

# Motivations and rank attributes of coworking spaces in a developing country context

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Yewande Adetoro Adewunmi 

*School of Construction Economics and Management,  
University of the Witwatersrand Johannesburg, Johannesburg, South Africa*

Olusegun Atiku

*Harold Pupkewitz Graduate School of Business, Namibia University of Science  
and Technology, Windhoek, Namibia, and Department of Business Management  
and Economics, Walter Sisulu University, East London, South Africa, and*

Thabelo Ramantswana 

*School of Construction Economics and Management,  
University of the Witwatersrand Johannesburg, Johannesburg, South Africa*

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## Abstract

**Purpose** – Previous studies on coworking spaces have mainly concentrated on location determinants and their effects on the immediate environment. Much of the research relies on data from developed countries, leaving a significant gap in user-centred perspectives in less-studied contexts, particularly before, during, and after COVID. This study aims to address this gap by examining the ranking for specific design attributes and exploring the underlying motivations for using coworking spaces in Windhoek, Namibia.

**Design/methodology/approach** – Self-administered questionnaires were sent to users of coworking spaces in Namibia, and the results were analysed using descriptive statistics and the Kruskal–Wallis and Mann–Whitney U tests.

**Findings** – The study found that affordable accommodation, a sense of community, a vibrant and creative atmosphere and the company's professional appearance were the top motivations for using coworking spaces. Accessibility, digital accessibility and diversity in supply spaces are perceived as the most important attributes of coworking spaces in Namibia. Post hoc comparisons of the Kruskal–Wallis test revealed significant mean differences in ranked attributes for ordinary internet between the periods before and after the COVID-19 pandemic and between the periods during and after the pandemic.

**Originality/value** – Few studies have examined the influence of the period of use of coworking preferences (pre-, during and post-COVID) in a developing-country context.

**Keywords** Attributes, Coworking spaces, Digital accessibility, Motivations, Namibia, User preferences

**Paper type** Research paper



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## 1. Introduction

Coworking spaces are subscription-based environments that facilitate collaborative work among individuals and teams from various organisations in a shared space. The business model is a variant of rental arbitrage in which coworking firms lease buildings from property owners under long-term, multi-year agreements. These firms enhance the spaces by incorporating common areas, cafes and other community-focused amenities, subsequently subleasing them to tenants at higher rates and with more flexible lease terms.

The tenants primarily comprised entrepreneurs, freelancers, remote workers and other independent or non-traditional workers unable to afford office space. Coworking not only provides workspace but also fosters a community of entrepreneurs who, while pursuing their ventures, collaborate in a shared environment (Bouncken and Reuschl, 2018; Orel and Bennis, 2021; Howell, 2022). Recent changes in work practices are attributed to the collaborative economy and emerging collaboration methods, which the shift towards hybrid working has further expedited, integrating in-office and remote work environments. There is growth in coworking spaces and their adoption by larger, more established companies.

Coworking spaces have been the subject of extensive research in the USA, various European countries (Rus and Orel, 2019), Asia (Bouncken and Reuschl, 2018; Bouncken *et al.*, 2020a, 2020b; Chevtavaeva, 2021; Chua *et al.*, 2024) and Australia (Waters-Lynch and Potts, 2017; Halvitigali *et al.*, 2019; Jackson *et al.*, 2022). A limited number of studies offer insights into ranked attributes for physical workspace design. It remains uncertain whether these preferences vary between countries due to their single-country focus, except for Appel-Meulenbroek *et al.* (2021), which compares three European countries. Furthermore, there exists a paucity of studies that have collected data in developing countries. Zietsman (2019) in South Africa focused on sustainable building refurbishment and the application of lean construction principles. Lahti *et al.* (2022) examined coworking spaces in Namibia, contextualising cultural factors through a comparative case study with Finland. Adegoke and Comunian (2021) investigated factors influencing coworking in Nigeria, while Ayodele *et al.* (2022) analysed the characteristics of Nigerian coworking spaces from the perspective of space providers. Adewunmi-Abolarinwa (2024) examined the features and management of coworking spaces in Africa. No research has investigated the ranking of attributes of coworking spaces or the motivations for using them in Windhoek, Namibia.

A report by Allwork.Space (2022) indicated that 1,158 coworking spaces were operational in Africa in 2022, out of a global total of 27,000, suggesting significant growth potential in the sector. Offices in Windhoek, Namibia, are generally modern and align with international standards for physical amenities and technology, while also fostering diversity and inclusion, which is particularly important given the history of apartheid. Additionally, the workplace culture is more personal, with employees looking out for colleagues' interests even outside the workplace, and places a distinctive emphasis on building strong relationships. The sector is influenced by a smaller economy and population and is set within a developing-country context (Master Southern Africa, 2024). Working in Namibia differs from that in other countries in that there is a strong preference for local labour, owing to population dynamics and the apartheid past, and a respect-based hierarchical corporate culture (Moima, 2017). Raunio and Andreas (2020) demonstrated that coworking spaces in Namibia can serve as hubs to promote the utilisation of technology, support youth entrepreneurial aspirations, eliminate geographical, political and income barriers, stimulate local start-ups and enhance cultural development.

This study aims to address the research question: What are the rankings of attributes and motivations of users of coworking spaces in Windhoek, Namibia? This study assumes that the motivations and rank attributes differ from those used by Appel-Meulenbroek *et al.* (2021). This

study contributes to the literature in four ways. Firstly, it offers the first empirical analysis of coworking motivations and ranked design attributes in Namibia. Secondly, it confirms digital accessibility as a formal attribute, reflecting infrastructural realities in emerging markets. Third, it examines temporal differences across pre-, during- and post-COVID-19 periods (Cabral and van Winden, 2022; Orel *et al.*, 2024), addressing how global disruptions reshape coworking preferences, understand shifts in coworking amenities, participation and design, inform strategic decisions about their future design and utilisation and ensure productivity (Orel *et al.*, 2024). Finally, it applies neoclassical utility theory and Corporate Real Estate Management (CREM) principles to interpret user choices, bridging theoretical frameworks with practical design considerations. Neoclassical utility theory (NUT) and Corporate Real Estate Management (CREM) principles are highly relevant to coworking spaces because they provide a framework for analysing why users choose these spaces and how they fit within broader business strategies (Weijjs-Perrée *et al.*, 2019).

The study specifies that NUT explains how coworking users make trade-offs among attributes such as price, accessibility and internet quality under budgetary and infrastructural constraints. CREM explains how providers configure workplace resources (layout, atmosphere, services and lease structures) to create value. Together, these lenses link user utility optimisation with workplace value creation, supporting the study's contribution to bridging theory and design.

Therefore, this study aims to address the following research questions (RQs):

- RQ1. What are the top motivations influencing the use of coworking spaces in Windhoek, Namibia?
- RQ2. What are the most important attributes influencing the choice of coworking spaces in Namibia?
- RQ3. How do preferences for coworking space attributes differ across the periods before, during, and after the COVID-19 pandemic?

RQ1 explores motivations for coworking spaces, while RQ2 examines the ranked importance of their attributes using descriptive statistics (Table 3). In contrast, RQ3 investigates differences in preferences for coworking space features across different COVID-19 periods and requires five hypotheses (H1–H5) for inferential statistical analysis. This structure effectively ties the descriptive nature of RQ1 and RQ2 to the confirmatory approach of RQ3, with insights from the literature review laying the groundwork for understanding changes in user preferences for coworking spaces in Windhoek, Namibia.

## 2. Theoretical framework and literature review

This study integrates NUT and CREM to explain coworking preferences. NUT highlights rational choices under constraints such as affordability, accessibility and digital connectivity (Hodgson, 2025; Munien and Telukdarie, 2024; Lahti *et al.*, 2022). CREM emphasises design and service qualities – layout, atmosphere, hospitality and tenant diversity – as value-creation mechanisms (van der Voordt, 2017; Wijnja *et al.*, 2021; Appel-Meulenbroek *et al.*, 2021). Integrating these frameworks clarifies needs, motivations and preferences (Rådman *et al.*, 2023), offering a comprehensive perspective for developing-country contexts.

Affordability (a key resource constraint), alongside accessibility, lease flexibility and digital connectivity was derived from NUT as a set of utility-maximising factors influencing workspace choice (Appel-Meulenbroek *et al.*, 2021). In contrast, atmosphere, hospitality, professional image, workplace quality, and tenant diversity were derived from CREM as key workplace design value-creation attributes that enhance user experience and organisational

performance (Fuzi, 2015; Bouncken *et al.*, 2020a, 2020b). These attributes are detailed in Table 3 and Figure 1, which show how design factors such as flexibility and atmosphere shape preferences (van der Voordt, 2017).

Integrating both frameworks reveals coworking choices as shaped by economic rationality and strategic resource management. Needs, motivations and preferences are clarified: affordability and connectivity are needs; networking and flexibility are motivations; ranked attributes such as atmosphere or lease terms are preferences (Rådman *et al.*, 2023). This distinction deepens understanding of coworking behaviour. Reflecting on Namibia’s context, the study shows how rational cost considerations intersect with design-driven motivations, offering a comprehensive view of coworking selection.

2.1 Motivations for using coworking spaces

The motivations examined are grounded in prior coworking research (Appel-Meulenbroek *et al.*, 2021; Zhao *et al.*, 2020; Christino *et al.*, 2022) and interpreted through NUT and CREM. Affordability reflects utility maximisation, while networking and community reflect both social utility (NUT) and workplace value creation (CREM), linking economic constraints to social and spatial design factors.

The consistent and growing demand for coworking spaces reflects their resilience in both expanding and contracting economies. During economic downturns, rising unemployment often pushes previously stable workers toward self-employment or flexible work arrangements (Merkel, 2023). Governments may also promote entrepreneurship to stimulate growth and job creation, making coworking spaces attractive to both public and private sectors (Luo and Chan, 2020).

People are drawn to coworking spaces for various reasons, including flexible access to office and social environments, opportunities for direct interaction and support for social, learning, cultural and business-related activities (Ayodele *et al.*, 2021). Many appreciate bundled service offerings, such as conference rooms, events and training, delivered through a space-as-a-service model (Appel-Meulenbroek *et al.*, 2021). Table 1 presents studies on the

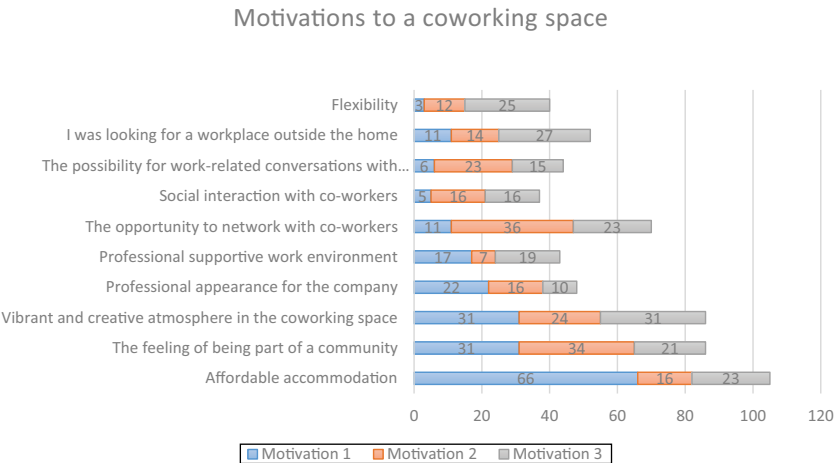


Figure 1. Coworking space motivations  
Source: Authors' own work

Table 1. Studies on coworking spaces' motivations

| Authors                         | Country                              | Social interaction | Learning | Productivity | Location | Services | Creativity | Innovation | Culture | Urban mobility | Sustainability |
|---------------------------------|--------------------------------------|--------------------|----------|--------------|----------|----------|------------|------------|---------|----------------|----------------|
| Spinuzzi (2012)                 | USA                                  | X                  | X        |              |          |          |            |            |         |                |                |
| Waters-Lynch and Potts (2017)   | Australia                            | X                  |          |              |          |          |            |            |         |                |                |
| Weijts-Perrière et al. (2019)   | The Netherlands                      |                    |          |              |          |          |            |            |         |                | X              |
| Yang et al. (2019)              | USA                                  | X                  |          |              |          |          |            | X          |         |                |                |
| Zhao et al. (2020)              | UK, UAE, Fiji, Australia             | X                  |          |              |          |          |            |            | X       | X              |                |
| Tan and Lau (2020)              | Malaysia                             |                    |          |              |          |          |            |            |         |                |                |
| Appel-Meulenbroek et al. (2021) | Netherlands, Germany, Czech Republic |                    |          |              | X        | X        |            |            |         |                |                |
| Echeverri et al. (2021)         | The Netherlands                      |                    |          |              |          |          | X          |            |         |                |                |
| Lahti et al. (2022)             | Finland                              |                    |          |              |          |          |            |            |         |                |                |
| Clifton et al. (2022)           | UK                                   | X                  |          |              |          |          |            |            |         |                |                |
| Christino et al. (2022)         | Brazil                               | X                  |          | X            |          |          |            |            |         |                |                |
| Ayodele et al. (2022)           | Nigeria and South Africa             |                    |          |              |          |          |            |            |         |                |                |
| Girija et al. (2024)            | India                                | X                  |          | X            |          | X        |            |            |         |                | X              |
| Kinsman et al. (2024a)          | Canada                               | X                  |          |              | X        | X        |            |            |         |                |                |
| Source(s): Authors' own work    |                                      |                    |          |              |          |          |            |            |         |                |                |

(continued)

Table 1. Continued

| Authors                                | Entrepreneurship | Space | Ambience | Leases | Knowledge sharing | Affordability | Flexibility | Mobile workers | Ease | Technology | Changing workforce |
|----------------------------------------|------------------|-------|----------|--------|-------------------|---------------|-------------|----------------|------|------------|--------------------|
| Spinuzzi (2012)                        |                  |       |          |        |                   |               |             |                |      |            |                    |
| Waters-Lynch and Potts (2017)          |                  |       |          |        |                   |               |             |                |      |            |                    |
| Weijjs-Perrée <i>et al.</i> (2019)     |                  |       |          |        |                   |               |             |                |      |            |                    |
| Yang <i>et al.</i> (2019)              |                  |       |          |        |                   |               |             |                |      |            |                    |
| Zhao <i>et al.</i> (2020)              |                  |       |          |        |                   |               |             |                |      |            |                    |
| Tan and Lau (2020)                     |                  |       |          |        |                   |               |             |                |      |            |                    |
| Appel-Meulenbroek <i>et al.</i> (2021) |                  | X     |          | X      |                   | X             |             |                |      |            |                    |
| Echeverri <i>et al.</i> (2021)         | X                | X     |          |        | X                 | X             |             |                |      |            |                    |
| Lahti <i>et al.</i> (2022)             |                  |       |          |        |                   | X             |             | X              |      |            |                    |
| Clifton <i>et al.</i> (2022)           |                  |       |          |        | X                 |               |             |                |      |            |                    |
| Christino <i>et al.</i> (2022)         |                  |       |          |        |                   |               |             |                |      |            |                    |
| Ayodele <i>et al.</i> (2022)           |                  | X     |          |        |                   | X             |             |                |      | X          |                    |
| Girija <i>et al.</i> (2024)            |                  |       |          |        | X                 | X             |             |                |      |            |                    |
| Kinsman <i>et al.</i> (2024a)          |                  | X     | X        |        |                   |               | X           |                | X    |            |                    |

motivations for coworking spaces across countries. Exploring the top motivations in Namibia will be particularly interesting.

Collaboration motivates coworking in Australia (Waters-Lynch and Potts, 2017; Zhao *et al.*, 2020), the USA (Yang *et al.*, 2019) and Brazil (Christino *et al.*, 2022). Spatial arrangements matter in Europe (Appel-Meulenbroek *et al.*, 2021) and Nigeria (Ayodele *et al.*, 2022), while social aspects are emphasized in the USA (Yang *et al.*, 2019), Australia (Zhao *et al.*, 2020), the UK (Clifton *et al.*, 2022) and Brazil (Christino *et al.*, 2022). Creativity emerges in Europe (Appel-Meulenbroek *et al.*, 2021) and the USA (Yang *et al.*, 2019). Managerial approaches shape collaboration (Romeo *et al.*, 2024). Whether Namibia aligns or diverges remains uncertain, warranting examination using Appel-Meulenbroek *et al.*'s (2021) approach.

## 2.2 Coworking space attributes

Identifying the key characteristics of coworking spaces that align with user preferences is essential. Waters-Lynch and Potts (2017) noted that coworking spaces differ from other shared office models primarily in visual design, despite the prevalence of many hybrids between coworking spaces and other business centre models. While serviced offices are typically located in modern buildings (Weijs-Perrée *et al.*, 2016), coworking spaces may occupy diverse structures, including industrial warehouses and refurbished factories (Deskmag, 2016; Gertner and Mack, 2017). This diversity results in more varied exterior and interior designs (Bouncken *et al.*, 2020a), making *atmosphere and interior aesthetics* a relevant attribute to consider in this study

Most coworking spaces are situated in accessible locations (Chua *et al.*, 2024), although remote and rural options also exist (Bouncken *et al.*, 2020b; Vogl and Micek, 2023). Accessibility and layout considerations may differ in developing economies (Ayodele *et al.*, 2022; Adewunmi-Abolarinwa, 2024). Therefore, *accessibility* (by car and public transport) constitutes a critical attribute influencing the choice of coworking spaces in developing countries. The *layout of space* also influences user experience, with open-plan designs encouraging interaction (Bacevice and Spreitzer, 2023; Kinsman *et al.*, 2024b). Many coworking spaces offer a mix of open areas, private offices, phone booths and meeting rooms (Bouncken *et al.*, 2021). Newer designs incorporate informal zones and event spaces (Kojo and Nenonen, 2016; Bouncken *et al.*, 2022).

In addition, they may offer extra leisure and well-being services, such as recreational facilities and guided sports activities (Cabral and van Winden, 2022). Coworking spaces support various mediation activities by organising events that use spatial mechanisms (Bouncken and Aslam, 2021) and digital tools (Rese *et al.*, 2020). Events and teamwork are group activities that foster interaction and participation in particular endeavours (Waters-Lynch and Potts, 2017; Romeo *et al.*, 2024).

Growth and market placement are significant tasks for those managing coworking spaces (Bouncken *et al.*, 2018; Gauger *et al.*, 2020; Gregg and Lodato, 2018; Orel *et al.*, 2023). In addition, this exploitation demands the presence of a *reception and other hospitality measures* (Merkel *et al.*, 2024). Additionally, coworking spaces provide their clients with reasonably priced digital access (Luo and Chan, 2020). *Digital accessibility* is an increasingly preferred attribute in coworking spaces (Ayodele *et al.*, 2022). Other attributes include the *diversity of tenants* and the *lease agreement*. Fiorentino (2024) demonstrated that brief contracts are a prevalent feature of coworking spaces. Longer contracts are also possible, and some companies even operate without contracts (Durante and Turvani, 2018).

Preferences for these attributes (in *italics*) may vary across countries and timeframes. While some studies have explored personal characteristics such as age and gender (Haynes *et al.*, 2017;

[Bae et al., 2020](#); [Baranski et al., 2023](#)), few have considered the ranking of attributes (*RQ2*) and timeframe differences (pre-, during- and post-COVID), in Namibia, addressed in *RQ3*.

Coworking spaces increasingly serve as talent hubs, facilitating access to skilled professionals and fostering community building ([Orel et al., 2023](#)). This dimension is particularly relevant in preferences for coworking spaces and appears relatively consistent globally. Contextual factors, such as Namibia's socio-economic conditions, cultural emphasis on community and infrastructural constraints (e.g. digital access), may produce unique patterns. Addressing these gaps contributes to a more nuanced understanding of coworking in developing economies.

Based on the literature, this study hypothesises as follows:

- H1.* There are no significant differences in users' preferences for accessing coworking spaces by car and public transport across the pre-COVID, during COVID and post-COVID periods.
- H2.* There are no significant differences in users' preferences for digital accessibility features in coworking spaces across the pre-COVID, during COVID and post-COVID periods.
- H3.* There are no significant differences in users' preferences regarding coworking space layouts across pre-COVID, during COVID and post-COVID periods.
- H4.* There are no significant differences in users' preferences for coworking spaces with reception services and active hosts across the pre-COVID, during COVID and post-COVID periods.
- H5.* There are no significant differences in users' preferences for coworking spaces offering lease agreements versus no-contract options across pre-COVID, during COVID and post-COVID periods.

### 3. Methodology

The study was conducted in Windhoek, Namibia's administrative capital, which has the highest concentration of offices in the country. It aimed to analyse coworking space preferences across user categories using a positivist epistemological stance to ensure methodological rigour and objectivity. A cross-sectional survey was conducted using a structured questionnaire that included a ranked-choice question adapted from a stated-choice experiment by [Appel-Meulenbroek et al. \(2021\)](#). Given the absence of an official register of coworking spaces at the time of data collection, coworking sites were identified through a structured reconnaissance process. A total of 16 spaces representing most of the Windhoek market were identified through a field survey conducted between July and September 2022. The identification process proceeded in three stages. Firstly, an initial inventory of coworking spaces was compiled using local business directories, online mapping and search platforms (e.g. Google Maps), as well as entrepreneurship networks and referrals. Secondly, each candidate site was physically visited to verify that it met the study's inclusion criteria: provision of shared workspace accessible to independent users, availability of flexible access or membership arrangements and multi-tenant usage, as distinct from single-organisation offices. Thirdly, site managers were approached to obtain permission to administer on-site questionnaires and to determine appropriate periods for data collection. Six typologies of coworking spaces were identified and included in the study: public spaces, third places/café's, collaboration hubs, coworking hotels, incubators and shared studios ([Weijs-Perrée et al., 2019](#)).

### 3.1 Research procedure and participants

The authors conducted a survey of coworking space users by distributing a hard-copy questionnaire to participants. The participants completed the survey on site while using these spaces. The questionnaire was pretested with 10 tenants of coworking spaces, the pretest affirmed the suitability of the questions without changes. Of 244 questionnaires sent, 212 were returned, yielding an 88% response rate. Informed written consent was obtained from all participants, and respondents' demographic details are presented in [Table 2](#).

Participants were recruited on-site using convenience intercept sampling technique. Users present in the coworking spaces during data-collection visits were invited to participate, after which informed written consent was obtained ([Atiku and Ganiyu, 2022](#)). The survey was completed and returned on-site, which explains the high response rate. Four questionnaires contained limited missing values; these were handled using group-specific median imputation before non-parametric analysis, while fully blank questionnaires were excluded from further analysis.

### 3.2 Questionnaire design and measures

The questionnaire focused on assessing the attributes of coworking spaces in Windhoek, Namibia, using nine attributes adapted from [Appel-Meulenbroek et al. \(2021\)](#). These attributes included accessibility, digital accessibility, atmosphere and interior aesthetics, layout of space, diversity in supply spaces, reception and hospitality, events, diversity of tenants and lease contract. Each attribute was measured at three distinct levels (see [Table 3](#)). Each attribute was evaluated at three distinct quality levels, and respondents ranked the attributes from 1 to 9 in terms of importance, with 1 indicating the highest importance. Additionally, respondents identified their top three motivations (1–3) for choosing coworking spaces ([Figure 1](#)), using options adapted from [Appel-Meulenbroek et al. \(2021\)](#).

### 3.3 Data analysis

Data analysis included descriptive and inferential statistics such as the Kruskal–Wallis H test and Mann–Whitney U test. The non-parametric nature of this test is well-suited to analysing ordinal data that do not meet the basic assumptions of parametric tests such as ANOVA ([Okoye and Hosseini, 2024](#)). Post hoc analysis was conducted using the Mann–Whitney U test ([Nguyen et al., 2025](#)), which is essential for determining specific pairwise differences in user preferences following significant overall findings from the Kruskal–Wallis test. The results of descriptive analyses include simple percentages, means and standard deviations. The reliability of the 27-item instrument was assessed using Cronbach's alpha, which yielded 0.698, indicating acceptable internal consistency. Findings were interpreted through the analytical lenses of NUT and CREM, reflecting dominant decision logics. NUT-related attributes are identified when behaviour reflects rational optimisation, whereas CREM-related attributes arise when decisions are shaped by institutional constraints, path dependencies and adaptive workplace practices.

## 4. Results

### 4.1 Demographic profile of respondents

As indicated in [Table 2](#), 55.7% of the sample were female. Judging from the mean, the average age of users was 30 years. By race, 67.5% were Black. Most respondents held higher education qualifications, with 54.7% holding bachelor's degrees. Regarding employment status, 29.7% were self-employed and 29.2% worked in small companies (2–10 employees). Income levels varied, with 53.3% earning less than N\$400,000.00 annually. Regarding the

**Table 2.** Sample characteristics ( $n = 212$ )

| Sample characteristics                                | <i>N</i> | %    |
|-------------------------------------------------------|----------|------|
| <i>Gender</i>                                         |          |      |
| Female                                                | 118      | 55.7 |
| Male                                                  | 94       | 44.3 |
| <i>Age</i>                                            |          |      |
| ≤ 24 years                                            | 52       | 24.5 |
| 25–34 years                                           | 112      | 52.8 |
| 35–44 years                                           | 40       | 18.9 |
| ≥ 45 years                                            | 8        | 3.8  |
| <i>Race</i>                                           |          |      |
| Black Namibian                                        | 143      | 67.5 |
| Black International                                   | 12       | 5.7  |
| White Namibian                                        | 22       | 10.4 |
| White International                                   | 13       | 6.1  |
| Asian                                                 | 5        | 2.4  |
| Coloured                                              | 13       | 6.1  |
| Others                                                | 2        | 0.9  |
| <i>Educational level</i>                              |          |      |
| No education/elementary school                        | 3        | 1.4  |
| Preparatory secondary vocational education            | 5        | 2.4  |
| Senior general secondary education                    | 15       | 7.1  |
| Pre-university education                              | 11       | 5.2  |
| Intermediate vocational education                     | 3        | 1.4  |
| Higher vocational education                           | 18       | 8.5  |
| University (bachelor)                                 | 116      | 54.7 |
| University (master)                                   | 29       | 13.7 |
| University (PhD)                                      | 10       | 4.7  |
| <i>Work description</i>                               |          |      |
| Self-employed worker                                  | 63       | 29.7 |
| Employee of a company (2–10 employees)                | 62       | 29.2 |
| Employee of a company (11–50 employees)               | 44       | 20.8 |
| Employee of a company (more than 50 employees)        | 14       | 6.6  |
| Student                                               | 27       | 12.7 |
| <i>Position in organisation</i>                       |          |      |
| Supporting staff (desk attendant, receptionist, etc.) | 25       | 11.8 |
| Regular employee                                      | 88       | 41.5 |
| Manager                                               | 33       | 15.6 |
| Board/owner                                           | 29       | 13.7 |
| Does not apply                                        | 35       | 16.5 |
| <i>Sector</i>                                         |          |      |
| Consultancy                                           | 31       | 14.6 |
| Design                                                | 6        | 2.8  |
| Commerce                                              | 13       | 6.1  |
| ICT                                                   | 11       | 5.2  |
| Art                                                   | 6        | 2.8  |
| Management                                            | 15       | 7.1  |
| Research                                              | 7        | 3.3  |
| Education                                             | 19       | 9.0  |

*(continued)*

**Table 2.** Continued

| Sample characteristics                           | <i>N</i> | %    |
|--------------------------------------------------|----------|------|
| Project management                               | 31       | 14.6 |
| PR, marketing, sales, advertising, communication | 19       | 9.0  |
| Writing                                          | 4        | 1.9  |
| Others                                           | 45       | 21.2 |
| <i>Annual net income</i>                         |          |      |
| I don't know/I'd rather not say                  | 43       | 20.3 |
| Less than \$N400, 000 a year                     | 113      | 53.3 |
| \$N 400,001 – \$N 500, 000 a year                | 29       | 13.7 |
| \$N500, 001 – \$N 600, 000 a year                | 15       | 7.1  |
| \$N 600,001 – \$N 700, 000 a year                | 6        | 2.8  |
| More than \$N 700, 000 a year                    | 4        | 1.9  |
| <i>Period</i>                                    |          |      |
| Before COVID-19 pandemic                         | 94       | 53.7 |
| During COVID-19 pandemic                         | 35       | 20.0 |
| After COVID-19 pandemic                          | 46       | 26.3 |
| <i>Mode of transport to coworking space</i>      |          |      |
| Car                                              | 94       | 53.7 |
| Bike                                             | 4        | 2.3  |
| By foot                                          | 9        | 5.1  |
| Public transport                                 | 66       | 37.7 |

**Source(s):** Authors' own work**Table 3.** Importance by rank

| Attributes                       | Theoretical basis | Mean | SD    |
|----------------------------------|-------------------|------|-------|
| Accessibility                    | NUT               | 2.41 | 1.973 |
| Digital accessibility            | NUT/CREM          | 3.54 | 2.091 |
| Atmosphere & interior aesthetics | CREM              | 3.89 | 2.168 |
| Reception & hospitality          | CREM              | 4.43 | 2.270 |
| Layout of space                  | CREM              | 4.58 | 2.382 |
| Diversity in supply spaces       | CREM              | 5.38 | 2.447 |
| Lease contract                   | CREM              | 5.44 | 2.448 |
| Diversity of tenants             | NUT/CREM          | 5.87 | 2.509 |
| Events                           | CREM              | 6.83 | 2.885 |

**Source(s):** Authors' own work

usage period, 53.7% began using coworking spaces before the COVID-19 pandemic. Regarding transportation, 53.7% used cars to access coworking spaces.

#### 4.2 Motivations and rank attributes to use a coworking space in Namibia

The analysis of motivations for coworking spaces indicates that the primary motivations were affordable accommodation, opportunities to network and a vibrant, creative atmosphere. A preference for affordable accommodation may be due to the respondents' economic backgrounds. Workers in Namibia exhibit a culture that emphasises community

orientation (Lahti *et al.*, 2022). Many users of these spaces come from diverse backgrounds, including consulting, which requires creativity. The least frequently cited factors included a professional supportive environment, social interaction with co-workers, work-related conversations and flexibility.

Table 3 presents the ranking of coworking space attributes based on user preferences. The top three attributes were accessibility (mean of 2.41), digital accessibility (mean of 3.54), and atmosphere and interior aesthetics (mean of 3.89). The least important attributes were events, diversity of tenants, lease contracts and diversity in supply spaces.

Further analysis of attribute-level preferences (Table 4) reveals that accessibility by car ( $\bar{x}$  = 1.43, SD = 0.696) was most preferred, followed by accessibility by car and public transport ( $\bar{x}$  = 2.05, SD = 0.619), highlighting the importance of private transport (Nwagbara and Iyama, 2019). Fast internet speed ( $\bar{x}$  = 1.37, SD = 0.717) and average internet speed ( $\bar{x}$  = 2.06, SD = 0.536) were also highly valued, highlighting the significance of digital access in Namibia (Keskinen *et al.*, 2022; Lahti *et al.*, 2022).

4.3 Ranked attributes of coworking spaces across different periods

An analysis of ranked attributes of coworking spaces across different periods used the Kruskal–Wallis H test, revealing several significant differences (Table 5).

Table 4. Descriptive analysis

| Attributes                    | Choice           | Mean | SD    |
|-------------------------------|------------------|------|-------|
| By car                        | Best choice      | 1.43 | 0.696 |
| By car and public transport   | Next best choice | 2.05 | 0.619 |
| By public transport           | Worst option     | 2.43 | 0.816 |
| Fast internet speed           | Best choice      | 1.37 | 0.717 |
| Average internet speed        | Next best choice | 2.06 | 0.536 |
| Ordinary internet             | Worst option     | 2.45 | 0.788 |
| Modern                        | Best choice      | 1.51 | 0.673 |
| Home like                     | Next best choice | 2.1  | 0.813 |
| Traditional                   | Worst option     | 2.27 | 0.768 |
| Open layout                   | Best choice      | 1.74 | 0.817 |
| Half open layout              | Next best choice | 1.76 | 0.626 |
| Closed layout                 | Worst option     | 2.41 | 0.81  |
| Premium coworking space       | Best choice      | 1.78 | 0.842 |
| Standard coworking space      | Next best choice | 1.71 | 0.616 |
| Basic coworking space         | Worst option     | 2.37 | 0.804 |
| Reception and active host     | Best choice      | 1.48 | 0.789 |
| Reception but no host         | Next best choice | 2.07 | 0.611 |
| No reception or host          | Worst option     | 2.37 | 0.765 |
| Often                         | Best choice      | 1.8  | 0.822 |
| Sometimes                     | Next best choice | 1.72 | 0.604 |
| None                          | Worst option     | 2.35 | 0.87  |
| Strong diversity of tenants   | Best choice      | 1.52 | 0.721 |
| Moderate diversity of tenants | Next best choice | 1.8  | 0.576 |
| No diversity of tenants       | Worst option     | 2.61 | 0.731 |
| Long-term contract            | Best choice      | 1.75 | 0.852 |
| Short-term contract           | Next best choice | 1.73 | 0.606 |
| No contract                   | Worst option     | 2.39 | 0.824 |

Source(s): Authors' own work

**Table 5.** Differences in users' preferences by period

| Attributes                                           | Time group   | N   | Mean rank | Kruskal–Wallis H test<br>$\chi^2(2)$ | $p$   | Mann–Whitney U (post-hoc)<br>$Sig\ diff\ (post-hoc)$ | test<br>$p$    |
|------------------------------------------------------|--------------|-----|-----------|--------------------------------------|-------|------------------------------------------------------|----------------|
| Accessibility<br>By car                              | Before COVID | 202 | 183.03    | 6.324                                | 0.042 | Before and after Covid                               | 0.013          |
|                                                      | During COVID | 76  | 198.27    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 209.72    |                                      |       |                                                      |                |
| By public transport                                  | Before COVID | 202 | 201.69    | 7.101                                | 0.029 | Before and after Covid                               | 0.011          |
|                                                      | During COVID | 76  | 201.13    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 172.82    |                                      |       |                                                      |                |
| Digital accessibility<br>Ordinary internet           | Before COVID | 202 | 202.39    | 13.095                               | 0.001 | Before and after Covid<br>During and after Covid     | 0.001<br>0.003 |
|                                                      | During COVID | 76  | 209.49    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 165.62    |                                      |       |                                                      |                |
| Layout of space<br>Closed layout                     | Before COVID | 202 | 204.43    | 9.752                                | 0.008 | Before and after Covid                               | 0.002          |
|                                                      | During COVID | 76  | 199.34    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 168.94    |                                      |       |                                                      |                |
| Reception & hospitality<br>Reception and active host | Before COVID | 202 | 84.81     | 12.480                               | 0.002 | Before and during Covid<br>During and after Covid    | 0.001<br>0.005 |
|                                                      | During COVID | 76  | 225.82    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 187       |                                      |       |                                                      |                |
| Lease contract<br>No contract                        | Before COVID | 202 | 211.92    | 17.634                               | 0.001 | Before and during Covid<br>Before and after Covid    | 0.38<br>0.001  |
|                                                      | During COVID | 76  | 186.38    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 164.06    |                                      |       |                                                      |                |
| Short-term contract                                  | Before COVID | 202 | 209.88    | 14.203                               | 0.001 | Before and after Covid                               | 0.001          |
|                                                      | During COVID | 76  | 189.02    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 166.02    |                                      |       |                                                      |                |
| Long-term contract                                   | Before COVID | 202 | 176.84    | 11.878                               | 0.003 | Before and during Covid<br>Before and after Covid    | 0.027<br>0.001 |
|                                                      | During COVID | 76  | 205.38    |                                      |       |                                                      |                |
|                                                      | After COVID  | 108 | 216.31    |                                      |       |                                                      |                |
| Source(s): Authors' own work                         |              |     |           |                                      |       |                                                      |                |

*H1a. \*\*Accessibility by Car\*\*:* A significant difference was found ( $\chi^2(2) = 6.324$ ,  $p = 0.042$ ) with mean rank scores of 183.03 (before COVID-19), 198.27 (during COVID-19), and 209.72 (after COVID-19). Post hoc analysis revealed a significant difference between the pre- and post-COVID-19 periods (mean rank increase of 26.69;  $p = 0.013$ ). This suggests that the choice of coworking space is influenced by car travel during and after the pandemic. This shift suggests that choice based on access by car has changed after the pandemic (Bruwer and Anderson, 2022). Car travel behaviour in Windhoek is comparable to other African cities and is driven by social status and security within fragmented and unreliable transport systems (Nuuyandja et al., 2025).

*H1b. \*\*Accessibility by Public Transport\*\*:* Significant differences were noted ( $\chi^2(2) = 7.101$ ,  $p = 0.029$ ) with mean ranks of 201.69 (before), 201.13 (during) and 172.82 (after). The Mann–Whitney U test revealed a significant mean difference between the pre-COVID-19 and post-COVID-19 periods (mean rank decrease of 28.87,  $p = 0.011$ ). The results suggest that coworking preference is significantly based on public transport accessibility before the COVID-19 pandemic, compared to after the pandemic and even reduced during the pandemic.

*H2. \*\*Ordinary Internet\*\*:* A significant difference was observed ( $\chi^2(2) = 13.095$ ,  $p = 0.001$ ) with mean ranks of 202.39 (before), 209.49 (during) and 165.62 (after). Post hoc comparisons revealed significant mean differences between before and after (mean rank decrease of 36.77;  $p = 0.001$ ) and between, during and after the pandemic (mean rank decrease of 43.87;  $p = 0.003$ ). These findings suggest that choice based on ordinary internet was reduced after the pandemic, compared to their preferences before and during the pandemic, with the highest preference during the pandemic. There was a greater preference for digital solutions during the pandemic (Innstrand et al., 2022). People in developing countries experience more severe constraints on digital access than their counterparts in developed countries, which, in turn, drives a stronger preference for coworking spaces that provide superior connectivity (Ayodele et al., 2022).

*H3. \*\*Closed Layouts\*\*:* A significant difference was found ( $\chi^2(2) = 9.752$ ,  $p = 0.008$ ) with mean ranks of 204.43 (before), 199.34 (during) and 168.94 (after). The Mann–Whitney U test revealed a significant difference in mean rank between the pre-COVID-19 and post-COVID-19 periods (mean rank decrease of 35.49;  $p = 0.002$ ). The results suggest that users exhibited a significantly greater preference for closed layouts before COVID-19 than during and after the pandemic. This shift confirms the global trend of having a more mobile workforce and reduced office usage (Barath and Schmidt, 2022).

*H4. \*\*Reception and Active Hosting\*\*:* Significant differences were observed ( $\chi^2(2) = 12.480$ ,  $p = 0.002$ ), with mean ranks of 84.81 (before), 225.82 (during) and 187.00 (after). Post hoc analysis showed significant mean differences between before and during (mean rank increase of 141.01,  $p = 0.001$ ) and during and after (mean rank decrease of 38.82,  $p = 0.005$ ). These findings suggest that users significantly preferred receptions with active hosts during the pandemic, compared with both the pre- and post-pandemic periods, indicating a need for interaction.

*H5. \*\*Lease Contracts\*\*:* Significant differences were observed for no contract (*H5a*) ( $\chi^2(2) = 17.634$ ,  $p = 0.001$ ), short-term contract (*H5b*) ( $\chi^2(2) = 14.203$ ,  $n = 387$ ,  $p = 0.001$ ), and long-term contract (*H5c*) ( $\chi^2(2) = 11.878$ ,  $p = 0.003$ ). For no contract, mean ranks were 211.92 (before), 186.38 (during) and 164.06 (after), with significant differences between before and during (mean rank decrease of 25.54,  $p = 0.038$ ) and before and after (mean rank decrease of 47.86,  $p = 0.001$ ). The results suggest that users significantly prefer no-contract arrangements before COVID-19 than during and after the pandemic, and thus prefer longer, more formal stays at coworking spaces, indicating growing confidence in such spaces.

*H5c. \*\*Long-term Contracts\*\**: Long-term contracts showed mean ranks of 176.84 (before), 205.38 (during) and 216.31 (after), with significant differences between before and during (mean rank increase of 28.54,  $p = 0.027$ ) and before and after (mean rank increase of 39.47,  $p = 0.001$ ). These findings suggest that users exhibit significantly higher preferences for long-term contracts during and after the pandemic. The reason for this shift could be to seek more stable lease terms and requires further investigation.

These findings indicate a shift in user preferences for coworking spaces before, during and after the pandemic, highlighting increased emphasis on car access and a greater focus on long-term contracts post-pandemic. In contrast, preferences for public transport and ordinary internet decreased.

## 5. Discussion

The findings of this study provide important insights into coworking motivations in a developing-country context and demonstrate the explanatory strength of integrating NUT and CREM. Affordability reflects NUT-driven utility maximisation under financial constraints, as users prioritise cost efficiency in workspace selection. Community and networking reflect both social utility (NUT) and workplace value creation (CREM), while a creative atmosphere and professional image reflect CREM design values and enhance opportunities and income potential consistent with NUT principles.

The prominence of affordability strongly aligns with NUT, which posits that individuals make rational choices under resource constraints (Hodgson, 2025; Munien and Telukdarie, 2024). Users prefer coworking spaces as cost-effective alternatives to traditional offices, reflecting the need to minimise operational costs while maintaining productivity. This finding aligns with evidence from Europe (Netherlands, Germany and the Czech Republic) (Appel-Meulenbroek *et al.*, 2021) and Nigeria (Ayodele *et al.*, 2022), where affordability is a key driver of coworking adoption. However, in Namibia, where economic and infrastructural constraints are more pronounced, this behaviour reflects stronger utility-maximisation tendencies, thereby extending NUT to developing contexts.

Networking and a sense of community further highlight the combined relevance of NUT and CREM. From a NUT perspective, social interaction enhances indirect utility by improving access to knowledge, opportunities and professional support, thereby supporting productivity and income generation. From a CREM perspective, community represents a central mechanism of workplace value creation, enhancing satisfaction, collaboration and belonging (Garrett *et al.*, 2017; Bouncken *et al.*, 2020a, 2020b). This double interpretation aligns with findings across Australia (Waters-Lynch and Potts, 2017), the USA (Zhao *et al.*, 2020) and Brazil (Christino *et al.*, 2022), where collaboration is a key motivation. The stronger emphasis on community in Namibia suggests that socio-cultural dynamics reinforce CREM-driven workplace values more strongly than in some developed contexts.

The importance of a vibrant and creative atmosphere is primarily explained through CREM, which emphasises the role of spatial and experiential design in enhancing workplace value and performance (van der Voordt and Jensen, 2023; Wijnja *et al.*, 2021). Coworking environments that provide stimulating and aesthetically engaging spaces contribute to creativity, identity and job satisfaction. This finding aligns with studies from European countries (The Netherlands, Germany and the Czech Republic) (Appel-Meulenbroek *et al.*, 2021) and broader international contexts (Echeverri *et al.*, 2021), where inspiring environments are key drivers of adoption. In this study, creative atmosphere demonstrates how spatial design translates into perceived workplace value. Similarly, professional image reflects core CREM principles associated with organisational performance and external stakeholder perception. Coworking spaces enable users to project a professional identity

through high-quality environments, enhancing credibility and legitimacy (Gauger *et al.*, 2020; van der Voordt, 2017). Concurrently, this motivation aligns with NUT, as improved professional environments are associated with increased income potential and business opportunities.

The relatively low flexibility and social interaction suggests important contextual variation. While these factors are often prominent in European studies (Appel-Meulenbroek *et al.*, 2021), their reduced importance in Namibia indicates that more fundamental constraints. Particularly, affordability and infrastructural constraints play a dominant role in shaping decision-making. From a NUT perspective, this pattern reflects prioritisation of core utility-maximising attributes. In contrast, from a CREM perspective, workplace value is predominantly derived from stability and core functional attributes rather than from flexibility alone.

This study integrates these theoretical lenses to demonstrate that coworking motivations are shaped by both economic rationality (NUT) and workplace value creation (CREM). The findings not only confirm key NUT predictions but also extend the framework by revealing the heightened significance of cost and infrastructural constraints in developing countries. Similarly, while confirming core CREM principles, the results advance the framework by highlighting the significant role of socio-cultural dynamics. This integrated perspective strengthens and deepens the study's theoretical contribution.

## 6. Conclusion

This study makes an original contribution to coworking research by presenting one of the first empirical analyses of user motivations and ranked design attributes in Namibia. It explores temporal differences across the pre-, during- and post-COVID periods. By applying NUT and CREM principles, the study bridges theoretical frameworks with practical design considerations. These contributions advance understanding of coworking dynamics in resource-constrained environments and offer actionable insights for operators, policymakers and scholars seeking to adapt coworking models to developing-country contexts.

The study's findings can inform strategies to enhance stakeholder value in coworking spaces, thereby promoting customer loyalty. From a CREM perspective, the identified preferences can inform sourcing decisions, aid location selection and provide insights into employee comfort across various workplace settings (Appel-Meulenbroek *et al.*, 2021). Developers and investors will find pertinent information regarding the design and delivery of spaces that address the needs of a wider demographic, informed by the specific temporal context. User preferences for spaces fluctuate over time, subsequently impacting business continuity.

Practical recommendations for coworking operators emphasise aligning spaces with user preferences and maintaining affordable pricing. Community-oriented layouts with central hubs and flexible furniture should be adopted. Flexible lease options address post-COVID demand for longer agreements. Operators should host networking events, promote diversity, support underprivileged groups and implement anti-discrimination codes aligned with Namibia's cultural values. Adequate parking, reliable high-speed internet, modern designs and diverse suppliers are essential to enhance inclusivity, functionality and the sustainability of coworking spaces.

The study also highlights differences in global trends: while some developed countries prefer short-term leases and hostless receptions, Namibian users prefer longer-term contracts and hosted receptions. In the post-pandemic period, the preference for stability has intensified, necessitating managerial adaptation to ensure long-term sustainability.

Methodologically, the study used a ranking approach rather than stated-choice experiments, as used in some prior models, thereby eliminating trade-offs between attributes and levels, which tends to select the highest quality levels. This approach may lead respondents to select the highest-quality levels, potentially influencing costs. Future studies could incorporate additional sustainability-related attributes and broader geographic coverage to improve generalisability. Limitations include the single-city focus and reliance on convenience sampling, which restrict external validity. Future research should employ more robust sampling techniques to account for potential random or environmental factors. Also, longitudinal studies examining coworking space lease trends in Namibia can be conducted.

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### Corresponding author

Yewande Adetoro Adewunmi can be contacted at: [yewande.adewunmi@wits.ac.za](mailto:yewande.adewunmi@wits.ac.za)