

Coworking-spaces: how a phenomenon of the sharing economy builds a novel trend for the workplace and for entrepreneurship

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Abstract The sharing economy brings a new phenomenon—coworking-spaces. One aspect of coworking-spaces is the sharing of office space; another is the sharing of social spaces beside the office. Both give rise to social interactions and thus knowledge and idea exchanges which might provide more than a mere sharing of working-spaces but of entrepreneurship or of incubation. Coworking-spaces stimulate the finding of mates for teams, projects, and entrepreneurship. This paper introduces coworking-spaces into management research. We deliver an understanding of coworking-spaces and then identify key factors which lead to our conceptual model. Our model assumes that performance, especially entrepreneurial performance improves by the learning processes among coworking-users that take upon the individual efficacy, trust and community among coworking-users. All the concepts have a positive relation. Yet, opportunism, often as knowledge leakage, will directly and indirectly spoil learning processes and entrepreneurial performance as it reduces their antecedents trust and community building.

Keywords Coworking space · Entrepreneurship · Self-efficacy · Open innovation · Learning · Literature review

JEL Classification M130 · M190 · O350 · L260

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1 Introduction

Coworking-spaces mushroom around the world. Today, more than 500,000 individuals use the more than 2000 coworking-spaces worldwide (Johns and Gratton 2013). Coworking-spaces rent out office-infrastructure to their users additionally giving access to a social hub (Capdevila 2013; Gandini 2015; Moriset 2014; Pohler 2012; Spinuzzi 2012). Coworking-spaces bring ‘another brick’ to the global trend of a “sharing economy” driven by the digitalized economy (Belk 2014). Coworking integrates different elements of home-office concepts, office communities, tele-centers, telework, virtual work, virtual teams, incubators, and communities of practices but specifically offers a cross-sectoral working community with more flexibility, autonomy, and opportunities for social interaction. Compared to project teams or virtual teams in the often rigid hierarchies of established firms (Chesbrough and Teece 1996; Pawar and Sharifi 1997) coworking-users can more flexibly choose teams and work processes. Main users of coworking-spaces, particularly in the distinct specialized coworking-spaces are self-employed persons, freelancers, or microbusinesses. Lowering administrative duties, accessing good locations and social interactions which provide inspiration, allow exchanging views, learning from others, forming teams and projects motivates the use of coworking-spaces. Likewise, coworking-users can develop social ties, learn from others, and jointly improve idea generation and implementation in entrepreneurship (Hughes et al. 2011), similar to incubation (Hughes et al. 2007).

However, previous management research has completely ignored this new trend. We lack insights into the forms and processes in coworking-spaces and how coworking-users can improve their entrepreneurial or economic situation. Therefore, this paper aims on delivering a comprehensive understanding of coworking-spaces and their forms and further on developing a first conceptual model with key mechanisms of coworking-spaces.

We contribute a new phenomenon into management research providing a definition of coworking and criteria for the different coworking-configurations. We assume that different coworking-users and coworking-spaces will set very unequal conditions of behavior and success in coworking-spaces. Further we contribute a first conceptual model that is inspired from previous research on social relations for knowledge transfer and learning that improves incubation and entrepreneurship (Hughes et al. 2007, 2011, 2014; Felin and Hesterly 2007; Hite and Hesterly 2001; Frankenberger et al. 2013). We assume that coworking has some analogies with business incubation. We specifically look on coworking-users following entrepreneurship and networking in the coworking-space (Hite and Hesterly 2001; Hughes et al. 2011). We contribute to research that incubation improves the innovation, growth and performance of young firms—respectively those by coworking-users (Hughes et al. 2007). We recommend future studies following the theoretic foundations of social network and socio-emotional wealth theory (Cesinger et al. 2016).

2 Understanding the coworking-space phenomenon

2.1 Sharing-economy background

Driven by technological (Belk 2014; Oskam and Boswijk 2016), economical (Hartl et al. 2016; Moehlmann 2015), and environmental (Cohen and Kietzmann 2014; Hamari et al. 2015) considerations, people increasingly organize the collaborative consumption of goods and services over the internet (Belk 2014). The system of collaborative consumption enhances the capacity utilization and increases the environmental sustainability. Cohen and Kietzmann (2014) describe the sharing economy as a system where people share underutilized resources in peer-to-peer networks. The sharing economy includes “peer-to-peer-based activit[y]ies of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services” (Hamari et al. 2015, p. 1). The sharing economy relates to the perceived value of ownership. Consumers enjoy goods and services only when they are required or desired without obtaining ownership and the involved obligations (Belk 2014).

The sharing economy estimated to be worth 100bn USD 2010 (Lamberton and Rose 2012) and serves a range of business areas like food, accommodation, traffic, or e.g. entertainment media (Hartl et al. 2016). Especially the business areas traffic and accommodation offer sharing economy show cases. For example, shared mobility offers economic and environmental advantages, as the total number of cars and the produced emissions are reduced (Cohen and Kietzmann 2014). Another prominent example is Airbnb, a web-based network that enables peer-to-peer accommodation sharing. Airbnb can directly compete with traditional hotels, leading to decreasing occupancy and turnover while users can profit from declining prices (Oskam and Boswijk 2016).

The trend of sharing also facilitates collaborative creation (co-creation) of goods and services. Customers become part of the value creation (Oskam and Boswijk 2016). Prahalad and Ramaswamy (2004) noted co-creation as new source of competitive advantage as the direct interactions between firms and their customers have the potential to create unique experiences. Crowdsourcing refers to the participative completion of a task against some kind of economic or psychologic compensation (Estellés-Arolas and González-Ladrón-de-Guevara 2012). Self-organizing crowds do not even need focal firms for value creation. Instead, communities with motivated and creative members offer support for ideas and innovations (Franke and Shah 2003). However, using the wisdom of the crowd for co-creation is not limited to a virtual environment. Co-creation activities can be transferred to real settings (Schopf et al. 2015). For example, the website Meetup (<http://meetup.com>) enables internet groups—the crowd—to organize meetings in the real world. Bilandzic and Foth (2013) highlight that Meetup enables motivated, often highly creative and skilled individuals, groups and crowds to meet and collaborate on specific tasks. These groups need a suitable place with appropriate infrastructure and equipment to support the completion of tasks. Public libraries as well as coworking-spaces can host such groups. So far it is unclear how such spaces should be set up,

how the inherent communities work, and which business models suit the users and providers of coworking-spaces (Franke and Shah 2003; Frankenberger et al. 2013; Gandini 2015).

2.2 Definition of coworking-spaces

Specialized, often new entrant institutions provide coworking-spaces as their core business model. Established firms offer coworking-spaces to increase creativity, innovation, and incubation, typically to their employees. Coworking-spaces offer office and social space for temporary or long-term use according to availability (e.g. a café) for its users (Capdevila 2013; Gandini 2015; Moriset 2014; Pohler 2012; Spinuzzi 2012). Research shows different nuances of coworking-spaces (see Table 1). Spinuzzi (2012) explains coworking-spaces by the *co-presence* of professionals in the same space. Capdevila (2013) highlights the *resource sharing* and *community building* among individuals in coworking-spaces. Bilandzic and Foth (2013) stress the close *interaction* between coworking-users (meet, explore, experience, learn, teach, share, discuss). Moriset (2014) highlights the *community-climate*. Moriset (2014) emphasizes coworking-spaces building (Oldenburg 1989; Oldenburg and Brissett 1982) a “Third place”, a working place besides the classical office and home-office. Coworking-spaces support a volatile ‘start-up-lifestyle’, a safe harbor for spontaneous ‘gigs’, stable social networks and interactions to initiate and promote new projects and contacts (Clark 2007).

We additionally underline that coworking-spaces provide high levels of autonomy. Autonomy includes the access and the use of the office infrastructure and amenities at self-regulated working hours. Different to work within the hierarchy, coworking-users have the autonomy of working and communicating where, when, with whom, how long, and to which intensity and openness. Coworking-users decide *autonomously* to take the opportunity—not the necessity—to interact with others on loose terms or very intense, to be open in job-related issues and private issues, to receive feedback, to provide feedback, and to intensify private and business relationships. Autonomy additionally serves experimentation and creativity.

Further, coworking-users have low responsibilities for administrative tasks such as insurances, cleaning, or e.g. waste disposal that are typical for shared offices (Pohler 2012). Coworking-users have the freedom to pursue business and non-business targets. Although the term coworking includes “work”, users of coworking spaces might seek leisure and socio-cultural desires besides the professional work, possibly combining both elements. Thus, coworking allows autonomy and dynamic combinations of *task-related* and *leisure targets* as well as combinations of *social* and *economic targets*. The nexus of these can further drive creativity.

Coworking-users are flexible in the duration of their memberships, their targets and tasks, and the development of relationships with others indicating a possible fluid character of relationships and projects. Because of coworking-users’ divergent tasks, norms, behavior, and a possible temporary character of team and project structures they may not necessarily develop specific communities of joint values, norms, and behavior role models that increase commitment and belonging of the

Table 1 Definitions of coworking-spaces

Authors	Methodology	Definition of coworking-space
Gandini (2015)	Literature review	Coworking spaces are shared workplaces utilised by different sorts of knowledge professionals, mostly freelancers, working in various degrees of specialisation in the vast domain of the knowledge industry. Practically conceived as office-renting facilities where workers hire a desk and a wi-fi connection these are, more importantly, places where independent professionals live their daily routines side-by-side with professional peers, largely working in the same sector – a circumstance which has huge implications on the nature of their job, the relevance of social relations across their own professional networks and – ultimately – their existence as productive workers in the knowledge economy. (p. 194–195)
Garrett et al. (2014)	Observations and semi-structured interviews	Coworking Communities are co-located groups of independent workers – freelancers, remote workers, or entrepreneurs – where members do their own work but in parallel. Members typically pay a fee for access to an open, collaborative space that includes shared amenities such as open tables, conference rooms, a kitchen, and office supplies, as well as community-building activities and a loose social structure. Assuming office amenities can easily be obtained in a home or rental office, and coffee shops can provide a basic social environment, we propose that a sense of community is what sets coworking spaces apart from alternative work spaces. (p. 1–2)
Moriset (2014)	Theoretical	Beyond the room layout, coworking is first an atmosphere, a spirit, and even a lifestyle. (p. 7)
Bilandzic and Foth (2013)	Observations and interviews	[A] co-working space [is a place] where social learning emerges as a result of people sharing the same workspace for their creative activities. It is conceived as a public community centre for peer collaboration and creativity around digital culture and technology, i.e. a place for people to meet, explore, experience, learn and teach, and share and discuss topics around creative practices in various areas related to digital technology. (p. 2)
Capdevila (2013)	Theoretical	Coworking-spaces are defined as localized spaces where independent professionals work sharing resources and are open to share their knowledge with the rest of the community. (p. 3)
Spinuzzi (2012)	Interviews and case study	[Coworking-spaces] are open-plan office environments in which they work alongside other unaffiliated professionals for a fee (...). (p. 399)

users to the space. Yet, the private and work related relationships emerging in coworking-spaces from the direct interaction in the office or the social space can proceed in times without co-presence in the coworking-space.

Working in coworking-spaces provides advantages for structuring the users' work and work-hours. The spatial separation of private and occupational areas specifically allows for a psychological differentiation between "working mode" and "leisure mode" which self-employed persons often lack (Pohler 2012).

Simultaneously, coworking-users can create an individual work rhythm according to their life situation. This helps to improve individual satisfaction, communication, collaboration, learning, and job performance as does the social nearness.

We thus define that coworking-spaces provide their individual or institutional users a flexible and highly autonomous use of both office and social space that eases the direct personal interaction among the coworking-users for social, learning, cultural and business related interests. Social interaction may have diverse forms and intensities bringing inspiration and increasing knowledge sharing among coworking-users not only during the physical co-presence in the coworking-space but also afterwards. Coworking-spaces refer to the idea of a sharing economy in two dimensions providing the access to shared physical assets (office, infrastructure, cafeteria etc.) and the sharing of intangible assets (information, knowledge etc.). The specificity of coworking-spaces may attract certain more homogenous individuals who might develop some shared sets of norms, rules, and behavior which build a coworking-space culture or coworking-community.

3 Categorizations of coworking

3.1 Types of coworking-users

Self-employed individuals, freelancers, and entrepreneurs, but also dependent contractors and consultants use coworking-spaces (Gandini 2015; Spinuzzi 2012). A first international survey shows that 54 % of the coworking-users are freelancers, 20 % are entrepreneurs (with own employees), 20 % are dependent contractors, and most of them work in creative and new media industries (Foertsch 2011). Spinuzzi (2012) by 17 interviews finds that coworking-users focus on revenues and income or on social and cultural goals. Especially persons who strive for independency, free collaboration, and values like community, networks, and open-source projects use coworking-spaces (Lange 2011). Coworking-users often have unusual combinations of competencies and creative potentials, atypical career paths, pursuing creative (architects, designer, journalists) and digital professions (software developer, digital consultants, social media agents) (Gandini 2015). Coworking-users can aim on primarily using equipment and services, learning from others or socializing with others. Bilandzic and Foth (2013) classify:

- *Utilizer* use coworking-spaces to profit from the technological infrastructure.
- *Learner* use coworking-spaces to acquire knowledge, visit events, and exchange with peers.
- *Socializer* search for recognition and acknowledgement in coworking-spaces.

3.2 Coworking-space provider

A coworking-space can be provided by a coworking-space firm, a public institution (e.g. chamber of commerce or library), a university (Bouncken 2016), or a company

(e.g. google) which runs the coworking-space besides their business for the public or within their company boundaries for employees only. To cover the diverse institutions, we introduce the term '*coworking-space-provider*'.

Coworking-spaces can have diverse ownership and governance structures influencing whether the coworking-space is open to the public or to specific users only. *Public* coworking-spaces (e.g. firms, institutions, universities, libraries) offer a membership open to everyone. Different to public providers, incumbent firms or corporate coworking-spaces can restrict the access to infrastructure and social structure. Typically, membership requires employee status. Thus elements of dependency and hierarchy of the company remain and will influence the targets and behavior of the coworking-space users. Especially IT-companies (e.g. Google or Apple) offer coworking-spaces to foster creative and open social interaction exclusive for their temporary and permanent employees. Yet, incumbent firms also offer coworking-space to their employees and to the public (e.g. 'Modul57' in Hannover run by the company TUI). We thus find, public, private, and semi-private–public forms of coworking-space-providers. These forms of coworking-space-providers influence the accessibility of the public or of a specific group to a coworking-space and the coworking-climate respectively the development of a coworking-space's organizational culture. Coworking-spaces can influence their users and the community development by their business model, user-selection mechanisms, artifacts, interior design, cafeterias, or events. Yet a coworking-space culture is strongly influenced from the dynamic interaction among individuals.

Alongside ownership, coworking-spaces can have different levels of *dependence* to other institutions of power or legal relations to other organizations, institutions, or public authorities. These have implications on the type of coworking-user, their autonomy, targets, and tasks—and again the coworking-space's organizational culture. Furthermore, the relationships of a coworking-space to other organizations will influence its targets that not necessarily are primarily in receiving rents from users. Coworking-spaces that are related to Universities, technology incubators, or companies might be primarily interested in knowledge exchange, learning, and innovation. State owned coworking-spaces might aim to foster occupational rates and entrepreneurship in the region.

Coworking-space-providers do not need to own the building or office but may rent the space themselves from others. Similar to the hotel business, coworking-space-providers might develop specific elements of corporate design, corporate architecture, and corporate systems, covering specific service levels and functionalities and even brands or franchise systems. This will trigger the development of different business models of coworking-space-providers which might be object to future research.

3.3 Classifications around coworking-spaces

Garrett et al. (2014) and Gandini (2015) classify coworking-spaces along their *participants* (knowledge professionals, freelancers, peers, remote workers, entrepreneurs), the *co-presence* and the *collaboration* (work in parallel, social interaction, networking, side-by-side working), the *infrastructure* (desks, wi-fi

connection, conference rooms, kitchen, office supplies), and the *community* (daily routines, sense of community, social environment). Spinuzzi (2012) uses differences in coworking-spaces' design, interior, flexibility of opening hours, place, homogeneous values and the professionalization for the classification of coworking-spaces. We develop six dimensions describing forms of coworking-spaces in Table 2. The most important are explained in the following. The dimensions influence the functionalities (see for analogies Kambil et al. 2000). For example, coworking-spaces might primarily provide a nice working environment by its interior and selection of users. Differently, coworking-spaces might concentrate on incubation and thus aim to bring entrepreneurs together, facilitate business development, even funding and thus allow fast venturing (Kambil et al. 2000). Also incumbent firms might establish internal coworking-spaces only for their employees or for externals also to improve creativity and innovation. The inclusion of labs (e.g. Fablab) may trigger specific technology developments and venturing in specific fields which might accelerate venturing.

3.3.1 Size

Coworking-spaces can be set up as stand-alone facilities (Spinuzzi 2012) or integrated into other buildings (e.g. libraries, Schopfel et al. 2015). Coworking-spaces can be small with few members who intensively utilize the coworking-space, meet frequently, and build tight relationships (Pohler 2012). Coworking-spaces can rely on a community of nearly anonymous users who appreciate variety, diversity, and the inspiration of new faces on a daily base. While the first case offers a stable, integrated, and secure community, the benefits of the latter case are grounded in a great availability of non-binding relationships and cooperation-forms with diverse and changing coworking-users (Pohler 2012). When a coworking-space expands easy and familiar interactions between users become lower (Pohler 2012).

3.3.2 Interior

The design of the available space itself is a distinguishing feature of coworking-spaces. Coworking-spaces purposefully integrate lounge areas, cafés, or e.g. bars to provide space for interaction between coworking-users (Bilandzic and Foth 2013; Capdevila 2013; Spinuzzi 2012). Capdevila (2013) summarizes all office related equipment in coworking-spaces as shared-resources. Specific equipment attracts coworking-users from specific professional backgrounds and industries. Coworking-users from the creative industry might demand special multimedia equipment or software, coworking-users from the fashion-industry might desire sewing machines, coworking-users from technology-related industries need, e.g. 3D printers or laboratories (Bilandzic and Foth 2013; Schopfel et al. 2015). Coworking-spaces also can offer shared labs attracting additional professionals or use the co-location to technological incubators.

Table 2 Six dimensions of coworking

Dimensions	Description	Content
Coworking-users	Individual characteristics and targets of coworking-users	Coworking-users' characteristics and targets determine their behavior in coworking-spaces and coworking-communities. A basic classification distinguishes between utilizers (utilization of equipment, space, and infrastructure), learner (knowledge exchange and acquisition), and socializers (search for recognition and acknowledgment)
Social intensity	Social interactions between coworking-users	A central function of coworking-spaces is the enhancement of social interaction. Events, trainings, and e.g. further activity offerings promote networking, cross-linking, and contact initiation on a social level. The end is to integrate individual members, users, and participants into a community which is related to the specific coworking-space
Institution of the coworking-space provider	Affiliation of coworking-spaces to other organizations	Coworking-space provider have public, private, or semi-private-public forms and exhibit different levels of dependence to other institutions of power or legal relations to other organizations, institutions, or public authorities. The organizational form and affiliations impact the type of coworking-user, their autonomy, targets, tasks, and the accessibility and culture of coworking-spaces
Physical assets	Availability and design of coworking-space, equipment, technical infrastructure, and supplies	Coworking-spaces can be set up as stand-alone facilities or e.g. single rooms in private (office buildings) or public (library) facilities. The available space is purposefully separated into working areas (meeting-rooms, workplaces, desks, offices) and social interaction areas (kitchen, cafeteria, café). Coworking-spaces provide technological infrastructure (internet, Wi-Fi connection, intranet, specific web-content, software) and equipment (printer, fax, phones, further hardware, binders, folders, paper) for members, users or participants. The technological equipment has to be adjusted to possible specializations of a coworking-space

Table 2 continued

Dimensions	Description	Content
Availability	Opening hours and accessibility models	Coworking-spaces provide different membership models (flexible, hourly, daily, weekly) with regulated access to infrastructure (internet, desks, printers, meeting rooms) and services (events, matchmaking, procurement). Accessibility attracts specific users and offers a structuring element for the private life and work routines
Professional focus and competition	Composition of professional groups in coworking-spaces	The composition of professional groups in coworking-spaces determines collaboration and competition among coworking-users. Coworking-spaces may offer trainings, events, presentations, and other activities to support members, users and participant in their work, impart knowledge, and help to promote networking, and contact initiation

3.3.3 Membership model

Coworking-spaces are typically open every day at every time (24/7). Yet, limited opening times are possible. Specific flexible short-term offers make coworking-spaces attractive many interested persons, e.g. permanent employees, freelancers, and travelers or incumbent firms that rent office or conference space. Today, the majority of coworking-spaces operates via hourly payment or a membership-model including flexible memberships of hours, days, and weeks (Capdevila 2013; Gandini 2015; Garrett et al. 2014; Moriset 2014; Spinuzzi 2012). Membership usually covers access to infrastructure like printer, scanner, fax devices, and e.g. 3D-printer. Higher fees can entitle coworking-users to continuously use a certain workplace, desk, or an individual office. Additional fees cover the rent of conference venues. Recently coworking-spaces have started providing extra services of conference venues like presentations by experts or trainers, social events, meeting rooms, order procurement, matchmaking, trainings (e.g. web design), and incubation as well as open innovation integration with temporary availability. These services can request additional payment or might be complementary. Hence, the services provided by coworking-spaces may conduct different forms of coworking-spaces having diverse functionalities. Additional infrastructures, (e.g. labs) will lead to new models. For example, firms already rent out computer tomography on an hourly base to physicians. This trend of a sharing economy might increase in the future and provides similarities to coworking-spaces.

3.3.4 Professional focus

Coworking-spaces can be open to all occupational groups and industry sectors, or specialize in specific occupational groups, industry sectors, technologies, business

models, or social targets. Coworking-spaces can also specialize on self-employed persons, founders, and founder teams from the social and cultural entrepreneurship area (Lounsbury and Glynn 2001). Social entrepreneurship is characterized by entrepreneurs offering non-economical or partly economical solutions with social value (Dacin et al. 2011). Cultural entrepreneurship refers to social and often artistic projects (Lounsbury and Glynn 2001). High levels of overlapping expertise of coworking-users from the same industry sector will increase the impact performance and the utilization of social relationships (Gandini 2015). So far coworking-spaces attract individuals with certain personalities or similar (creative) jobs that improve the professional interaction but cause more competition among coworking-users. We do not know if more homogenous or less homogenous professionals improve fast venturing (Kambil et al. 2000).

3.4 Key mechanisms, development of a conceptual model, and future research

3.4.1 *Nexus of community, trust, and learning versus opportunism*

Coworking-spaces increase social relations including social feedback, trust, learning, and collaboration between experts with different expertise, e.g. graphic design, copywriting, web-design, web-development, or search engine optimization (Spinuzzi 2012). Coworking-spaces break up the isolation of freelancers and self-employed persons, especially present in digital jobs (Moriset 2014). Coworking-spaces can provide (early stage) entrepreneurs an opportunity for the development of more sophisticated networks over and above the mere social ties which they typically begin with (Hite and Hesterly 2001; Kambil et al. 2000). The networks with the potential knowledge, skills, and contacts build a vital force for ‘incubation’ that new young firm or founder teams achieves from its network for the value it creates (Hughes et al. 2007). Thus, coworking-users forming new ventures can improve innovation, growth, and performance when they take upon the network advantages in the coworking-space (Hughes et al. 2007; Kambil et al. 2000). Coworking-users might increase their entrepreneurial performance when taking upon the ties in the coworking-space and particularly when the coworking-space provides links to incumbent firms (Hughes et al. 2011). Different forms of social network capital might have diverse effects of the success of the coworking-users as for other entrepreneurs (Hughes et al. 2011).

The co-presence and the possibly similar attitudes of coworking-users may develop a community with shared working behaviors, diverse capabilities, and similar concepts of life, again improving their social integration, satisfaction, and well-being that can have additional economic advantages because of the better work-life-situation (Moriset 2014; Capdevila 2013; Garrett et al. 2014). This culture may increase the trust level among coworking-users and provide guidance that substitutes the non-existing organizational rules as existent in hierarchies of incumbent firms. The form of interaction and community building might lead to different forms of value creation and incubation performance (Hughes et al. 2007). Spinuzzi (2012) shows that coworking-users specifically seek the opportunity to

acquire and share knowledge, learn, and receive feedback in coworking-spaces. The simultaneously open, yet close collaboration offers a variety of learning advantages which have already been investigated in alliance research (for example Das and Teng 1998; Phelps 2010). Intensified social interaction, strengthened networking, exploration of complementarities, knowledge transfer, and learning specifically create potentials for creativity, unexpected serendipity (Graebner 2004), innovativeness and improved or new business models. The social interaction thus can improve coworking-user's economic situation, even by working alone on their business model and more strongly by forming links to other users or external firms that they integrate in the business model. However, intense communication, trust and time spent to find, evaluate, build, and maintain ties might also distract from 'real' work and reduce the creation of novel products or business models (Hughes et al. 2007). Future studies might explore how community interacts with trust and how it shapes coworking-users' task fulfillment. Also, Hughes et al. (2014) find that the absence of prior knowledge which is often the case for entrepreneurs and specifically for nascent coworking-entrepreneurs constrains them to transfer learning outcomes achieved through social capital behaviors into performance. Furthermore, alliance research also points at risks of opportunism and unintended knowledge drain (Becerra et al. 2008; Das and Teng 2001; Langfield-Smith 2008, particularly for novel business models (see Bouncken and Fredrich 2016). The open exchange and collaboration between coworking-users and with external companies creates risks around an unintended drain of ideas and knowledge. It is unclear how opportunism risks and trust (emotional trust, calculated trust, institutionalized trust, see Bachmann 2000) emerges in coworking-spaces and affects collaboration and learning. Trust among coworking-users might have a special character (understanding based) as the involved parties struggle with the same difficulties (lack of money, resources, and market access) and should know that they achieve more together than they could alone. Coworking-spaces' community building, networking, and interaction allowing to share and to co-create knowledge might improve the absorption of ideas and learning from others (see below) and thus economic performance and entrepreneurship (Capdevila 2013). Thus, future studies can explore how community and trust emerge, interact with each other and with the risk opportunism on learning and finally on economic or entrepreneurial performance.

3.4.2 *Entrepreneurial self-efficacy*

According to Shane and Venkataraman (2000) entrepreneurial behavior refers to the recognition, seizing, and exploitation of opportunities that may lead to economic success. As coworking-users strive for independency, free collaboration, values like community, networks, and open-source projects (Lange 2011), they are prone of entrepreneurship (Gandini 2015) and can take advantage from the coworking-space's infrastructure and social space. Coworking through an inspiring work environment advances entrepreneurship. Studies show that due to a lack of resources, decisions of entrepreneurship and micro companies are often not oriented on optimization principles, but represent the attempt to reach goals with the available resources (Berends et al. 2014). The social and material resources of

coworking-spaces can support entrepreneurs and micro-companies in their decisions. Coworking can take on learnings from previous research on self-employed persons and freelancers and offer solutions for their problem of isolation, which impacts psyche, physique, and professional performance. Lévesque et al. (2002) assume that the decision to become self-employed or being a freelancer depends on personalities. Consequently, specific personality traits and motives drive self-employment and drive entrepreneurship occurring in coworking-spaces, but may be influenced by environmental factors also. Gohmann (2012) explains the decision and drivers to be self-employed based on the environment. A study based on 18 countries shows that economic freedom is a general driver for self-employment. We assume that coworking-spaces offer an institutional environment promoting self-employment and the connected advantages for individuals, bringing some extra accelerator for entrepreneurship. Thurik et al. (2008) show that high unemployment motivates individuals to found start-ups and to become self-employed and that self-employment reduces unemployment. If coworking exhibits similar mechanisms it might have individual and social advantages. Guerra and Patuelli (2014) investigate the relationship between job satisfaction and self-employment: dissatisfaction of job compensations with dependent work drives self-employment in Switzerland. Based on a survey in 15 European countries, Noorderhaven et al. (2004) show similar results.

Entrepreneurship research paid interested on the relationships between entrepreneurial style and self-efficacy (Kickul et al. 2009), startup-success and self-efficacy (Kolvereid and Isaksen 2006) while pursuing entrepreneurial goals (Arora et al. 2013; Baron et al. 2016), entrepreneurship intentions (Boyd and Vozikis 1994), its persistence (Cardon and Kirk 2015), repetition of entrepreneurial behavior (Hsu et al. 2015), and venturing success (Utsch and Rauch 2000). However, other studies stress threats like hubris (Bullough et al. 2014). We assume that coworking-spaces can be a harbor for entrepreneurs and strengthen the self-efficacy of coworking-users, specifically towards their entrepreneurial actions (McGee et al. 2009). The main reason is that coworking-spaces allow pushing ideas without hierarchical restrictions (particularly compared to dependent employment) and with better infrastructure in coworking-spaces based on mutual learning and knowledge transfer (particularly compared to freelancers outside of coworking-spaces). Research on entrepreneurial success highlights the importance of self-efficacy, the perceived individual ability for entrepreneurial ventures (McGee et al. 2009). Trainings offered in coworking-spaces have an additional positive effect on self-efficacy (Zhao et al. 2008). Future studies can investigate self-efficacy in coworking-spaces from two perspectives.

3.4.3 Model

From the key mechanisms explained above we develop a first conceptual model for coworking-spaces. We model the dependent construct simply as performance. This might be economic performance in terms of orders but will mostly be business model performance or venturing performance. We assume that learning among coworking-users is a main trigger for performance. Yet also the self-efficacy will

have a strong impact about how risk-taking and proactivity of the coworking-users propagates their business model. The lack of hierarchy in the coworking-space might be substituted by trust and community. These two aspects will have single and joint positive effects on learning among coworking-users. They also might have a positive interaction with self-efficacy. Opportunism often present as misuse of knowledge or contacts will have several direct and indirect negative influences. It will reduce the development of trust and community as well as learning. Our model (see Fig. 1) demands empirical validation in future studies.

4 Discussion and conclusion

Coworking-spaces are increasing in number and scope world-wide. This paper introduced this phenomenon of management practice, embedded in the sharing economy into research into research. The few studies (Capdevila 2013; Gandini 2015; Moriset 2014; Pohler 2012; Spinuzzi 2012) are either semi-scientific, internet blogs, or come from non-management and non-economic backgrounds.

Public and company (corporate) coworking-spaces offer the spatial, technological, and social structure to facilitate and improve independent self-employment, freelancing, entrepreneurship, and micro-business without losing access to professional networks. Coworking-spaces allow communication and learning creating professional communities, which could serve as pools of ideas, knowledge, know-how, skills, and innovation for private and business clients advancing their business model. Coworking allows flexibility and social interaction that can stimulate their members' inspiration, the exchange and development of ideas among coworking-users, the development of teams and projects in the coworking-space, the

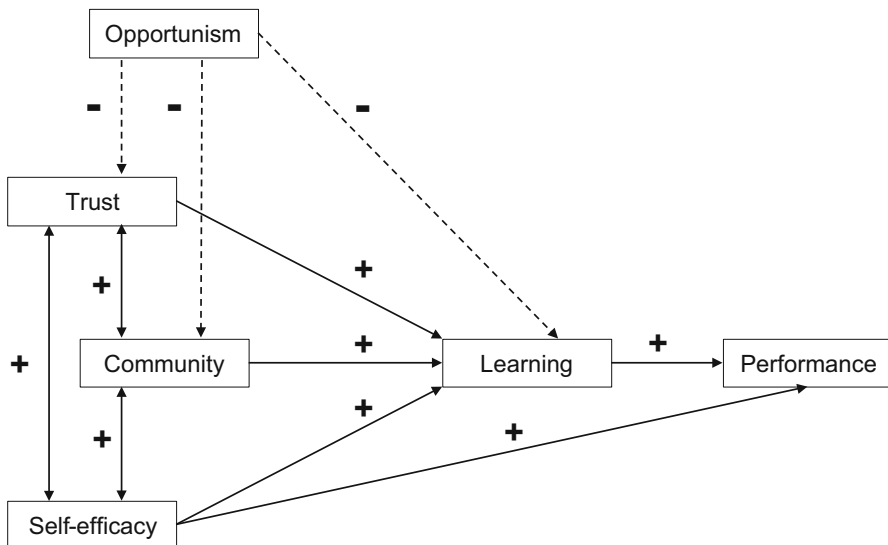


Fig. 1 Proposed research model

autonomous collaboration among coworking-users and incumbent firms—all improving learning among coworking-users fostering personal satisfaction, venturing, and/or business model development. The access to communities and networks as well as the separation of private and work environment in coworking-spaces positively relates to coworking-users' self-efficacy and thus performance. However, coworking-spaces bear risks of self-exploitation, competition, knowledge leakage or the loss of social security within self-employment. Especially opportunism and competition will reduce key positive effects of learning, knowledge exchange and performance in coworking-spaces. We contribute a conceptual model on key factors on performance influenced by trust, community, learning, self-efficacy that are affected negatively by opportunism.

We advocate further conceptual and empirical research upon coworking-spaces. One line of future research could relate to the testing of our conceptual model. Further work could analyze the antecedents, processes, and outcomes of entrepreneurship, and business model innovation in the context of coworking-spaces. Further, future research can explore the basic mechanisms of communication and collaboration in coworking-spaces and the processes affecting entrepreneurship, self-efficacy, open innovation, learning, and business model innovation under consideration of satisfaction, community, learning, innovation, and e.g. performance. Future studies could investigate coworking-specific antecedents (community set-up, infrastructure, availability of trainings, availability of diverse skills, or e.g. knowledge sharing) and consequences (entrepreneurial success, new product development, or e.g. time to market) of self-efficacy. Studies could provide a better understanding about possibilities to improve self-efficacy through professional (trainings, events, or e.g. networking activities) and social interactions (events, socializing activities, or e.g. design of the social-hub) in the coworking-space. Other studies can dig deeper on the challenges and risks of coworking threatening job security and social security. Considering the social networks that evolve and operate in coworking-spaces, future research could measure the forms of coworking-users' social capital and the effects on venturing (Hughes et al. 2011). Coworking-users will follow economic motives but also non-economic motives. We thus recommend using socioemotional wealth (SEW) logics to explain the targets and behavior of coworking-users as shown valuable for decision making in family firms (Cesinger et al. 2016).

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