-urban CSs appear to be explored in greater detail within the literature, encompassing six aspects compared to four aspects discussed in the identified literature on urban CSs. While the studies on non-urban CSs focus more extensively on spatial layout, catering availability and workplace policies, literature on both urban and non-urban CSs indicates a convergence in user preferences toward open-space layouts that provide facilities for communication and undisturbed work. The latter preference, particularly regarding constraints on discussing confidential information freely (Rådman et al., 2023), may also indicate the anticipated increase of corporate employees working in both urban and non-urban CSs, as documented in recent literature (Nagy and Lindsay, 2018; Vogl et al., 2024a).

5. Conclusion

This systematic literature review analyzed academic representations of urban vs non-urban CS users across 20 studies spanning 13 years (2010–2023). The analysis reveals that while the selected literature shows largely similar patterns across both spatial categories in terms of user demographics, to some extent in motivations for choosing to work in a CS, and in workplace preferences, the studies emphasize partially different motivational factors and location preferences. Three key patterns emerge from the literature:

(1) besides a common sense across the urban and non-urban literature on CSs for social interaction, knowledge exchange and spatial differentiation, studies on urban CSs emphasize individual performance factors, such as productivity, inspiration or creativity and well-being as motivators to choose working in a CS;

(2) literature on urban CS users prioritizes affordability and location prestige while literature on non-urban CSs focuses on comprehensive service offerings and the accessibility of the location; and

(3) literature from both spatial categories show convergence on workplace infrastructure, facilities and layout, suggesting potential for standardized physical design approaches while requiring location-specific service strategies.

The limitations of this study are related to the methodology applied. Accordingly, the identified patterns reflect the research emphases found in selected literature rather than direct empirical observations of user populations. The frequency analysis indicates which aspects have been most commonly investigated in studies of urban vs non-urban CSs contexts and shows potential research gaps. Furthermore, a limited availability of relevant studies on the user characteristics of non-urban workers, in general, and their workplace preferences, in particular. The latter makes it difficult to draw firm conclusions from the studies reviewed in this paper. The number

of scientific studies is limited to 2023, and most of the literature comes from Western countries and a handful of other countries, so generalizability across cultures is limited. Thereby, the very unbalanced gender ratio (75% male and 35% female) of a study from Africa suggests cultural differences. Another issue is that most studies are based on urban and regional perspectives, and there is little information on the workplace management of non-urban CSs.

However, it is evident that there are significant research gaps that require further investigation, particularly concerning the limited availability of non-urban literature that investigates workplace preferences. The results confirm assumptions from literature that CS members have different needs for their work (Bouncken *et al.*, 2020b; Rådman *et al.*, 2023) and point to the differences between users of urban and non-urban CSs regarding their motivations and location preferences. Researchers could benefit from the systematization of the existing literature as it provides a detailed overview of the motivations, location and workplace preferences of users of urban and non-urban CSs and displays research gaps that could be addressed. Besides the theoretical contributions, the findings of this study can offer insights to non-urban CS providers regarding potential workplace design and location characteristics that may have been previously overlooked or based on urban literature. As Bosworth *et al.* (2023) posited, the future of rural coworking should consider this spatial diversity. To maintain competitiveness in the current economic climate, decision-makers must adapt to these shifts in the global landscape. Consequently, a growing demand from corporates is predicted (Vogl *et al.*, 2024a) and will potentially become of decisive relevance for CS providers to attract the growing target group and gain a competitive advantage. Whilst major CS chains are predominantly located in urban areas and benefit from substantial financial resources, privately owned CSs with limited liquidity are more common in non-urban regions. These smaller CSs are exploring innovative strategies to attract enough users to sustain economically viable operations. Hence, this work could assist project developers and non-urban CS providers in making informed decisions regarding the location and the workplace design to attract a sufficient number of users to address the challenge of retaining a critical mass of users to remain economically viable (Vogl *et al.*, 2024a) and help those planning to incorporate CSs into their corporate real estate portfolio in creating a user-centric workplace design.

Acknowledgements

References

Appel-Meulenbroek, R., Weijs-Perrée, M., Orel, M., Gauger, G. and Pfnür, A. (2021), "User preferences for coworking spaces; a comparison between The Netherlands, Germany, and the Czech Republic", *Review of Managerial Science*, Vol. 15 No. 7, pp. 2025-2048, doi: 10.1007/s11846-020-00414-z.

Avdikos, V. and Merkel, J. (2020), "Supporting open, shared and collaborative workspaces and hubs: recent transformations and policy implications", *Urban Research and Practice*, Vol. 13 No. 3, pp. 348-357, doi: 10.1080/17535069.2019.1674501.

Ayodele, T.O., Ogunbayo, O.T., Kajimo-Shakantu, K. and Babatunde, T. (2022), "Coworking space practices: assessing space users' preferences and challenges in Ibadan, Nigeria", *Journal of Corporate Real Estate*, Vol. 24 No. 4, pp. 256-272, doi: 10.1108/JCRE-03-2021-0011.

Barton, G. and Le, A.H. (2023), "The importance of aesthetics in workplace environments: an investigation into employees' satisfaction, feelings of safety and comfort in a university", *Facilities*, Vol. 41 Nos 13-14, pp. 957-969, doi: 10.1108/F-03-2023-0016.

Bergefurt, L., Weijs-Perrée, M., Appel-Meulenbroek, R. and Arentze, T. (2022), "The physical office workplace as a resource for mental health – a systematic scoping review", *Building and Environment*, Vol. 207, doi: 10.1016/j.buildenv.2021.108505.

Bosworth, G., Whalley, J., Fuzi, A., Merrell, I., Chapman, P. and Russell, E. (2023), "Rural co-working: new network spaces and new opportunities for a smart countryside", *Journal of Rural Studies*, Vol. 97, pp. 550-559, doi: 10.1016/j.jrurstud.2023.01.003.

Bouncken, R.B., Clauss, T. and Reuschl, A.J. (2016), "Coworking-spaces in Asia: a business model design perspective", *Paper presented at the SMS Special Conference Hong Kong*, Hong Kong, China.

Bouncken, R.B., Kraus, S. and Martìnez-Pérez, J.F. (2020a), "Entrepreneurship of an institutional field: the emergence of coworking spaces for digital business models", *International Entrepreneurship and Management Journal*, Vol. 16 No. 4, pp. 1465-1481, doi: 10.1007/s11365-020-00689-4.

Bouncken, R.B., Ratzmann, M., Barwinski, R. and Kraus, S. (2020b), "Coworking spaces: empowerment for entrepreneurship and innovation in the digital and sharing economy", *Journal of Business Research*, Vol. 114, pp. 102-110, doi: 10.1016/j.jbusres.2020.03.033.

Brown, J. (2017), "Curating the 'third place?' Coworking and the mediation of creativity", *Geoforum*, Vol. 82, pp. 112-126, doi: 10.1016/j.geoforum.2017.04.006.

Buchnik, T. and Frenkel, A. (2021), "The lifestyles of millennial coworkers in urban spaces: the case of Tel-Aviv", *European Planning Studies*, Vol. 31 No. 3, pp. 528-553, doi: 10.1080/09654313.2021.1950641.

Clifton, N. and Reuschke, D. (2022), "The diverse coworking landscape and implications for commercial real estate provision: lessons from individual preferences and practice", *Journal of Property Investment and Finance*, Vol. 40 No. 5, pp. 508-523, doi: 10.1108/JPIF-12-2021-0109.

Cruz, R., Franqueira, T. and Pombo, F. (2021), "Furniture as a feature in coworking spaces. Spots in Porto city as a case study", *Res Mobilis*, Vol. 10 No. 13, pp. 317-338, doi: 10.17811/RM.10.13-3.2021.316-338.

Deskmag.com (2018), "Coworking space members: it's a girl!", available at: www.deskmag.com/en/coworkers/coworking-space-members-demographics-marketreport-study-survey-1034 (accessed 24 January 2023).

Flipo, A., Lejoux, P. and Ovtracht, N. (2022), "Remote and connected. Negotiating marginality in rural coworking spaces and 'tiers-lieux' in France", *Region*, Vol. 9 No. 2, pp. 87-107, doi: 10.18335/REGION.V9I2.405.

Gabrielli, L. and Fiorentino, S. (2022), "Guest editorial: co-working spaces after COVID-19. The differences between sharing office spaces in urban cores and peripheral locations", *Journal of Property Investment and Finance*, Vol. 40 No. 5, pp. 445-447, doi: 10.1108/JPIF-08-2022-196.

Gauger, F. (2021), "New work environments: the economic relevance of flexible office space", PhD Thesis, Technische Universität Darmstadt, Germany.

Gauger, F., Pfnür, A. and Skarabi, J. (2020), "Arbeitswelten im Wandel: coworking spaces Eine Empirische Befragung Der Eigenschaften Und Nutzerpräferenzen Von Coworking Spaces", Arbeitspapiere zur immobilienwirtschaftlichen Forschung und Praxis: Darmstadt, Germany.

Grazian, D. (2020), "Thank god it's Monday: manhattan coworking spaces in the new economy", *Theory and Society*, Vol. 49 Nos 5-6, pp. 991-1019, doi: 10.1007/s11186-019-09360-6.

Hölzel, M. and de Vries, W.T. (2021), "Digitization as a driver for rural development—an indicative description of German coworking space users", *Land*, Vol. 10 Nos 3-326, pp. 1-21, doi: 10.3390/land10030326.

Hölzel, M., Kolsch, K.H. and de Vries, W.T. (2022), "Location of coworking spaces (CWSs) regarding vicinity, land use and points of interest (POIs)", *Land*, Vol. 11 Nos 3-354, pp. 1-32, doi: 10.3390/land11030354.

Konecka-Szydłowska, B. and Czupich, M. (2022), "Coworking — a new entrepreneurship model in the sharing economy", *Economy of Region*, Vol. 18 No. 1, pp. 280-295, doi: 10.17059/ekon.reg. 2022-1-20.

Lashani, E. and Zacher, H. (2021), "Do We have a match? Assessing the role of community in coworking spaces based on a person-environment fit framework", *Frontiers in Psychology*, Vol. 12, doi: 10.3389/fpsyg.2021.620794.

Liberati, A., Altman, D., Tetzlaff, J., Mulrow, C., Gøtzsche, P. and Ioannidis, J. (2009), "The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration", *PLoS Medicine*, Vol. 6 No. 7, p. e1000100.

Mariotti, I., Akhavan, M. and Rossi, F. (2021), "The preferred location of coworking spaces in Italy: an empirical investigation in urban and peripheral areas", *European Planning Studies*, Vol. 31 No. 3, pp. 467-489, doi: 10.1080/09654313.2021.1895080.

Mariotti, I., Pacchi, C. and Di Vita, S. (2017), "Coworking spaces in Milan: location patterns and urban effects", *Journal of Urban Technology*, Vol. 24 No. 3, pp. 47-66, doi: 10.1080/10630732.2017. 1311556.

Merkel, J. (2019), "'Freelance isn't free.' Co-working as a critical urban practice to cope with informality in creative labour markets", *Urban Studies*, Vol. 56 No. 3, pp. 526-547, doi: 10.1177/ 0042098018782374.

Merrell, I., Füzi, A., Russell, E. and Bosworth, G. (2021), "How rural coworking hubs can facilitate well-being through the satisfaction of key psychological needs", *Local Economy: The Journal of the Local Economy Policy Unit*, Vol. 36 Nos 7-8, pp. 606-626, doi: 10.1177/ 02690942221075598.

Migliore, A., Ceinar, I.M. and Tagliaro, C. (2021), "Beyond coworking: from flexible to hybridspaces", in Orel, M., Dvouletý, O. and Ratten, V. (Eds), *The Fexible Workplace. Human Resource Management*, Springer, Cham, doi: 10.1007/978-3-030-62167-4_1.

Nagy, G. and Lindsay, G. (2018), "Why companies are creating their own coworking spaces", Harvard Business Review, available at: https://hbr.org/2018/09/why-companies-are-creating-their-owncoworking-spaces (accessed 6 September 2022).

Orel, M. and Bennis, W.M. (2021), "Classifying changes. A taxonomy of contemporary coworking spaces", *Journal of Corporate Real Estate*, Vol. 23 No. 4, pp. 278-296, doi: 10.1108/JCRE-12-2020-0061.

Prisma History (2022), available at: www.prisma-statement.org/PRISMAStatement/Checklist (accessed 5 January 2023).

Rådman, E., Johansson, E. and Bosch-Sijtsema, P. (2023), "In search of member needs in coworking spaces", *Review of Managerial Science*, Vol. 17 No. 3, pp. 881-907, doi: 10.1007/s11846-022-00546-4.

Rese, A., Kopplin, C.S. and Nielebock, C. (2020), "Factors influencing members' knowledge sharing and creative performance in coworking spaces", *Journal of Knowledge Management*, Vol. 24 No. 9, pp. 2327-2354, doi: 10.1108/JKM-04-2020-0243.

Rodríguez-Modroño, P. (2021), "Non-standard work in unconventional workspaces: self-employed women in home-based businesses and coworking spaces", *Urban Studies*, Vol. 58 No. 11, pp. 2258-2275, doi: 10.1177/00420980211007406.

Tomaz, E., Moriset, B. and Teller, J. (2023), "Rural coworking spaces in the COVID-19 era. A window of opportunity?", in Mariotti, I., Di Marino, M. and Bednar, P. (Eds), *The COVID-19 Pandemic and the Future of Working Spaces*, Routledge, London-New York, NY.

Vogl, T. (2024), "A real estate perspective of coworking spaces in non-urban areas [Eigenverlag der Professur Baubetrieb und Bauverfahren]", In *Schriften der Professur Baubetrieb und Bauverfahren*, Vol. 45, doi: 10.25643/dbt.64205.

Vogl, T. and Akhavan, M. (2022), "A systematic literature review of the effects of coworking spaces on the socio-cultural and economic conditions in peripheral and rural areas", *Journal of Property Investment and Finance*, Vol. 40 No. 5, pp. 465-478, doi: 10.1108/JPIF-12-2021-0108.

Vogl, T. and Micek, G. (2022), "Why do they go to the peripheries? Studying the relations between the real estate market and coworking spaces in the peripheral areas of Germany", *Journal of Property Investment and Finance*, Vol. 40 No. 5, pp. 479-492, doi: 10.1108/JPIF-11-2021-0095.

Vogl, T. and Micek, G. (2023), "Work-leisure concepts and tourism: studying the relationship between hybrid coworking spaces and the accommodation industry in peripheral areas of Germany", *World Leisure Journal*, Vol. 65 No. 2, pp. 276-298, doi: 10.1080/16078055.2023.2208081.

Vogl, T. and Orel, M. (2024), "The promise and perils of coworking in residential areas: a systematic review of health and community impacts", *International Journal of Workplace Health Management*, Vol. 17 No. 2, pp. 156-174, doi: 10.1108/IJWHM-05-2023-0069.

Vogl, T., Orel, M. and Appel-Meulenbroek, R. (2024a), "Exploring the characteristics of non-urban coworking spaces in Germany and their perceived benefits for corporate users: novel means for supporting corporate real estate management strategies", *Journal of European Real Estate Research*, Vol. 17 No. 1, pp. 137-156, doi: 10.1108/JERER-11-2023-0045.

Vogl, T., Sinitsyna, A. and Micek, G. (2024b), "Systematic literature review of location factors of coworking spaces in non-urban areas", in Mariotti, I., Tomaz, E., Micek, G. and Méndez-Ortega, C. (Eds), *Evolution of New Working Spaces. Springer Briefs in Applied Sciences and Technology*, Springer, Cham, doi: 10.1007/978-3-031-50868-4_8.

Walden, J. (2019), "Communicating role expectations in a coworking office", *Journal of Communication Management*, Vol. 23 No. 4, pp. 316-330, doi: 10.1108/JCOM-09-2018-0097.

Weijs-Perrée, M., van de Koevering, J., Appel-Meulenbroek, R. and Arentze, T. (2018), "Analysing user preferences for co-working space characteristics", *Building Research and Information*, Vol. 47 No. 5, pp. 534-548, doi: 10.1080/09613218.2018.1463750.

Zhao, F., Prentice, C., Wallis, J., Patel, A. and Waxin, M. (2020), "An integrative study of the implications of the rise of coworking spaces in smart cities", *Entrepreneurship and Sustainability Issues*, Vol. 8 No. 2, pp. 467-486, doi: 10.9770/jesi.2020.8.2(28).

Further reading

Kojo, I. and Suvi, N. (2016), "Typologies for co-working spaces in Finland – what and how?", *Facilities*, Vol. 34 Nos 5-6, pp. 302-313, doi: 10.1108/F-08-2014-0066.

Sargent, K., Cooper, J., Mellwig, B. and McDonald, M. (2018), "Coworking and the disruption of the current corporate real estate model", *Corporate Real Estate Journal*, Vol. 7 No. 3, pp. 267-276.

Tremblay, D.G. and Scaillerez, A. (2020), "Coworking spaces: new places for business initiatives?", *Journal of Innovation Economics and Management*, Vol. 31 No. 1, pp. 39-67, doi: 10.3917/jie.031.0039.

Corresponding author
Thomas Vogl can be contacted at: t.v.vogl@tudelft.nl