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The Mediating Role of Social Climate on the Pathway between Spatial Creativity and Entrepreneurial Opportunity in Co-Working Spaces

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Abstract

This research examines the influence of space creativity on Entrepreneurial Opportunity Recognition and Exploitation (EORE) within co-working spaces in Thailand, with particular attention to the mediating role of social climate. Although co-working environments have been widely investigated in Western contexts, empirical evidence remains limited in Asian settings where cultural and institutional conditions differ significantly. Drawing on broaden-and-build theory, this study proposes a framework to test how spatial design creativity directly and indirectly affects entrepreneurial behaviors through social dynamics. The empirical analysis is based on survey data collected from 350 individuals with current or prior experience using co-working spaces in the Bangkok metropolitan area, a rapidly expanding hub for start-ups and digital entrepreneurs. Measurement constructs were adapted from validated scales of creativity, social climate, and opportunity recognition, with data analyzed using structural equation modeling and bootstrapping techniques. The results reveal that space creativity significantly enhances EORE ($\beta = 0.221$, $p < .01$), while social climate exerts a stronger direct effect on EORE ($\beta = 0.502$, $p < .001$). Moreover, social climate partially mediates the relationship between space creativity and EORE ($\beta = 0.339$, $p < .001$), indicating that supportive and collaborative climates amplify the benefits of creative spatial design. These findings advance theory by integrating physical and social dimensions of entrepreneurial ecosystems, demonstrating how spatial creativity contributes to opportunity-driven entrepreneurship in emerging economies under the Thai context. Practically, the study underscores the importance of designing workspaces and communities that cultivate collaboration and innovation to drive local economic growth. Practically, this research highlights that investments in creative spatial design and community-building strategies can serve as effective levers to stimulate opportunity-driven entrepreneurship and foster local economic development.

Keywords: Entrepreneurial Opportunity Recognition and Exploitation, Social Climate, Mediation Role, Space Creativity, Thailand

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Introduction

In recent years, co-working spaces have emerged as a noticeable feature of entrepreneurial ecosystems, particularly in innovation-oriented economies. The global shift towards more flexible, collaborative, and resource-efficient work environments reflects broader transformations in the business landscape, where conventional office layouts are gradually substituted by dynamic spaces that cultivate creativity, interaction, and experimentation (Sukatendel et al., 2025). This evolution shows not merely a spatial reconfiguration but also a paradigm shift in how entrepreneurial opportunities are recognized, evaluated, and acted upon. The increasing prevalence of co-working spaces worldwide reflects the broader trend toward open innovation and inter-organizational learning, where spatial proximity and social interaction foster cognitive alertness essential for entrepreneurial opportunity recognition (Sukatendel et al., 2025).

In Thailand, the co-working industry has evolved into one of the most dynamic segments within the commercial real estate and entrepreneurial support ecosystem. According to the Thailand Co-Working Space Market Report (Haritwal, 2024), the sector was valued at USD 106.7 million in 2023 and is expected to reach USD 550.8 million by 2030, signifying a compound annual growth rate of 26.2% between 2024 and 2030. Bangkok, recognized as Thailand's primary start-up hub and ranked 74th globally in the 2023 StartupBlink Index, functions as the center of this transformation, accommodating the majority of professional and conventional co-working facilities. The combination of affordable leasing models, strategic urban locations, and community-driven service designs has made these spaces essential infrastructure for Thailand's entrepreneurial economy (Haritwal, 2024).

The concept of "space creativity" refers to the deliberate and strategic design of physical environments that stimulate innovation, collaboration, and creative thinking among customers. It can encompass spatial, aesthetic, and functional dimensions that interact to influence how individuals perceive, engage, and generate ideas within a workspace (Thoring, 2020). Specifically, space creativity integrates three related aspects, namely functional adaptability that concerns how spatial arrangements allow flexibility and multiple modes of working; aesthetic stimulus that includes design elements such as color, lighting, and materials that arouse creative emotions and cognitive engagement; and social affordance that accentuates how spatial arrangements foster communication, serendipitous encounters, and knowledge sharing (Elsbach & Pratt, 2007). Within co-working spaces, space creativity therefore extends beyond mere architectural form to incorporate the symbolic and emotional qualities of the environment that stimulate entrepreneurial behavior and innovative collaboration.

To outline this discussion more clearly, the emergence of co-working spaces can be understood as both a global socio-economic phenomenon and a theoretical lens for examining entrepreneurial cognition. The first aspect underscores the structural transformations in work culture, while the second centers on how spatial design interacts with individual cognitive mechanisms underlying opportunity recognition (Girija et al., 2024). This distinction strengthens the rationale for exploring spatial creativity as a determinant of entrepreneurial processes rather than treating it as a mere contextual feature. This trend has not only redefined the methods in which entrepreneurs and small enterprises operate but has also positioned co-working spaces as essential enablers of entrepreneurial activity and local economic development. Their importance is particularly evident in contexts where entrepreneurship is recognized as a crucial engine of economic growth and competitiveness, such as in Thailand and other emerging economies

(Sukatendel et al., 2025). However, Thailand's co-working ecosystem provides a uniquely fruitful ground for scrutinizing these mechanisms, as its entrepreneurial landscape is characterized by collectivist social norms, Buddhist-inspired relational values that mediate how spatial and social dimensions influence entrepreneurial cognition (Chumnangoon et al., 2023). Dissimilar to Western contexts accentuate individualistic and technology-driven entrepreneurship, Thai entrepreneurs often rely on communal trust, social reciprocity, and adaptive creativity, making it an especially meaningful setting for extending theories of spatial-social entrepreneurship (Chumnangoon et al., 2023).

Understanding the role of co-working spaces is imperative because such environments provide not only physical infrastructure, but also function as social and creative platforms where entrepreneurs can access diverse networks and resources, share information and knowledge, and generate creative and innovative ideas (Girija et al., 2024). Early researches suggest that co-working spaces can motivate collaboration and support entrepreneurial resilience in uncertain economic circumstances (Girija et al., 2024). In this regard, space creativity can be seen as an important antecedent to entrepreneurial opportunity recognition and exploitation, as it directly shapes how entrepreneurs interact with their environment, identify opportunities, and transform ideas into tangible ventures. Hence, a theoretically explicit connection between spatial creativity and opportunity recognition enriches understanding of how environmental design can trigger opportunity alertness, a cognitive process central to entrepreneurship (Thoring et al., 2020). This link elucidates how spatial affordances not only enhance creativity but also facilitate the transformation of creative insights into actionable business opportunities.

A clear and early definition of this concept provides a stronger theoretical underpinning for probing the mechanisms through which the spatial characteristics of co-working environments facilitate innovation and entrepreneurship. Yet, in spite of growing acknowledgment of their economic and social relevance, the mechanisms through which co-working spaces outline entrepreneurial processes remain inadequately understood. In particular, while the design creativity within shared spaces has been recognized as a valuable asset, its association with how entrepreneurs pinpoint and act upon opportunities has not been effectively explored (Wu & Zhang, 2024). This theoretical opening highlights the necessity for empirical models that connect spatial, cognitive, and social dimensions of entrepreneurship, especially within collectivist and emerging-market settings like Thailand, where institutional logics and informal networks shape entrepreneurial decision-making. The existing literature has primarily examined co-working from managerial, spatial, or community-building aspects, often accentuating their role in reducing operational costs, enhancing networking, or facilitating innovation. However, there is still limited empirical work that directly addresses the relationship between spatial creativity and Entrepreneurial Opportunity Recognition and Exploitation (EORE) (Krauss & Tremblay, 2024). Much of the prevailing research is conceptual or qualitative in nature, with relatively few studies employing systematic case-based or quantitative methodologies to investigate how co-working environments influence entrepreneurial outcomes (Vogl et al., 2024). Furthermore, the majority of research has focused on Western contexts, leaving a discrepancy in comprehending how these dynamics unfold in Asian cultural contexts such as Thailand, where cultural, institutional, and economic conditions differ significantly. By conducting this research within the Thai context, the study not only addresses this geographical imbalance but also contributes to broadening entrepreneurship studies by offering understandings from Southeast Asian regions that focus relational creativity and contextual adaptability.

This research aims to bridge the existing literature gaps by assessing the linkage between space creativity and EORE as well as the mediating role of social climate within such a dynamic relationship under Thai co-working environments in Thailand. By incorporating a theoretically grounded conceptualization of space creativity as a multidimensional construct, this research provides a coherent framework for understanding how spatial features influence entrepreneurial cognition and behavior. Thus, it aligns with emerging research on spatial entrepreneurship that views the built environment as an active participant in shaping entrepreneurial action and innovation processes (Thoring et al., 2020). By focusing on this relationship, this study contributes to both theoretical and practical domains. Theoretically, this research advances the understanding of how spatial creativity serves as an antecedent of entrepreneurial processes and how social climate mediates this dynamic relationship, thus expanding knowledge on both co-working and entrepreneurship literature under the Thai cultural context. Practically, the research provides insights for policymakers, co-working managers, and entrepreneurs into how space design, collaborative and supportive environments can be leveraged to stimulate opportunity-driven entrepreneurship and business growth. Moreover, by clarifying how spatial design interacts with social climate, this research extends the dialogue on entrepreneurial ecosystems, validating how culturally embedded spatial practices can strengthen opportunity ecosystems in emerging markets.

Research Objectives

The objectives of this research are twofold: First, to investigate how the creative features of co-working spaces impact individuals' ability to recognize and exploit entrepreneurial opportunities, and second, to evaluate the mediation role of social climate plays during the processes that space design creativity contributes to entrepreneurial development within the Thai context. To align with these objectives, the central research questions are, first, how does the creativity of space in co-working environments influences the recognition and exploitation of entrepreneurial opportunities? Secondly, does the social climate of co-working spaces mediate the relationship between space creativity and EORE under Thailand context?

Literature Review

Theoretical Support

The Broaden-and-Build (B&B) theory proposed by Fredrickson (2001) provides a useful psychosomatic framework for understanding how emotive experiences translate into lasting cognitive, social, and behavioral outcomes. The central proposition of the theory is that affirmative emotions, such as joy, interest, and curiosity, can broaden individuals' momentary thought–action repertoires by broadening attentional scope, enhancing cognitive flexibility, and stimulating exploratory behavior. Over time, these recurrent episodes of broadened cognition and action accrue to construct lasting personal and social resources, including knowledge, skills, and social ties (Fredrickson, 2001; Cohn et al., 2009). When considered in relation to the co-working context, the theory advocates that creative spatial design can function as a stimulus for eliciting positive affect. Features such as flexible layouts, aesthetic richness, playful design, and spaces that encourage informal interaction can generate feelings of enthusiasm, curiosity, and autonomy (Dul & Ceylan, 2014; Blomberg & Kallio, 2022). These affective responses, aligning with

the B&B framework, broaden cognitive processing and cultivate openness to exploration and spontaneous engagement with others. For instance, a spatially creative co-working atmosphere may encourage members to initiate conversations with individuals who are outside their immediate domain, thereby extending their informationa2l and relational prospects.

However, while the B&B framework elucidates the psychosomatic pathway from affect to cognition and resource accumulation, it has been criticized for overlooking the influence of environmental affordances that condition such processes (Withagen et al., 2018). By integrating Gibson's (2014) environmental affordance theory, it provides a complementary ecological perspective, postulating that the spatial environment offers actionable possibilities that known as the affordances, which invite or constrain creative and social behavior. This integration grounds the psychological mechanisms of the B&B theory in material and cultural context, thus enhancing the ecological soundness of the conceptual model (Maier & Fadel, 2009). In co-working spaces, for instance, open plan designs or communal zones afford collaboration, while modular furniture affords adaptive use and experimentation. Within Thailand's entrepreneurial ecosystem, where collectivist tendencies and high-context communication prevail, such affordances can be interpreted through culturally specific norms that underline harmony and indirect engagement (Miura, 2024). Therefore, spatial and social mechanisms may operate differently compared to Western contexts, as Thai entrepreneurs tend to prioritize relational harmony and community orientation, aligning with environmental affordances that promote social cohesion over individual autonomy. This cultural moderation underscores the need to situate B&B processes within localized socio-ecological frames.

The repeated experience of positive emotional states in co-working can also contribute to the gradual accrual of social resources. These resources include trust, reciprocity, shared norms of knowledge exchange, and the realization of diverse relational ties (Fredrickson, 2001; Barsade, 2002). Collectively, they shape the social climate of the co-working space, cultivating an environment where partnership, openness, and mutual support are anticipated and reinforced. This emergent social climate functions as an essential role in entrepreneurial processes, particularly in relation to opportunity recognition and exploitation. A widened cognitive frame, together with exposure to diverse knowledge and outlooks, can enhance the likelihood of discovering novel business opportunities through synchronizing the previously disparate cues (Shane, 2000; Ardichvili et al., 2003). In the meantime, the social resources embedded in a supportive climate facilitate the exploitation of these opportunities by providing access to collaborators, early customers, and feedback channels, as well as by reducing transaction costs through norms of trust and reciprocity (Bouncken & Reuschl, 2018). Recent scholarship further demonstrates that spatial and social factors jointly mediate entrepreneurial learning within co-working settings (Girija et al., 2024). Post-pandemic co-working research emphasizes hybrid affordances, both digital and physical that sustain social creativity even under spatial constraints (Mariotti & Manzini, 2021). Integrating these contemporary insights ensures the theoretical framework remains current and adaptable to Thailand's rapidly evolving digital-entrepreneurial ecosystem. The B&B theory, therefore, provides a process model that explains the mechanism through which spatial creativity in co-working environments can translate into entrepreneurial outcomes. By mapping out the trail from space design, through the elicitation of affirmative response and the expansion of cognition and social collaboration, to the subsequent cultivation of a favorable social climate, B&B theory links environmental design to the recognition and exploitation of entrepreneurial opportunities. Through this, B&B highlights the significance of considering

co-working spaces more than simply functional workplaces, but as socio-psychological ecosystems where spatial creativity and positive experience congregate to yield entrepreneurial potential.

Spatial Creativity

A growing number of studies highlight the importance of workplace design, particularly its architectural form and spatial arrangement, in fostering creativity and motivation among individuals (Magadley & Birdi, 2009). Within the specific context of co-working environments, the concept of spatial design refers to the physical dimension of design, which can influence organizational outcomes by shaping how space is structured and experienced (Dul & Ceylan, 2011). Increasingly, organizations have recognized that physical settings are not simply backdrops to work, but rather critical determinants of innovation potential (Martens, 2011). Thus, many co-working spaces adopt design concepts similar to those of well-known technology firms such as Google and Apple, where creative architecture and interior design serve as catalysts for innovative behaviors. These features are intentionally aligned with the cognitive and social processes of tenants, encouraging creative idea generation and collaborative interactions.

The design outline of co-working, including its layout, aesthetics, and architectural choices, plays a crucial role in shaping behavioral patterns (Magadley & Birdi, 2009). Prior researches demonstrate that spaces intentionally constructed to promote creative thinking, such as innovation laboratories or brainstorming zones, often differ from the rigidity of conventional office arrangements by replacing rectangular layouts with flexible, adaptive, and visually stimulating alternatives (Kristensen, 2004). Grounding on these principles, co-working spaces frequently integrate diverse workrooms, circular seating arrangements, informal exhibition areas, cafés, and symbolic cues like artwork or nontraditional geometrical designs. Such features not only enhance users' creative capacity but also provide an inspiring atmosphere that supports collaboration. According to B&B theory, environments that reliably evoke positive emotions can broaden attention and encourage approach behaviors, thus creative design features such as aesthetic appeal, flexible zones will function as stimuli that increase momentary positive affect and approach orientation, which in turn increase the likelihood of spontaneous interactions.

A well-designed spatial layout can also further facilitate the circulation and exchange of knowledge. Co-working environments are often designed with openness and visibility in mind, creating an atmosphere conducive to interaction and communication (Parrino, 2015). Spatial openness and visibility have been found to support collaborative communication, teamwork, and unanticipated encounters, allowing for unplanned interactions that inspire knowledge transfer and idea sharing (Blomberg & Kallio, 2022). In this way, co-working spaces are not simply physical constructs but function as social and conceptual arenas where collaboration, learning, and experimentation occur jointly (Spinuzzi, 2012). The physical closeness among members additionally supports informal exchanges and provides opportunities to access shared resources, reinforcing the linkage between design and knowledge acquisition (Bouncken & Reuschl, 2018). Moreover, the creative design of co-working spaces is intended to meet participants' needs by providing an environment that fosters diverse and productive activities. A well-designed space attracts entrepreneurs and independent professionals, offering them a sense of comfort that encourages interaction and engagement with both the physical and social dimensions of the environment. Space creativity thus enhances tenants' cognitive processes by encouraging curiosity, exploration, and the pursuit of new knowledge. At the same time, it promotes informal

learning and collaboration by allowing tenants to exchange complementary resources and experiences within the community. Such dynamics increase the likelihood of discovering innovative ideas and exploring new opportunities. On this basis, the following hypothesis is postulated: Hypothesis 1: Space creativity of co-working spaces is positively related to opportunity recognition and opportunity exploitation.

Social Climate

Innovative ideas and opportunities rarely occur in isolation; instead, they tend to emerge through iterative processes that are embedded in social contexts where collaboration and interaction take place (Musenze et al., 2024). Social climate can be understood as the collective perception of the relational and normative conditions that shape interactions within a group or setting. It comprises dimensions such as interpersonal trust, feelings of psychological security, norms of reciprocity and mutual assistance, the perceived frequency and quality of social exchanges, and an overall orientation toward cooperation and shared learning (Amabile et al., 1996). Within co-working environments, the notion of social climate refers to how participants interpret the community's readiness to provide support, the strength of collaborative ties, and the organizational mechanisms that encourage constructive engagement. It can also be described as a socially constructed resource that emerges through repeated interactions and becomes a relatively stable attribute of the community. This characteristic influences how knowledge flows, how participation norms develop, and how resources are mobilized (Bouncken & Reuschl, 2018; Rese et al., 2021).

Social climates characterized by trust, openness, and knowledge exchanges provide broader and more diverse informational inputs, reduce barriers to idea sharing, and create psychological safety for exploratory decision-making. According to B&B theory, climates built through repeated positive interactions broaden group cognition and encourage associative thinking, thus improving individuals' ability to observe and recombine cues into entrepreneurial opportunities. Co-working arrangements reintroduce opportunities for socialization into contemporary work practices. These environments are not simply physical infrastructures but also social communities that provide a productive platform for networking and professional relationship building (Spinuzzi, 2012). Professionals who select co-working spaces often prefer flexible work styles and contexts that are cultivated by other independent or creative individuals who recognize the benefits of networking and the advantages of collaboration (Gandini, 2015). Within such an environment, entrepreneurs and freelancers gain opportunities to exchange experiences in an atmosphere that fosters mutual understanding and shared values, with a constructive social climate serves a critical role in strengthening collaboration and collective learning.

Unlike traditional organizations, where hierarchical structures or exterior motivations often shape interactions, co-working communities tend to facilitate more organic forms of relational engagement (Garrett et al., 2017). McMillan and Chavis (1986) denote communities as being founded in four interconnected dimensions, including membership, influence, integration, and emotive connection, which is pivotal to the way social climate is conceptualized, emphasizing trust, reciprocity, and interpersonal relationships as its underpinning (Blanchard, 2007; Lewicki et al., 1998). Thus, co-working spaces may be recognized as trust-based, community-oriented ecosystems designed to foster encounters, motivate collaboration, and encourage entrepreneurial effort (Merkel, 2015). Trust within such environments has been found to encourage knowledge

exchange, enhance coordination between members, and encourage the collective pursuit of entrepreneurial opportunities and activities (Cvitanovic et al., 2021).

An accommodating social climate also lessens friction among members and contributes directly to the well-being and performance of organizations embedded among co-working communities. Psychological safety, the perception that one can share ideas, take risks, and voice dissent without worrying about the negative consequences, is particularly valuable in such contexts, as it allows members to experiment, learn, and explore more freely (Edmondson, 1999). Moreover, overlapping expertise and opportunities for knowledge dissemination are more likely to occur in an atmosphere marked by mutual respect and trust, thereby enabling members to collaborate and explore (Fleming et al., 2007).

Co-working spaces also serve as hubs for creative individuals, bringing together people from various backgrounds who share an orientation toward innovation and exploitation. This can form collective cognitive frames, shifting emphasis from routine tasks execution toward creative problem solving (Capdevila, 2015). Early researchers found that exposure to the creativity of peers can inspire individuals to discover and enhance their own explorative capacity in response to the behaviors and outputs of others (Kilduff, 2006). Such processes are more easily expedited when the immediate climate is cooperative and low in interpersonal conflict, because this reduces resistance to unconventional approaches and promotes acceptance of experimentation. In all, above explanations and findings offer a theoretical foundation for suggesting that co-working spaces with a strong, positive social climate are more conducive to the entrepreneurial opportunity recognition and opportunity exploitation. Thus, the following hypothesis was posited: H2: Social climate in co-working spaces positively influences opportunity recognition and opportunity exploitation.

Entrepreneurial Opportunity Recognition and Exploitation

The identification and development of opportunities constitute a principal dimension of entrepreneurial activity (Shane, 2000) and form a central element of the innovative strategies pursued by established organizations (Zahra & Wright, 2011). Timmons (1999) explains entrepreneurial opportunity as a prospect that is attractive, durable, and timely, and it is commonly embedded in a product or service and capable of creating value for its user. Opportunity recognition can thus be described as the cognitive and behavioral efforts devoted to discovering and framing such prospects (Baron, 2008; Shane & Venkataraman, 2000). This process is extensively recognized as a fundamental contributor to sustainable competitive advantage and outstanding firm performance (Eckhardt & Shane, 2003), and opportunity exploitation, in turn, emphasizes the acquisition and integration of knowledge. Accessing diverse knowledge environments not only enables the discovery of new opportunities but also facilitates their effective exploitation, creating pathways for firms to enhanced competitiveness (Ardichvili et al., 2003). From this standpoint, opportunities are not fully realized at the moment of recognition but necessitate following development, evaluation, and subsequent exploitation. This broader understanding is captured under the construct of opportunity recognition and exploitation that comprises of both the discovery and the applied realization of opportunities.

Co-working environments present conditions particularly conducive to ORE, for instance, the creative design of physical space, through openness, flexibility, and aesthetic stimulation, encourages spontaneous interaction, collaborative work, and the exchange of innovative ideas. Such environments function as incubators in which diverse participants can

connect, exchange perspectives, and experiment with emerging concepts. In this respect, space creativity enhances cognitive alertness to the unmet needs, unsolved problems, and innovative resource configurations (Ardichvili et al., 2003), therefore, members are positioned to engage more actively in the recognition and exploitation of opportunities. Also, according to the B&B theory, creative design elicits positive affect or the immediate broadening response, which encourages affiliating and exploratory behaviors. These repeated occurrences of broadened engagement will lead to the building of social resources that alter the co-working space's social climate, including trust, reciprocity, and psychosomatic safety. This social climate is the proximate social mechanism through which design affects both the cognitive stage of opportunity recognition, such as exposure and diverse cues recombination, as well as the behavioral stage of exploitation, such as resource mobilization and cooperation.

Empirical evidence can be found to support this mediation effect of social climate, for instance, experimental and review work on creative spaces identifies affective, cognitive, and social constructs as plausible mediators between physical space and individual exploratory behaviors (McTeague, 2024; Lee & Lee, 2023). Other co-working research also explicitly modeled chain relationships where structural/design features result in supporting social dynamics which then bring about enhanced creative outcomes (Rese et al., 2021; Bouncken & Reuschl, 2018; Parrino, 2015). Moreover, one recent work underscores that an innovation climate positively influences creative role identity, which in turn fosters innovative behaviors (Deng et al., 2022). Therefore, this research supports the mediation logic implied by B&B theory and postulates the following hypothesis: spatial design elicits positive affect and social processes that explain how creative design translates into opportunity recognition and exploitation. Hypothesis 3: Social Climate positively mediates the relationship between space creativity and EORE in co-working spaces. Therefore, the conceptual framework of this study, including all proposed hypotheses, is illustrated in Figure 1.

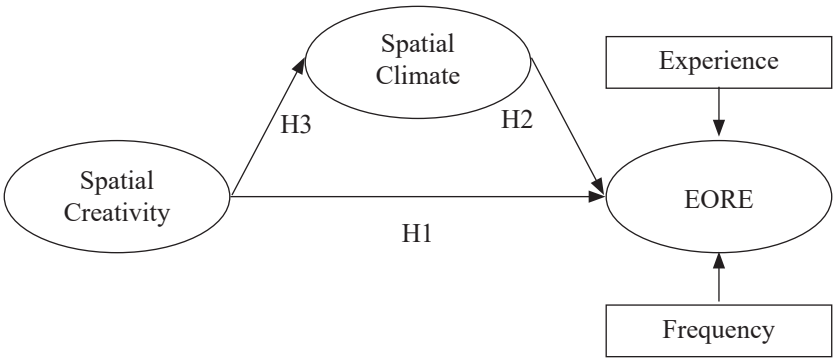

Figure 1 Proposed Research Framework

Methodology

Research Context and Population

The present research was conducted among customers who either currently use or have previous experience of engaging with coworking spaces within the Bangkok metropolitan area. This urban center was selected as the research setting because of its rapid expansion of entrepreneurial hubs, digital start-up culture, and the increasing popularity of flexible work environments tailored to younger cohorts. Coworking spaces in Bangkok not only provide access

to physical infrastructure but also foster interaction, creativity, and resource sharing, making them particularly relevant for examining patterns of opportunity recognition and exploitation. Moreover, recent statistics indicate that the percentage of flexible workspaces in Bangkok grew by 80% compared to the year before the pandemic with users, ranging from freelancers to start-up founders (Srisuwon & Anantsuksomsri, 2025). Such diversity in users reflects the heterogeneity of the entrepreneurial ecosystem in Thailand and supports the generalizability of the research's findings beyond a single urban context. Bangkok's positioning as a regional innovation hub also reflects broader patterns observed in Southeast Asia's emerging economies, where digital transformation and flexible workspaces drive new forms of entrepreneurial collaboration (Srisuwon & Anantsuksomsri, 2025). Consequently, while the current findings are based on the Thai context, they hold theoretical implications for understanding coworking dynamics in other rapidly developing economies with similar socio-economic structures (Srisuwon & Anantsuksomsri, 2025).

Sampling and Data Collection

In this research, purposive sampling was employed to ensure the inclusion of respondents who met the predefined eligibility criteria. However, as the overall size of the target population cannot be determined, the sample size is determined by applying Cochran's (1977) formula, with a 95 percent confidence level, which resulted in a minimum of 385 participants. After screening and removing the unusable questionnaires, 350 usable questionnaires were yielded for subsequent data analysis, which is close to the estimated required minimum sample size and can provide adequate statistical power for multivariate testing. Data collection was conducted through an online survey administered between February and March 2025. Recruitment was facilitated through digital platforms such as LinkedIn, Facebook groups, and entrepreneurship forums that cater to start-up communities, freelancers, and remote workers in Thailand. Before accessing the main survey, participants were required to complete screening questions on coworking spaces using frequency and experience to verify their eligibility. Survey respondents were also informed that their participation was strictly voluntary, together with the research objectives, anonymity provisions, and their right to withdraw at any stage. Although the total population size was classified as unknown (Pichayakul & Tangtong, 2023), purposive sampling was justified on the basis of its suitability for targeting specialized user groups whose characteristics align with the study objectives (Etikan et al., 2016). The logic behind this approach lies in ensuring that respondents possess relevant experiential knowledge of coworking environments, rather than representing a random cross-section of the general population (Pichayakul & Tangtong, 2023). Inclusion criteria were thus limited to individuals who had utilized coworking spaces for at least three months within the past year, while exclusion criteria applied to those who had only attended short-term events or virtual coworking communities. Data quality was verified through multiple mechanisms, including attention-check items embedded in the questionnaire, duplicate responses check, and monitoring of survey completion times to identify inattentive participation (Meade & Craig, 2012).

Research Instruments and Measures

The measurement constructs and scales items applied in this study are adopted from existing literature. For instance, space creativity was adopted through the measurement scale proposed by Amabile et al. (1996), while social climate was borrowed from the measurement scale developed by Garrett et al. (2017). And the measurement scale for opportunity recognition

and exploitation dimension was adopted from the one designed by Shane & Venkataraman (2000). All scale items were evaluated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Scale reliability and validity were confirmed through pilot testing and existing literature, with measurement adaptation following standard guidelines for instrument development. To ensure contextual validity, all measurement items were carefully adapted to the Thai coworking environment through a translation–back translation process following Brislin's (1986) guidelines. This involved linguistic review by bilingual experts to confirm text equivalence. A pilot test with 150 participants was conducted prior to the main data collection to evaluate clarity and reliability, yielding Cronbach's α values exceeding 0.80 across all constructs and Average Variance Extracted (AVE) values above the recommended threshold of 0.50, indicating strong internal consistency and convergent validity (Hair et al., 2019).

Data Analysis and Control Variables

Data analysis was carried out using IBM SPSS and AMOS programs, where descriptive statistics were first generated to summarize the demographic information of the respondents, followed by the normality testing, multicollinearity testing, common method bias testing, reliability, and validity examination. Following these checks, Structural Equation Modeling (SEM) and path analysis served as the main statistical techniques for hypothesis testing. Furthermore, the bootstrapping method will be applied to evaluate the mediating role of social climate. Control variables such as coworking space usage frequency and prior coworking experience were included to account for individual differences that might influence the dependent variable. The inclusion of these control variables was conceptually grounded in previous evidence suggesting that the frequency of coworking space usage can affect perceptions of spatial creativity and collaboration intensity, as repeated exposure enhances social embeddedness and creative engagement (Bouncken & Aslam, 2019). Similarly, individuals with previous coworking experience may exhibit heightened sensitivity to environmental affordances and social cues, which could influence their evaluation of spatial and social climates differently compared to first-time users (Spinuzzi, 2012). Integrating these factors thus can ensure more robust estimation of the hypothesized relationships.

Results

The demographic and usage frequency information of the sampled participants are summarized in Table 1, which indicates that the majority of participants had engaged with coworking spaces for one to two years, with the largest group (31.4%) having one year of experience, followed by 2 years (25.1%), 4 years (22.6%), and 3 years (20.9%). On the other hand, the frequency of coworking usage varied, with 33.4 percent of the participants attending less than one time per month, 18.3 percent attending once per week, 22.3 percent participating a few times per month, and the smallest proportion attending 2-3 times per week or not at all. These distributions reflect diverse engagement patterns among Thai users in Bangkok coworking spaces.

Table 1 Demographic Information

Frequency	Percent	Valid Percent
Less Than 1/ Month	117	33.4
1/ Week	64	18.3
A Few Times/ Month	78	22.3
2-3 Times/ Week	27	7.7
Daily	64	18.3
Total	**350**	**100.0**
Experience		
Less Than 1/ Month	117	33.4
2-3 Times/ Week	27	7.7
1/ Week	64	18.3
A Few Times/ Month	78	22.3
Daily	64	18.3
Total	**350**	**100.00**

The assessment of skewness and kurtosis values indicated that all values were ranging from -.632 to -.918, and from -.494 to .099, respectively, indicating that the data approximated a normal distribution. The assessments of reliability and validity confirmed that all constructs achieved acceptable measurement standards, where the Cronbach's alpha values for space creativity, social climate, and EORE were 0.796, 0.864, and 0.879 (in Table 2), respectively, indicating internal consistency. The convergent validity for all constructs was also supported, where in Table 2, the factor loadings were satisfactory across items ranging from 0.764 to 0.840 for space creativity, 0.667 to 0.813 for social climate, and from 0.748 to 0.825 for EORE. And the composite reliability for space creativity, social climate, and EORE were 0.796, 0.864, and 0.880, respectively.

Table 2 Convergent Validity

Component		Factor Loading	Reliability	CR	AVE
SCR			.796	.796	.566
SCR_1	-	.764	-	-	
SCR_2	-	.796	-	-	-
SCR_3	-	.840	-	-	
EORE			.879	.880	.595
EORE_1	.801	-	-	-	-
EORE_2	.825	-	-	-	-
EORE_3	.748	-	-	-	-
EORE_4	.782	-	-	-	-
EORE_5	.750	-	-	-	-
SOC		-	.864	.864	.559
SOC_1	-	.667	-	-	-
SOC_2	-	.745	-	-	-
SOC_3	-	.793	-	-	-
SOC_4	-	.733	-	-	-
SOC_5	-	.813	-	-	-

Source: SCR-Space Creativity; EORE- Entrepreneurial Opportunity Recognition & Exploitation; SOC-Social Climate

And the respective average variance extracted were 0.566, 0.559, and 0.595. Moreover, the discriminant validity test in Table 3 yielded satisfactory results, which were further confirmed by the heterotrait–monotrait ratios in Table 4. These values, ranging from 0.534 to 0.945, were all below the recommended threshold of 0.95, thereby verifying discriminant validity for all three constructs. Additionally, multicollinearity concern was investigated through the Variance Inflation Factor (VIF) values. The VIF scores for the independent variables, including space creativity (1.388) and social climate (1.388), were well below the threshold value of 3.3 (Petter et al., 2007), signifying that the multicollinearity issue was not shown in the structural model of the current study. Furthermore, the testing of Common Method Bias (CMB) was assessed by Harman's single-factor test. The result showed that the largest variance explained by a single factor was not over 46 percent, which is below the satisfactory threshold of 50 percent. This offers evidence that the CMB issue was not present in the research.

Table 3 Discriminant Validity

Variable	SOC	SCR	EORE
SOC	.748	-	-
SCR	.597	.752	-
EORE	.619	.495	.771

Source: SCR-Space Creativity; EORE- Entrepreneurial Opportunity Recognition & Exploitation; SOC-Social Climate

Table 4 Heterotrait-Monotrait (HTMT) Ratio

Variable	SCR	SOC	EORE
SCR	1.00	.945	.534
SOC	.945	1.00	.563
EORE	.534	.563	1.00

Source: SCR-Space Creativity; EORE- Entrepreneurial Opportunity Recognition & Exploitation; SOC-Social Climate

Table 5 Path Analysis Estimate

Path Relationship			Estimate	S.E.	P
SOC	<---	SCR	.676	.084	***
EORE	<---	SCR	.221	.083	.008
EORE	<---	SOC	.502	.075	***
EORE	<---	Frequency	.043	.026	.091
EORE	<---	Experience	.015	.039	.693

Source: SCR-Space Creativity; EORE- Entrepreneurial Opportunity Recognition & Exploitation; SOC-Social Climate; Model fit indices: $\chi 2 = 88.478$ ($P < 0.00$), df = 62, $\chi 2/df = 1.427$, CFI = .988, GFI = .963, NFI = .960, TLI =. 984, RMSEA = .035, *** = .001 significance level

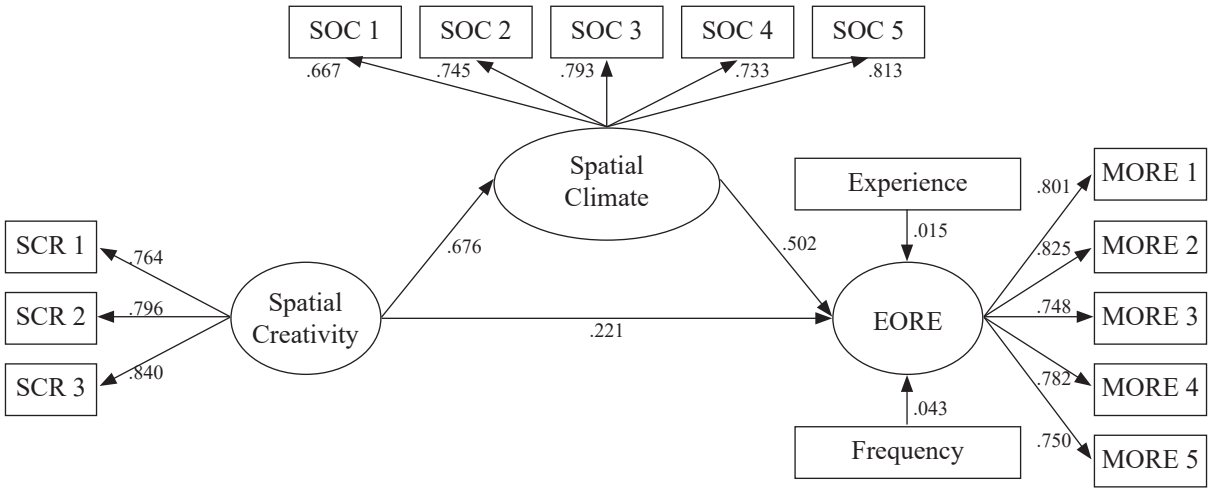

Figure 2 Modified Research Framework

In this study, structural equation modeling was employed to test the hypothesized relationships, and the results from Table 5 indicated that the proposed model demonstrated satisfactory fit, with chi-square to degrees of freedom ratio (1.427), goodness-of-fit index (.963), comparative fit index (.988), and root mean square error of approximation (.035) all fell within the thresholds, thus supporting the adequacy of the model. Moreover, the path analysis results in Table 5 confirmed a significant positive effect of space creativity on EORE (β=.205, p=.014), which indicates that coworking environments designed to foster creativity directly enhance Thai users' ability to identify and act on business opportunities, thus H1 is supported. Similarly, the results shown in Table 5 supported the positive impact that social climate exerts on EORE (β = 0.502, p < .001), which suggested that supportive and collaborative coworking environments contribute to entrepreneurial behaviors, thus H2 is supported. Regarding the effects of control variables in this research, the results in Table 5 illustrate that coworking space usage frequency and experiences both have a positive influence on business opportunities identification, although the impact of experiences was not significant.

Table 6 Mediation Effect of Social Climate

Relationship	**Estimate**	**Bootstrapping Bias-Corrected 95% CI**		**2 Tailed Significance**
Direct Effects	-	LB	UB	-
SCR - SOC	.676	.493	.899	.001
SCR - EORE	.221	.020	.457	.029
SOC - EORE	.502	.343	.699	.001
Indirect Effects				
SCR - EORE	.339	.220	.530	.000

Furthermore, in Table 6, the results showed that space creativity had a significant impact on social climate (β = .676, p < .001), and the indirect impact of space creativity on opportunity recognition and exploitation via social climate was also significant (β = .339, p < .001). As the direct effect of space creativity on EORE (β = .221, p = .029) remained significant after including the mediator, confirming partial mediation rather than full mediation, which supports the assertion that coworking spaces can influence entrepreneurial opportunity both directly and indirectly. These findings conclude that social climate partially mediates the relationship, highlighting the importance of social factors in translating spatial creativity into actionable opportunities, thus H3 is supported. Figure 2 further illustrate this pathway, showing arrows from space creativity to social climate and then to EORE, with a direct arrow from space creativity to EORE retained to emphasize partial mediation. Additionally, consistent with the B&B theory (Fredrickson, 2001), spatial creativity fosters positive social dynamics that enhance opportunity-driven entrepreneurship by broadening cognitive repertoires and building lasting social resources.

Discussion

The findings from this research confirmed that space creativity positively affects EORE. This result aligns with an early study that has accentuated the significance of creative environments in motivating entrepreneurial cognition. For instance, grounded in resource-based theory, Bouncken et al. (2018), in their empirical study of 184 participants across co-working spaces, suggested that spatial design supporting creativity improves entrepreneurial learning and opportunity pursuit. Similarly, under the Spanish context and entrepreneurial ecosystem theory, Capdevila (2019) surveyed 247 participants and found that spaces designed for creativity facilitated knowledge sharing, which in turn expanded business opportunity recognition. These findings suggest that co-working spaces are not only physical infrastructures but also incubators that embed creative cues to trigger opportunity recognition. The results of the current study in Bangkok provide additional evidence that spatial creativity can function as a strategic lever in shaping entrepreneurial behavior in Asian contexts. Moreover, the partial mediation effect of social climate demonstrates that while the physical environment stimulates opportunity recognition directly, it also operates indirectly by creating supportive social networks, thereby validating the socio-material interplay between space design and social mechanisms.

The results from this study also validated the affirmative relationship between social climate and EORE. This relationship is also evident in the existing literature, for instance, empirical research conducted by Garrett et al. (2017), who studied 246 U.S.-based co-working users across various industries and found that communal support enhances both perceived belonging and opportunity recognition. Also, Parrino (2015) applied a qualitative method in the Italian co-working spaces context and demonstrated that shared climate and collective trust enhanced users' capacity to access market opportunities. The Bangkok findings align with prior research that underscores that a collaborative social climate is one key antecedent in co-working spaces that motivates opportunity exploitation. The research findings extend this by signifying that social climate functions as an outlet through which spatial creativity translates into entrepreneurial action, consistent with the B&B theory, which postulates that positive environmental spurs broaden cognitive and social resources, expediting opportunity recognition and exploitation (Fredrickson, 2001). The results from this research also confirmed that social climate partially mediates the relationship between space creativity and business opportunity recognition, which suggests that the influence of creative space design on opportunity recognition can be amplified by social climate. This mediation effect is consistent with the socio-materiality perspective (Orlikowski, 2007), which suggests that material arrangements and social practices as mutually constitutive. Empirical evidence can also be drawn from the findings of research conducted by Garrett et al. (2017), who outlined that physical design affected social dynamics, which in turn impacted community-level outcomes. Thus, the Bangkok findings extend early studies by confirming that the benefits of creative space design are not merely aesthetic or functional but operate indirectly through their ability to build relational climates that support entrepreneurial cognition.

Conclusion

This research has confirmed that all three hypothesized relationships were supported, and collectively, these findings will advance both theoretical understanding and practical knowledge.

From an academic perspective, the results extend the entrepreneurial ecosystem and B&B framework by demonstrating how spatial creativity functions as a contextual antecedent to social and entrepreneurial processes. Early research often treated spatial design and social climate separately (Brown, 2017; Capdevila, 2019), but the current study empirically integrates them, illustrating that creative spatial designs indirectly enhance business opportunity recognition by strengthening social climates. Moreover, such findings accentuate the mechanism through which socio-spatial configurations facilitate entrepreneurial cognition, suggesting that physical environments do not merely host social interaction but actively shape entrepreneurial behaviors. This fills in the void in co-working literature by providing empirical validation of a socio-spatial model that connects physical space, social structures, and entrepreneurial cognition. By explicitly joining these elements, this research advances theory beyond descriptive aspect, providing a more nuanced explanation of how entrepreneurial ecosystems operate at the micro level and offering a framework for integrating socio-spatial factors into broader ecosystem studies.

From a practical perspective, the findings offer actionable insights for co-working operators, policymakers, and business development agencies. For operators, investing in creative workspace designs can cultivate stronger social climates, which in turn enhance entrepreneurial opportunity recognition among members. For policymakers, the research findings suggest that co-working spaces can be utilized as part of urban innovation strategies in Bangkok and other similar metropolitan regions. This underlines the role of designed environments as catalysts for regional entrepreneurship, indicating that urban policy interventions should consider the spatial and social configuration of workspaces, rather than focusing solely on financial or regulatory support. This is particularly relevant for governments aiming to foster entrepreneurship in knowledge economies, as co-working spaces provide accessible platforms for SMEs and entrepreneurs to engage in business opportunity recognition. For organizations and industry leaders, the research findings highlight that co-working is more than cost-efficient office space, but rather a strategic environment that fosters innovation and entrepreneurial activity that can be harnessed to stimulate local economic development. Therefore, strategic investments in co-working infrastructure can produce measurable economic and social yields, as these spaces facilitate the emergence of novel collaborations, knowledge spillovers, and ecosystem-level synergies (Spinuzzi, 2012).

Limitations and Future Research

Despite its contributions, several limitations of this study need to be acknowledged. Firstly, the cross-sectional design of this research restricts its causal inference. While the study revealed significant associations between creativity, social climate, and opportunity recognition, the temporal dynamics remain unknown. Future longitudinal studies could also explore potential feedback loops, where entrepreneurial outcomes further strengthen social climates and spatial creativity, providing a dynamic model of co-working ecosystem evolution. Thus, future longitudinal research could consider tracking users' experiences over time to validate the causality between variables. Secondly, the sample size limitation arises from the use of Bangkok-based participants only. Although Bangkok is a major regional hub for co-working, cultural and institutional contexts may vary significantly in other Asian or Western cultural settings. Such contextual sensitivity indicates that socio-spatial interactions may exhibit different patterns depending on cultural customs of collaboration, trust, and social cohesion. Thus, comparative cross-national studies in future research could assess whether the socio-spatial model holds across diverse ecosystems.

Thirdly, this research adopted a quantitative method, which relied on self-reported measures that may be subject to response biases or social desirability effects. Integrating observational and ethnographic studies, or digital trace data, could validate the findings, offering richer insights into how spatial design translates into social and cognitive outcomes. Future study, thus, could employ mixed-method approaches such as combining ethnographic observation with quantitative modeling, in order to capture deeper nuances of user interaction and validate perceptual measures. Fourthly, this research is limited by its context and industry scope as it focused primarily on co-working users and excluded virtual co-working or hybrid digital-physical models. Provided the accelerated adoption of remote work and digital collaboration apparatuses, understanding how virtual and hybrid spaces mediate socio-spatial mechanisms signifies a critical frontline for research in entrepreneurial ecosystems. With the rise of remote and hybrid work, future research should assess how digital interfaces mediate the interplay between creativity, social climate, and opportunity recognition. Lastly, the selective inclusion of variables means that other potentially relevant antecedents, such as perceived trust, psychological safety, or innovation outcomes, were not included. Therefore, future research could expand the model to integrate such constructs and offer a more comprehensive comprehension of co-working dynamics. In particular, examining mediating and moderating mechanisms, such as network density or cognitive diversity, could theoretically and practically broaden our comprehensions of how co-working environments function as reagents for entrepreneurial ecosystem development.

Reference

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154-1184.

Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing, 18*(1), 105-123. https://doi.org/10.1016/S0883-9026(01)00068-4

Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review, 33*(2), 328-340. https://doi.org/10.5465/amr.2008.31193166

Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly, 47*(4), 644-675. https://doi.org/10.2307/3094912

Blanchard, A. L. (2007). Developing a sense of virtual community measure. *CyberPsychology & Behavior, 10*(6), 827-830. https://doi.org/10.1089/cpb.2007.9946

Blomberg, A. J., & Kallio, T. J. (2022). A review of the physical context of creativity: A three-dimensional framework for investigating the physical context of creativity. *International Journal of Management Reviews, 24*(3), 433-451. https://doi.org/10.1111/ijmr.12286

Bouncken, R. B., & Reuschl, A. J. (2018). Co-working-spaces: How a phenomenon of the sharing economy builds a novel trend for the workplace and for entrepreneurship. *Review of Managerial Science, 12*(1), 317-334. https://doi.org/10.1007/s11846-016-0215-y

Bouncken, R. B., Laudien, S. M., Fredrich, V., & Görmar, L. (2018). Coopetition in co-working-spaces: Value creation and appropriation tensions in an entrepreneurial space. *Review of Managerial Science, 12*(2), 385-410. https://doi.org/10.1007/s11846-017-0267-7

Bouncken, R., & Aslam, M. M. (2019). Understanding knowledge exchange processes among diverse users of coworking-spaces. *Journal of Knowledge Management, 23*(10), 2067-2085. https://doi.org/10.1108/JKM-05-2018-0316

Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research*. Sage.

Brown, J. (2017). Curating the "third place"? Co-working and the mediation of creativity. *Geoforum, 82*, 112-126. https://doi.org/10.1016/j.geoforum.2017.04.006

Capdevila, I. (2015). Co-working spaces and the localized dynamics of innovation in Barcelona. *International Journal of Innovation Management, 19*(3), 1540004. https://doi.org/10.2139/ssrn.2502813

Capdevila, I. (2019). Joining a collaborative space: Is it really a better place to work? *Journal of Business Strategy, 40*(2), 14-21. https://doi.org/10.1108/JBS-09-2017-0140

Chumnangoon, P., Chiralaksanakul, A., & Chintakananda, A. (2023). How closeness matters: The role of geographical proximity in social capital development and knowledge sharing in SMEs. *Competitiveness Review: An International Business Journal, 33*(2), 280-301. https://doi.org/10.1108/CR-03-2021-0038

Cochran, W. G. (1977). *Sampling Techniques* (3rd ed.), John Wiley & Sons.

Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: Positive emotions increase life satisfaction by building resilience. *Emotion, 9*(3), 361-368. https://doi.org/10.1037/a0015952

Cvitanovic, C., Shellock, R. J., Mackay, M., Van Putten, E. I., Karcher, D. B., Dickey-Collas, M., & Ballesteros, M. (2021). Strategies for building and managing 'trust' to enable knowledge exchange at the interface of environmental science and policy. *Environmental Science & Policy, 123*, 179-189. https://doi.org/10.1016/j.envsci.2021.05.013

Deng, B., Cao, J., Huang, J., & Wu, J. (2022). The influence of innovation climate on creative role identity: The mediating role of flow. *Frontiers in Psychology, 13*(1), 866464. https://doi.org/10.3389/fpsyg.2022.866464

Dul, J., & Ceylan, C. (2014). The impact of a creativity-supporting work environment on a firm's product innovation performance. *Journal of Product Innovation Management, 31*(6), 1254-1267. https://doi.org/10.1111/jpim.12149

Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management, 29*(3), 333-349. https://doi.org/10.1016/S0149-2063(02)00225-8

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350-383. https://doi.org/10.2307/2666999

Elsbach, K. D., & Pratt, M. G. (2007). 4 The physical environment in organizations. *Academy of Management Annals, 1*(1), 181-224. https://doi.org/10.1080/078559809

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics, 5*(1), 1-4.

Fleming, L., Mingo, S., & Chen, D. (2007). Collaborative brokerage, generative creativity, and creative success. *Administrative Science Quarterly, 52*(3), 443-475. https://doi.org/10.2189/asqu.52.3.443

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218. https://doi.org/10.1037/0003-066X.56.3.218

Gandini, A., Bandinelli, C., & Cossu, A. (2017). Collaborating, competing, co-working, coalescing: Artists, freelancers and social entrepreneurs as the 'new subjects' of the creative economy. In A. Gandini, C. Bandinelli, & A. Cossu (Eds.), *Collaborative production in the creative industries* (pp. 15-32). University of Westminster Press. https://doi.org/10.16997/book4.b

Garrett, L. E., Spreitzer, G. M., & Bacevice, P. A. (2017). Co-constructing a sense of community at work: The emergence of community in co-working spaces. *Organization Studies, 38*(6), 821-842. https://doi.org/10.1177/0170840616685354

Gibson, J. J. (2014). *The ecological approach to visual perception: Classic edition*. Psychology Press.

Girija, S., Sharma, D. R., Yeediballi, T., & Sriramneni, C. (2024). Factors influencing the intention to use co-working spaces in emerging markets: An analytic hierarchy process approach. *Property Management, 42*(2), 235-255. https://doi.org/10.1108/PM-03-2023-0026

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.

Haritwal, C. (2024). *Thailand co-working space market report: Asia Pacific opportunity analysis & industry forecast 2024-2030. Next Move Strategy Consulting*. https://www.nextmsc.com/report/thailand-co-working-space-market

Kilduff, M., Tsai, W., & Hanke, R. (2006). A paradigm too far? A dynamic stability reconsideration of the social network research program. *Academy of Management Review, 31*(4), 1031-1048. https://doi.org/10.4337/9781802209181.00010

Krauss, G., & Tremblay, D. G. (2024). Third places, coworking, and coworking spaces as concepts responding to current social and economic trends. In D. G. Tremblay & G. Krauss (Eds.), *The coworking (r) evolution* (pp. 7-25). Edward Elgar Publishing. https://doi.org/10.4337/9781802209181.00010

Kristensen, T. (2004). The physical context of creativity. *Creativity and Innovation Management, 13*(2), 89-96. https://doi.org/10.1111/j.0963-1690.2004.00297.x

Lee, J. H., & Lee, S. (2023). Relationships between physical environments and creativity: A scoping review. *Thinking Skills and Creativity, 48*, 101276. https://doi.org/10.1016/j.tsc.2023.101276

Magadley, W., & Birdi, K. (2009). Innovation labs: An examination into the use of physical spaces to enhance organizational creativity. *Creativity and Innovation Management, 18*(4), 315-325. https://doi.org/10.1111/j.1467-8691.2009.00540.x

Maier, J. R., & Fadel, G. M. (2009). Affordance based design: A relational theory for design. *Research in Engineering Design, 20*(1), 13-27. https://doi.org/10.1007/s00163-008-0060-3

Mariotti, I., & Manzini Ceinar, I. (2021). Teleworking in post-pandemic times: May local coworking spaces be the future trend? *Romanian Journal of Regional Science, 15*(1), 52-76. https://hdl.handle.net/11311/1177617

Martens, Y. (2011). Creative workplace: Instrumental and symbolic support for creativity. *Facilities, 29*(1/2), 63-79. https://doi.org/10.1108/02632771111101331

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14(1), 6-23.* https://url.in.th/hBgQQ

McTeague, C., & Thoring, K. (2024). Mediators of the relationship between physical indoor spaces and individual creativity. In M. Štorga, S. Škec, T. Martinec, D. Marjanović, N. Pavković, & M. M. Škec (Eds.), *The 18th International Design Conference (DESIGN 2024)* (pp. 1025-1034). Cambridge University Press. https://doi.org/10.1017/pds.2024.105

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological methods, 17*(3), 437-455. https://doi.org/10.1037/a0028085

Merkel, J. (2015). Coworking in the city. *Ephemera, 15*(2), 121-139.

Miura, Y. (2024). Entrepreneurial orientation and national culture in Thailand: A case of three generations of a Thai SME. *Journal of the International Council for Small Business, 5* (4), 390-401. https://doi.org/10.1080/26437015.2024.2370419

Musenze, I. A., Mayende, T. S., Wanyana, M., & Kasango, J. (2024). Servant leadership and innovative work behavior: The role of innovation climate using evidence from the Ugandan local government sector. *Journal of Management Development, 43*(6), 896-919. https://doi.org/10.1108/JMD-10-2023-0316

Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization Studies, 28*(9), 1435-1448. https://doi.org/10.1177/0170840607081138

Parrino, L. (2015). Co-working: Assessing the role of proximity in knowledge exchange. *Knowledge Management Research & Practice, 13*(3), 261-271. https://doi.org/10.1057/kmrp.2013.47

Pichayakul, P., & Tangtong, A. (2023). Customer preferences for coworking spaces in Chiang Mai. *Community and Social Development Journal, 24*(1), 185-197. https://doi.org/10.57260/rcmrj.2023.263045

Rese, A., Görmar, L., & Herbig, A. (2021). Social networks in co-working spaces and individual coworker's creativity. *Review of Managerial Science, 16*(2), 391-428. https://doi.org/10.1007/s11846-021-00445-0

Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science, 11*(4), 448-469. https://doi.org/10.1287/orsc.11.4.448.14602

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review, 25*(1), 217-226. https://doi.org/10.5465/amr.2000.2791611

Spinuzzi, C. (2012). Working alone together: Coworking as emergent collaborative activity. *Journal of Business and Technical Communication, 26*(4), 399-441. https://doi.org/10.1177/1050651912444070

Srisuwon, S., & Anantsuksomsri, S. (2025). Impacts of COVID-19 on coworking spaces in Bangkok. *International Review for Spatial Planning and Sustainable Development, 13*(2), 111-128. https://doi.org/10.14246/irspsd.13.2_111

Sukatendel, P. Y., Iskandarini, I., & Sembiring, M. T. (2025). Analysis of co-working space business strategy with SWOT method to increase visitors and market expansion: Case study of ICO Space Medan. *Formosa Journal of Multidisciplinary Research, 4*(7), 3453-3472. https://doi.org/https://doi.org/10.55927/fjmr.v4i7.345

Thoring, K., Mueller, R. M., Desmet, P., & Badke-Schaub, P. (2020). Spatial design factors associated with creative work: A systematic literature review. *Artificial Intelligence for Engineering Design Analysis and Manufacturing*, *34*(3), 1-15. https://doi.org/10.1017/S0890060420000232

Vogl, T., Sinitsyna, A., & Micek, G. (2024). Systematic literature review of location factors of coworking spaces in non-urban areas. In G. Micek & T. Vogl (Eds.), *Evolution of new working spaces: Changing nature and geographies* (pp. 83-94). Routledge. https://doi.org/10.1007/978-3-031-50868-4 _8

Withagen, R., De Poel, H. J., Araújo, D., & Pepping, G. J. (2012). Affordances can invite behavior: Reconsidering the relationship between affordances and agency. *New ideas in psychology, 30*(2), 250-258. https://doi.org/10.1016/j.newideapsych.2011.12.003

Wu, X., & Zhang, Y. (2024). Impact of workplace fun in a co-working space on office workers' creativity. *Journal of Organizational Change Management, 37*(1), 173-191. https://doi.org/10.4236/oalib.1112192

Zahra, S. A., & Wright, M. (2011). Entrepreneurship's next act. *Academy of Management Perspectives, 25*(4), 67-83. https://doi.org/10.5465/amp.2011.0138