European Narratives on Remote Working and Coworking During the COVID-19 Pandemic

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A Multidisciplinary Perspective

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Contents

Introduction to the Effects of the COVID-19 Pandemic on Coworking

Mina Akhavan, Marco Hölzel, and Divya Leducq

1 The Changing Geography of Work

The world of work and spaces for work are changing together with the urban economy. Technological advancements, the expansion of ICTs and broadband have enabled time–space compression [18], and working is becoming less dependent on time and space [15]. In the age of digitalisation, cities are increasingly adapting to such rapid changes. Nevertheless, remote and rural areas may still have poor-quality ICTs infrastructures. Innovations in rural areas tend to take place in isolation and more slowly [26], social capital becomes an essential factor in developing entrepreneurship in rural areas [17].

Since the mid-2000s, the digitalisation of work has enabled flexible working [27], leading to a broader shift from full-time office hours to part-time, casual working. Therefore, the spatial and temporal boundaries between the living and working spaces are blurring. In the context of digital work, flexible working spaces (FWSs), i.e., new working spaces (NWSs—most popular being the coworking model), have become the subject matter of many studies in management, business, sociology, economic geography and urban studies [1]. However, the role of planning and policy in supporting these changes remains largely unexplored.

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Before the pandemic, especially during times of economic crisis and the rise of the creative class (Florida [12]), there was already a trend in increasing number of precarious workers and freelancers, including independent professionals, contractors, and self-employed knowledge workers, also known as the 'lone eagles' (Beyers and Lindahl [6]). They endeavour to break loneliness and isolation and expand their socialising and networking opportunities. Unlike traditional office space and rigid working hours, flexible working allows teleworkers, freelancers, and lone eagles to choose the place and time that best fits their necessities. The emergence of new ways of working within a flexible, sharing, and collaborative environment can also be inserted within the broader phenomena of smart cities [8] and sharing economy [9].

2 A Focus on Coworking Spaces

Flexible and collaborative working spaces include various kinds of spaces of collaborative and innovation such as coworking spaces (CSs), living labs, innovation hubs, etc.; hybrid working spaces, including the concept of third places, coined by the sociologists Oldenburg and Brissett [29]. These spaces represent a flexible combination of working, household, parenting, caring, and leisure, where different professions can experience 'working alone together [33]. Nevertheless, this book is particularly concerned about the 'coworking model', which has been rapidly proliferating worldwide since the early 2000s: from 3 spaces in 2005 to more than 20,000 CSs and 2.5 million users worldwide.

CSs first became popular in big cities such as San Francisco, New York, London, Paris, Milan, etc., where there is a concentration of urban amenities and business infrastructure and availability of high-skilled workers. Although the coworking concept has reached maturity, it is still evolving in terms of its location (urban vs rural), spatial features (e.g. size), governance structure (private, public, and public–private), and, more recently, its adaptation strategies to the pandemic [24] (Akhavan [1]). Nevertheless, as an alternative solution to traditional office spaces, CSs share values in providing flexibility (in time and space), fostering collaboration, interaction and sharing (knowledge and infrastructure) [5], and promoting networking practices, social interactions (Fuzi [14]) and community making [34]. The collaborative environments in CSs may lead to creativity and innovation in terms of new projects, clients, suppliers, and knowledge-making [7].

So far, CSs have shown significant effects on individuals (see Akhavan and Mariotti [3]), but it has also affected the built environment, urban planning, and transportation [4, 23]. Moreover, many studies have highlighted the manifold effects of CSs on the local economies and real estate markets (see the review by Vogl and Akhavan [35]). Other studies have provided evidence that flexibility in time and space can reduce and shorten working commuters [28] and traffic reduction [16, 20]. However, there is a lack of holistic studies that also consider the potential rebound effects, such as the effects on daily mobility in general (e.g., more leisure travel, fewer work commutes, more human-powered mobility) and long-term mobility and residential decisions [21, 31]. Considering flex-work as a planning conundrum [30] and coworking as a talent attraction strategy, there is an urge to understand the effectiveness of planning and policy tools—such as the 15-min city concept [22]—to ensure sustainable development in terms of mobility, density and land use in the longer term.

3 State-of-the-Art Studies on the Pandemic Effects

The worldwide shock brought by the COVID-19 pandemic has profoundly restructured our societies, ways of living, working, residence choices, travel and commute patterns [13]. Recent transformations are interpreted as the 'new normal', which deals with the contemporary challenges of sustainability, climate change, and social inequality [19].

As a consequence of the spreading of disease and governmental lockdowns, two significant trends can be recognised: (i) (temporary) relocation to second homes; for example, the Swiss moving to their second homes in ski resorts [28], (ii) reverse urban to rural migration flows; e.g. many Italians are returning to their towns of origin in southern Italy: the South Working[1] phenomenon is developing as an opportunity to attract talents to the lagging-behind regions.

Although the phenomena of remote working (other similar concepts known as teleworking) and home office are not new, the current pandemic has been a catalyst for remote working. The mass shift to working-from-anywhere has raised public awareness for flexible working spaces, particularly CSs. While it is reported that in European countries, about 25% of employment belongs to teleworkable sectors, around 40% of EU workers began full-time teleworking during the first months of the Corona outbreak. In 2019, only 11.1% of EU employees were working from home ('usually' or 'sometimes'); more women teleworked than men (respectively 11.6% and 10.6%) (Eurofound [10]). Nevertheless, recent data show that, throughout EU27 countries, in early 2021 compared to a year before, working exclusively from home is becoming less relevant: the most significant decline was recorded in Spain (from 46 to 21%) and Italy (from 48 to 26%) [11]. No doubt that home-office has its benefits, yet it is not the best solution for all, considering the difficulties couples face competing for the same working space and resources, adding some providing childcare and home-schooling (Reuschke and Felstead [32]).

A recent publication on the new working spaces () and effects of the COVID-19 pandemic from socioeconomic and spatial perspectives by Mariotti et al. [25] brings together 18 chapters in a volume that discusses: "(i) coworking spaces and smart work centres; (ii) makerspaces and other technical spaces (fab labs, open workshops); (iii) other new working spaces (hackerspaces, living labs, and corporate labs); and (iv) coffee shops and public libraries that provide formal and informal spaces for working" [24: 256].

[1] South Working Movement: https://www.southworking.org/.

4 Aim and Structure of This Book

The original idea of this book was born within the project COST Action CA18214 "The Geography of New Working Spaces and the Impact on the Periphery" the Working Group 2 (Direct and Indirect Effects): 17 countries delivered a short piece narrating the immediate effects of the pandemic restrictions on coworking industry in their country, during the end of 2020 and the beginning of 2021. The result was a multi-authored working paper that was circulated internally among the COST members.

This book offers a multidisciplinary and comprehensive perspective regarding the immediate and long-term effects of the COVID-19 pandemic on CSs in the European Region. The current pandemic has imposed several effects on work and spaces for work: some are immediate effects and will last for a short time (such as the closing down of the space), and some will last longer (namely, the reorganisation of the space to meet the physical distancing), and some will stay for a long time (remote working and hybrid working). Although the literature on coworking spaces and the effect of the pandemic is growing fast, empirical studies are yet limited. Within this context, this book seeks a twofold aim: (i) to contribute to the fast-growing literature on CSs with country-specific (12 countries) empirical studies in a European comparative view (ii) to present a multidisciplinary perspective about the yet-lasting Corona-pandemic effects on the patterns of remote working and consequently on CSs, as the most diffused form of new working spaces hosting remote workers.

Apart from the two introduction and conclusion chapters, the current book is organised into three main parts, based on a geographic sub-division of the EU region: (i) Narrations of the countries in Northern and Western Europe; (ii) Narrations of the countries in Eastern Europe; (iii) Narrations of the countries in Southern Europe. Chapter "Remote Working and New Working Spaces During the COVID-19 Pandemic—Insights from EU and Abroad" by Aleid Elizabeth Brouwer and Ilaria Mariotti provides an overview of remote working after the pandemic restrictions and how this phenomenon can change geographical patterns. The following provides a short description of each section and the corresponding chapters:

Part 1 presents five chapters from Estonia, France, Germany, Norway and the Netherlands. Chapter "Acceleration of Remote Work and Coworking Practices in Estonia During the COVID-19 Pandemic", by Kaire Piirsalu-Kivihall, Anastasia Sinitsyna, Luca Alfieri and Tiiu Paas, mainly based on national statistics, reminds us that Estonia is a country with a small and flexible economy that is highly digitalized that was pretty much ready for teleworking during the pandemic. The state of mind of employers and employees could help to improve rural revitalization beyond Tartu or Talinn big city. Divya Leducq and Christophe Demazière discuss the case of France. Based on both primary and secondary data, Chapter "Narratives on COVID-19 Effects on Coworking Spaces in France: A Winning Ticket for the Peripheries?" enhances the fact that in favour of COVID-19, a new territorial narrative around coworking and flexible places of work has emerged in

France, addressing the issue of better territorial balance (planning policies) and individual well-being (way of life): quality of life and proximity of remote working places can benefit to small and medium-sized cities in the shadow of metropolitan cores. In Chapter "Impact of the COVID-19 Pandemic on Remote Working and Coworking Spaces in Germany—Narrative Literature Analyses", Marco Hölzel and Thomas Vogl discuss the situation in Germany. The authors gathered information from different sources on governmental measurements, the world of work, mobility and transportation, people's behaviour, companies' strategies, real estate market to create a narration of immediate impacts, medium-term and long-run effects on new working spaces, in particular coworking spaces. The case of Norway is presented in Chapter "Working (and Living) During Corona Times and Implications for Planning and Mobility—The Case of Norway". Mina Di Marino and Hossein Chavoshi explore the ways of working and living during the Corona Times and the implications for planning and mobility in Norway as a Nordic country, in short, and medium temporalities. They point out significant consequences for our cities and the current societal debates related to urban planning and design: new housing demands, commuting habits and transportation modes, asking from where to work remotely. The final chapter in this section, by Martijn Smit, Veronique Schutjens, and Aleid Brouwer, is dedicated to the case of the Netherlands. Here in Chapter "Not Going Back to the Office any Time Soon: Coworking Spaces in The Netherlands", the authors underline the high number of users of 'third spaces' even before the pandemic. They provide an overview of the geography of Dutch coworking space as a kind of third space for work and discuss the Covid-related effects.

In Part 2 there are three chapters from Poland, Slovakia and Tukey. In Chapter "The Effects of the COVID-19 Pandemic on the Coworking Spaces in Poland", Grzegorz Micek, Karolina Małochleb, Katarzyna Wojnar and Maciej Smętkowski make use of their long-term database and several interviews to analyse the resilience of the CW sector during the COVID-19 pandemic, the impact of the real estate market on CS and how the effects of CSs on local milieus have changed during the pandemic in Poland. Eva Belvončíková, Lukáš Danko and Oliver Rafaj describe in Chapter "The COVID-19 Pandemic and Its Influence on Coworking Spaces in Slovakia: West–East Division" the effects of the COVID-19 pandemic on CW, companies and the office market in Slovakia. They give insights into the support programs issued by the government, the organisational development within the community of CSs and the activity of CSs through events, online or in-person, by comparing main urban areas in east and west Slovakia. Tüzin Baycan and Meltem Parlak Mavitan presented their analyses of CSs in Turkey during the COVID-19 pandemic in Chapter "The Booming Growth of Coworking Spaces During the COVID-19 Pandemic in Turkey" regarding the development of CSs in recent years, the immediate responses and measurements of CSs and coworkers on the spreading of COVID-19 by conducting in-depth interviews with operators of CSs. They reveal changes in the daily routines and events of CS and show some trends of CS in touristic destinations. The situation in Hungary is analysed by Dóra Bálint, Réka Horeczki, Judit Kálmán and Gábor Lux in Chapter "Coworking Places in Hungary During the COVID-19 Pandemic" regarding the impact of the COVID-19 pandemic on CSs and the measurements issued by the government. They take a closer look at the varying presence and strategy of CSs and their responses to the pandemic. Further regarded aspects are trends of relocation of companies and private households.

Part 3 includes three chapters from Italy, Malta and Portugal. Chapter "Italian Experiences in Coworking Spaces During the Pandemic", by Ilaria Mariotti and Michele Lo Russo, reports on the adaptation strategies applied by the coworking managers of CSs in Italy by referring to the two surveys done by the centre of Italian coworking. They present the state of the coworking resilience level in terms of size, ownership, sector specialization, hybridization, etc. The authors discuss the so-called 'community garrisons' found in Southern Italy as a response to the rising number of remote workers (e.g., "southworkers"). Bernadine Satariano and Thérèse Bajada present the case of Malta in Chapter "The Impact and Complex Effects of the COVID-19 Pandemic on the Working Environment and the Use of Coworking Spaces in Malta". They show the results of their in-depth interviews with managers and users of CSs, to describe how the pandemic may be impacting the coworking industry in complex ways: negative impacts, such as soft lockdown measures, and limitations related to social distances; yet there are positive long-term effects, i.e. the rising number of remote working and freedom to choose where to work. This book's last case is Portugal, narrated by Elisabete Tomaz, Maria Gato and Gislene Haubrich in Chapter "Dynamics of Change at Work and Reactions of Coworking Spaces in the Aftermath of the Pandemic: Notes on Portugal". The scholars describe the growing public awareness of new workplaces and the transformation of work as positive effects of the pandemic. They highlight the main public measures adopted by the government following the growing number of teleworkers, underlining insights for the future.

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Remote Working and New Working Spaces During the COVID-19 Pandemic—Insights from EU and Abroad

Aleid Elizabeth Brouwer and Ilaria Mariotti

1 Introduction

The COVID-19 pandemic changed geographical work patterns in several ways. Firstly, the pandemic redefined of the needs and functions of commercial and office spaces; secondly, the pandemic generated a new look on where to live and work from home [14, 24]. Suburban and peripheral areas are expected to become more attractive places. Thirdly, a new demand for geographically dispersed shared workspaces for remote workers, and digital nomads, enabling them to reduce commuting and improve work-life balance [31, 21]. According to the ILO [20], the term distance working includes the following working arrangements: teleworking, agile working, smart working and working from home. The economic activities that have a greater ease of working at a distance (e.g., at home) are those with a higher knowledge content: professional, scientific, technical activities, finance and insurance; professional services; public administration (among the others, Barbieri et al. [1]).

This chapter explores why people decided to keep working remotely even after the restrictions were cancelled. The remote working phenomenon is described in European countries and the USA, and its effects on workers' wellbeing, workplaces, cities, periphery and rural areas explored. The last section concludes with some hints on how remote working affects coworking and hybrid spaces' future.

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2 COVID-19 Pandemic and Remote Working in the EU and USA

More people started to work from home following the introduction of the social distancing measures in response to the COVID-19 pandemic and this seems to be a trend. According to Eurostat [13], in 2020, 12% of employed people aged 20–64 in the European Union worked from home, while this share used to be a constant 5 or 6% in the 10 years before. The European regions with the highest shares of remote workers in 2020 are Helsinki-Uusimaa, the capital region of Finland with 37%, recorded the highest share in 2020. Followed by the Belgian Province du Brabant Wallon with 27% and the Belgian capital region, Région de Bruxelles-Capitale/Brussels with 26%. In some the capital regions of the European Union about 25% of the employed worked from home in 2020; 25% in Eastern and Midland in Ireland, 24% in Wien, Austria and 24% in Hovedstaden in Denmark. The Île-de-France in France, the city Utrecht in the Netherlands, Luxembourg and Área Metropolitana de Lisboa in Portugal all have 23% of the employed work from home in 2020 [13].

During the pandemic, the USA and Europe have experienced out-migration from their cities, even though each in their own specific way [25]. Recent studies in the USA (e.g., [7, 29]) found that especially those people located in higher income neighbourhoods living in high-income neighbourhoods in larger U.S. cities have the most chance of working from home. Ramani and Bloom [29] found two effects in the US cities. Firstly, the “Donut Effect” is where people and activities move from the cities towards the city edge and more to suburban areas. Secondly, a relocation of people from the cities to smaller regional cities or more rural towns. Since the pandemic started, people have commuted less, hence it is worth moving to places further from the office. Some European examples also indicate to a trend to more remote workers in less urban areas. In Spain, it was observed that small towns (< 2000 inhabitants) experienced population growth [18]. In the Netherlands, there is a slight shift outward of the larger cities observed, but primarily to municipal neighbours, which are still quite urban by address density [3]. In Italy, Mariotti et al. [25], in a study about the leave of workers from the city of Milan in 2020, found that municipalities closer to Milan with a strong broadband connection, a high concentration of knowledge workers, and foreign immigrants are more suitable for hosting remote workers. Besides, Italy experienced a movement of remote workers to southern and inner areas of the country while working for employers based in the big cities of the north or even abroad [8, 26]. In Scotland also a growth in population in some intermediate and more rural villages since the pandemic [10].

In 2022, some larger cities the number of people returning to the office is significantly less than before the pandemic. Some cities returned to baseline quite swift such as Harare, Zimbabwe had a baseline recovery of 59.8% and Lima, Peru had a baseline recovery of 32.9%, while Montgomery, Alabama, USA had a baseline recovery of – 10.9% [9]. Countries where the rate of return to the office was fastest were Bangladesh, Pakistan, Nigeria, Egypt, and Tanzania [37]. In some countries, the government gives pressure to bring employees back to the office as soon as possible to resume life as normal. Also, many companies view that working in the office leads to higher productivity levels, more effective collaboration, and enhanced communication and therefore are bringing their employees to the office fast. And for many employees, the office can be more attractive to work since they simply do not have the space, or technology at home to work efficiently [2]. Differences in return ratio's are bound by cultural reasons, but also influences by other factors such as availability of other spaces [9] and possibilities to for example more to more suburban or rural areas to live and work remotely [19, 34].

3 The Effects of Working from Home on Individuals and Workplaces

In 2021, people felt that the work balance should be different than before; this is visible in employees' choices. According to the Work Trend Index [37], 53% of the employees are more likely to prioritize health and wellbeing over work than before the pandemic. Rather than just returning to the office, employees more often than before the pandemic decide to engage in hybrid work [34], which can have consequences for their residential and mobility behaviour [10, 15] as well as for the way they behave as consumers. For individuals that decide to keep to work remotely, this can have a positive effect on their wellbeing (Mariotti et al. [24]). This wellbeing can improve by having more autonomy and an expected better work-life balance [20]. Even before the pandemic, women working from home reported slightly better work-life balance scores than men, and they valued flexible work schedules and limited commuting time more positively than men [12]. Women, indeed, could dedicate that time to carrying out caregiving and domestic responsibilities [11], and may be more positively affected by the opportunity to work from home [32]. From a collective standpoint, remote work has the potential to reduce commuting with positive effects on the environment [22].

But even though the positive effects are there, and working from home—especially since the pandemic—can also induce productivity growth [17], remote work, especially working from home (WFH), can also be related to negative effects on wellbeing. The office offers certain positive effect such as connection, friendship, routines and innovative capacities [36, 30]. Furthermore, working from home sometimes means you miss adequate technology the sense of isolation, the difficulty in balancing work-life and the feeling of being constantly connected [36]. Companies are realizing that remote working is staying and are opening in some places geographically dispersed offices (hubs) to be closer to workers' places of residence [21]. About 73% of the employees need a better reason to come into the office than just company expectations and say they are only tempted to go to the office for their friends and peers rather than managers and leadership [37].

Regarding the working space, in most cases, the home is not a suitable place to work; there can be a lack of space, difficulties to concentrate and lacking technologies

[2, 28]. During the lockdowns, the issues of unequal living conditions became even more on topic because the new ways of remote work and working from home were perceived during the lockdowns and restrictions [6]. As such, administrative and knowledge workers that used to work and live in cities are now considering to live and work remotely in more peripheral and rural areas to increase their wellbeing by living in the countryside [5].

Recent research in Europe, such as the Cost Action CA18214[1] project and the Coral ITN-Marie Curie Project,[2] is questioning the relevance of new workplaces, such as collaborative spaces, coworking spaces and hybrid spaces, as an alternative to the home and office. New workplaces positively impact users (in terms of improved well-being, economic performance and work-life balance) and the local context (in terms of community building, improvement of the surrounding public space and urban revitalisation) [2]. In fact, these are not only spaces equipped for carrying out work activities, but hybrid, flexible spaces and multifunctional environments that offer users services for childcare, upgrading of professional skills, aggregation and socialisation, etc. [22].

4 Opportunities for Non-urban New Working Spaces

Studies focusing on peripheral and rural areas found that in areas where digital infrastructures are lacking, the creation of hubs and facilities to enable remote work may potentially push for the development of 5G networks, thus reducing spatial inequalities [24, 34]. The attraction of knowledge and creative workers can provide opportunities for the area's economic development [27], primarily if the newcomers work stably. Nevertheless, the effects of these spaces on the socio-economic development of peripheral and remote areas, and the working conditions of rural entrepreneurs and freelancers are still unclear [4, 34]. The effects of remote workers and digital nomads relocating to peripheral and rural areas can be positive if they contribute to developing community well-being [35].

The interest in peripheral and rural areas rose during the pandemic, and new working spaces coworking spaces have attracted the attention of municipal councils and policymakers, who, in some countries, have funded them [4, 16]. Policymakers have begun to recognise the role of these spaces. Even before the pandemic, coworking spaces were used as a tool to stimulate entrepreneurship and economic activities outside the cities [34]. Even though many co-working spaces faced difficult times during the lockdown and restrictions, now that the restrictions have been cancelled, and remote working seems to have found a solid user base, especially in non urban areas, co-working spaces and other hybrid solutions can become solutions for more traditional office use [33].

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1 https://www.cost.eu/actions/CA18214; https://new-working-spaces.eu.

2 See: https://coral-itn.eu/.

5 Conclusions

The growth of remote working has been considered one of the "positive" aspects of the COVID-19 pandemic, especially for those countries not used to practising it. This new working modality has had several effects on knowledge workers, their wellbeing and work-life balance, and the workplaces, core and periphery. Nevertheless, the pandemic-accelerated distance working has both positive and negative aspects. While on the one hand, it brings with it undoubted advantages related to the possibility of a better work-life balance, reduced commuting, and positive environmental effects. On the other hand, it has widened inequalities in the labour market by favouring knowledge workers, and workers without family burdens, further calling for policies that rebalance these differences. In this context, it is crucial to recognise the social role of new working spaces and socio-cultural hybrid spaces through bureaucratic facilitation of authorisation processes, flexible public policies and accompanying policies, primarily if they are located in peripheral and rural areas.

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Narrations of the Countries in Northern and Western Europe

Acceleration of Remote Work and Coworking Practices in Estonia During the COVID-19 Pandemic

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1 Introduction

The COVID-19 pandemic accelerated Estonian remote work practices and changed the workways of many employees. The capital, Tallinn, is known to be "one of the world's best places for working remotely" [3], more than 2700 e-services are currently at the customers' disposal [1]. A high degree of digitalization in everyday life and extensive Internet coverage created favourable preconditions for smooth transmission from offices to online and remote work [10]. The draft of the Estonian welfare development plan 2023–2030 also states that the flexibility of working time and workplace increases. Due to the rise in digital opportunities and the spread of COVID-19, more and more work is being done outside the usual place of work and working with flexible working hours.

The case of Estonia, a small country with a high level of digitalization, provides additional information on the development of new ways of working pushed by the turbulence (e.g., COVID-19) in the labour market. Estonia has a high share of people living and working in metropolitan areas Harju (46% of the population) and Tartu county (12%). According to the Estonian population and housing census, 41.2%

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of the working-age population have higher education, and a fifth of 25–64-year-olds have a master's degree. Such preconditions create a suitable ground for the development of remote work.

The information and data about coworking spaces in Estonia are from Micek et al. [5] and Sinitsyna et al. [10], data collection and interviews and web pages of coworking providers. Data on remote work is extracted from Statistics Estonia and Salary Information Agency.

This chapter offers an overview of the development of remote work during the recent decade, emphasizing remote work practices and coworking in the development of remote work in Estonia during COVID-19.

2 Developments in Remote Work Practices and Coworking Spaces in Estonia

The pre-pandemic share of enterprises practising remote work was high and relatively stable over time. It was approximately 20% in 2009 and 18% in 2015 (Statistics Estonia). However, by 2021, the number of enterprises with remote workers doubled relative to 2009. Every second out of 5 enterprises practice the remote mode by the beginning of the COVID-19 pandemic. However, there were considerable size differences in remote work practices across enterprises of different sizes.

Figure 1 shows how the share of enterprises with remote workers changes by the size of the company. The most considerable increase in remote work practices can be seen in Estonia's largest companies, which were already implementing remote work practices in 2015. The share of remote workers was highest in the fields of information and communication (78.3%), financial and insurance activities (76.4%), and professional, scientific and technical activities (58.8%). However, the smallest is in the areas of accommodation and catering (7.1%), health and social welfare (8.8%), and the processing industry (14.4%) [13].

There are also differences in areas of Estonia. The share of employed people working remotely was the highest in two main metropolitan areas—Harju County (35%) and a third of employed persons living in Tartu County also worked remotely. Teleworking was the least common among people also from other parts of Estonia, e.g., in Nord-East (Ida-Viru) and South-East Estonia (Võru) counties, where only 11–13% of employed people used this option [13]. However, Fig. 2 shows how the geographical heterogeneity of remote work in Estonia has reduced at the beginning of the pandemic. This could trigger a more uniform distribution of remote work in the long run if this temporary growth in the peripheral areas becomes permanent.

According to the information provided by the Salary Information Agency of Estonia, in autumn 2019, only 6% of employees reflected that they worked from home (see Fig. 3). However, the first wave of the pandemic pushed 41% of employees to work from home. In spring 2022, when society became more used to living with the disease and there were no restrictions, the share of people working from home

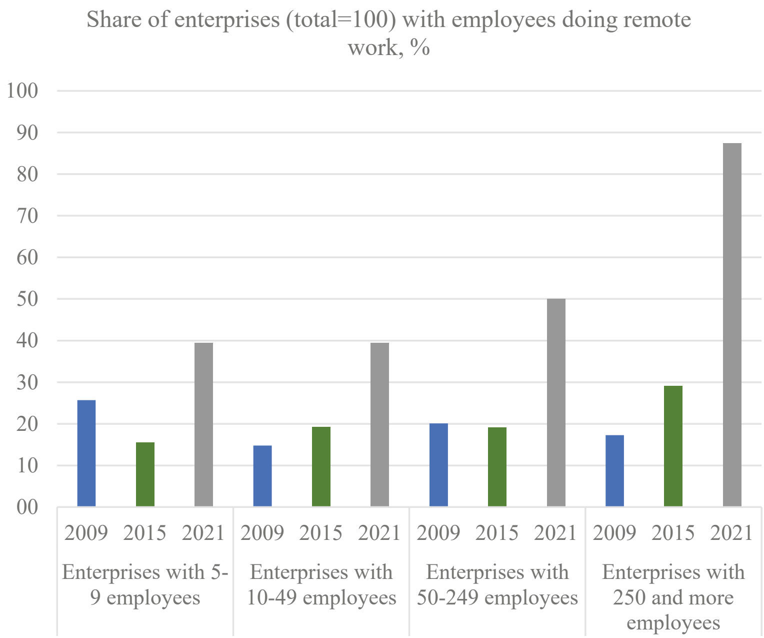

Fig. 1 Share of enterprises with remote workers by the size of the company. *Source* Statistics Estonia

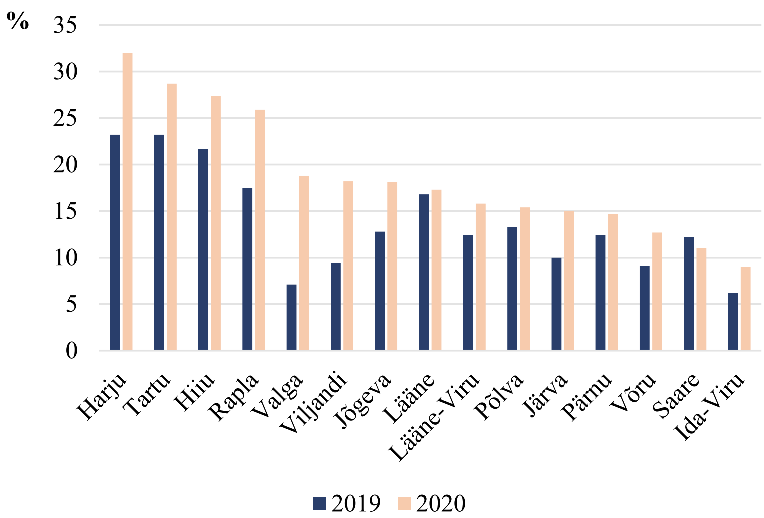

Fig. 2 Share of employed people aged 17–74 working remotely in the Estonian counties, 2019–2020. *Source* Statistics Estonia

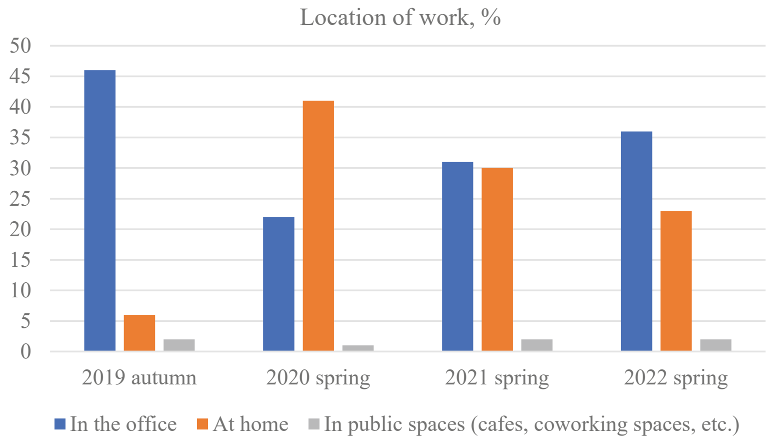

Fig. 3 Location of work among employees. *Source* Salary Information Agency, 2022

dropped to 23%. Additionally, the same study indicates that half of the knowledge workers prefer to work in a hybrid form, and less than a third prefer the office as the primary work location. This implies that the current level of employees working at home and their individual preferences have stabilized at a higher level compared to the pre-pandemic period.

The share of people who work mainly in public spaces like cafes and coworking spaces is small—only 2%, but relatively stable (see Fig. 3). This is interesting because the COVID-19 pandemic accelerated the growth of organizations and companies that offer remote working opportunities. Unfortunately, there are no client statistics for coworking spaces available. Still, the qualitative study carried out in the spring of 2020 among locally-owned coworking spaces in Estonia specialized in tech companies showed that managers of coworking spaces saw their future optimistically and even planned to put additional emphasis on marketing to raise awareness of coworking [10]. Coworking spaces may offer more flexibility in rental contracts and cost savings and could be a good choice during uncertainty for many companies.

During the pandemic, coworking spaces in Estonia were less affected in their operations due to the fewer restrictions that Estonia experienced compared to other European countries [5]. However, given the investments in ICT technologies in Estonia before the pandemic, coworking spaces in Tallinn experienced the most significant increase in the share of virtual events over the total number of events during the COVID-19 pandemic compared to other critical European cities (*Ibid*).

Flexible forms of work encourage the participation of different social groups in the labour market. However, working time and workplace flexibility are often accompanied by an increase in workload, blurring of the boundaries of work and personal time, problems with the working environment, social isolation, increasing inequality and difficulty in controlling working conditions, which in turn have an impact on the employee's mental and physical health. Low wages may also accompany new forms of work (Ministry of Social Affairs).

The Parliament of Estonia is currently processing the amending of the Act on Occupational Health and Safety, which also includes changes related to remote work. The draft stipulates the obligations of the employer and the employee to ensure a safe working environment in remote work.

3 Widespread Remote Work and Geographical Heterogeneity

The increase in remote work practices due to the COVID-19 pandemic accelerated several already underway activities and offered new possibilities for different service providers. In addition to companies providing coworking spaces for freelancers and employees, public and private organizations have focused more and more on remote work possibilities.

3.1 Remote Workstations for Employees of the Public Sector

In Estonia, the real estate development and management company Riigi Kinnisvara AS is established for the efficient management of state real estate. The company is 100% owned by the Republic of Estonia, and its shares are controlled by the Ministry of Finance. Before the pandemic, in 2018, the government initiated the pilot project to create state office buildings, including remote workplace environments for public sector employees in counties, to improve the availability of state services and save on real estate costs (Riigi Kinnisvara).

As Riigi Kinnisvara AS states, the COVID-19 crisis highlighted that work environments must be created as flexible as possible and easily adaptable to changes. This means that a public sector employee, whose job allows them to choose between the office and remote work and that across Estonia, has good opportunities for this. Today's real estate decisions must also ensure a high-quality working environment 10 and 20 years from now. The flexible work environment also supports the national recruitment policy, i.e., the recruitment of a specialist is possible based on their preferred location. From Riigi Kinnisvara's point of view, this means in-depth knowledge of the client's work process and the resulting high quality of the initial project task, based on which designers can create well-thought-out architectural solutions.

The state's administrative policy program is to keep the share of central government employees in the capital city Tallinn below 44.7% [2]. This is because there would also be motivated employees with the necessary qualifications in rural areas. They started hiring new people from where they currently lived. On the one hand, it was a regional political step, but on the other hand, it was an opportunity to hire good people who did not want to come to live in Tallinn.

With remote workplaces, employees of state institutions are offered the opportunity to comfortably work temporarily in another location and assess the suitability of the location and premises of remote workplaces, ease of use and what additional opportunities remote workplaces could offer in the future. Currently, remote workstations are located in seven Estonian cities. This is a pilot project, and if the use of workplaces is widespread, locations and workplaces will be added to the existing remote workplaces across Estonia, including in future government buildings. All remote workstations have an additional monitor, keyboard and high-speed Internet connection. The use of remote workplaces is free for public sector employees.

3.2 Development of Remote Work Tourism in Estonia

The region of Southeast Estonia consists of three counties: Võrumaa, Põlvamaa and Valgamaa. Southeast Estonia, next to Ida-Virumaa, has been one of the regions that lost its inhabitants the fastest. Although the downward trend has been somewhat slower in recent years compared to Statistics Estonia's forecast, the decline will continue in the foreseeable future, meaning an increase in the share of older adults due to longer life expectancy and emigration of younger residents, and the decrease of both the number and share of working-age people.

Thanks to its good reputation as a pleasant living environment, Southeast Estonia has the potential to benefit from the increasingly widespread trend of remote working. All three counties have joined their forces to promote Southeast Estonia as an attractive destination for remote work tourism. In July 2020, the brand of remote work destination Kupland was launched. Kupland brings providers of remote working services in South-Eastern Estonia (Võru, Põlva and Valga Counties) together under a single umbrella brand. In the Kupland network, one can find visitor centres, hotels, tourist farms, creative houses, and innovation centres. Visitors of Kuplands' website can choose whether they would like to come to work remotely alone, with the family or with the team. They can also select the necessary amenities.

Due to the COVID-19 pandemic, the first target audience was domestic tourists, but in the future, Kupland plans to broaden the focus to neighbouring countries. In addition to Estonian, they already have their website in English, Latvian, Finnish, Russian, and German language. Cooperation projects have started with some regions in Germany and Poland. When it began, Kupland had 16 private and public organizations across Estonia that hosted remote workers. By the end of 2020, the number of hosts was 21, and by the end of 2021, 28 [4]. The network statistics show that the increase in visitor numbers in 2021 compared to 2020 was 140%. Most visitors stayed for one day, and 25% of visitors stayed for two days. Most visitors are knowledge workers who work using ICT, but also creative workers who need privacy and inspiration. An increase is also in the short-time rental of the room for online client meetings or consultations.

Following Kupland's example, a network covering regional, remote workplaces on the islands of Saare county (Saaremaa, Muhu, Abruka, Ruhnu, Vormsi, Vilsandi) is currently under development. Saare county is among the last regions in Estonia regarding the share of people working remotely. The working group has mapped the service's potential user, their needs, and how they could reach this service. They are also developing an umbrella brand for organizations and companies offering remote work opportunities.

3.3 The Emergence of New Types of Coworking Spaces

Libraries. Libraries as places for remote work have gained popularity. Newer libraries have special rooms or individual boxes for working. 2022 was the year of libraries in Estonia. Related to that event, the map of libraries offering remote work opportunities was launched [7]. It confirms how relevant the topic of remote work has become in recent years. According to the map, 170 libraries offer remote work possibilities for free. However, many of them still do not have private rooms for teleworking, but working is possible in reading rooms.

Community centres. In the last decade, the activity of local communities has picked up. Municipalities have supported the creation of community centres. These centres are often established in buildings with a significant history for local communities—in old village schools or centres, post offices, etc. The community centres usually include a bigger hall for events, seminars and cinema, small rooms for joint activities like knitting, book club, etc., and a communal kitchen and workspaces for remote work. Community centres are for local residents and usually do not advertise their workstations outside the municipality.

Unique places for remote work. Offering opportunities for remote work is recently seen as a possibility for diversifying the initial service. Coworking spaces have always thrived on offering their clients a vibrant and trendy ambience. Due to the COVID-19 pandemic, other companies and organizations have become interested in remote workers' market niches. For example, renting an igloo office, a workstation in the art gallery or radio station, or the riverboat is possible. The common feature is that the main activity field is complemented with additional services, and remote working offers an opportunity for that.

Promotion of remote work. In 2016 the Estonian Smartwork Association (NGO) started an initiative of the Remote Working Badge. The badge aims to recognize organizations already using remote working practices and encourage other Estonian organizations to apply flexible working practices in their everyday work arrangements. Also, since 2018 organizations can nominate leaders for the title "Best remote leader" [11]. Applying for the badge has become increasingly popular as employers perceive it as an additional benefit for recruiting the best talents. In total, 195 companies have received the Remote Working Badge as recognition for their remote work practices.

4 Conclusion

Across all EU countries, the COVID-19 pandemic drastically changed how people work. Employers had to adjust to the new working environment and introduce new ways and practices of working. The findings of our study provide an overview of the significant trends in remote work and coworking practices in Estonia—a country with a small economy and with a high level of digitalization. We seek to investigate what extended the COVID-19 pandemic and accelerated the pre-pandemic trends. Based on Statistics Estonia, we evidence the growing demand for flexible and safe working conditions. During the pandemic period, 41% of employees had to work from home. When the restrictions were relaxed, employees, especially in high-skilled occupations, remained in a hybrid work format. We assume that preference towards hybridity of work will be further supported by employers and adopted as the new daily base routine.

Another trend we observe is an increasing number of private and public companies that provide remote work. Even before the pandemic, companies in the ICT sector, banking and finance industries were familiar with the remote work practice. Thanks to the high level of digitalization and implementation of IT technologies and solutions in the pre-pandemic period, many companies had a smooth transfer into a safe mode of remote working. Public companies (for example, real estate company Riigi Kinnisvara AS) offered equipped workstations across non-metropolitan locations on a temporal or permanent basis and introduced new hiring practices recruiting employees across all regions of Estonia despite their place of residence. Employees' preferences towards hybridity and remote practices and the readiness of employers to meet them, supported by the high pre-pandemic level of digitalization and developed ICT sector, push the revitalization of rural and deprived regions and reduce the socioeconomic disparities across Estonia.

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Narratives on COVID-19 Effects on Coworking Spaces in France: A Winning Ticket for the Peripheries?

Divya Leducq and Christophe Demazière

1 Introduction and Research Focus

France, as other European countries, has not been spared by the COVID-19 crisis, but this pandemic, unknown in the twenty-first century, has highlighted and resonated with many other issues, both in society and in the fabric of cities [1]. Indeed, France before COVID-19 was not a country keen on remote working but in recent years the spread of broadband internet has encouraged the rise of more remote working. Thus, the aspirations of non-managerial office workers, both women and men, to work one day a week from home had favoured the beginning of individual and sector-specific collective agreements. In 2018, the Yellow Jackets protest brought to light the problem of costly mobility from the countryside to the city. At the same time, and almost in contrast, the growing attraction for a better quality of life, the possibility for digital nomads and higher intellectual professions to work from their second home in the countryside or by the sea was already slightly present. Finally, since 2012, we have observed in France a growing success of coworking spaces and third places of work which are marked by a triple trend: their multiplication, their spatial diffusion, and the diversification of the typology of coworking spaces.

When it arrived in 2020, the unforeseeable, the unpredictable COVID-19 pandemic severely affected France, first the cities (the very large ones), then the whole country. The batch of restrictions, administrative closures, barrier gestures in a first time (from spring to winter 2020), then the arrangements in a second phase (during the year 2021) damaged the economy, the state of mind and the conditions of

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numerous individuals and families, but also endangered the coworking spaces which were in danger of survival.

The COVID-19 crisis therefore raises a paradox of living together, of the collective, of co-housing in flexible workplaces: are coworking spaces a luxury of good times, a promise that can be avoided in difficult times? Or, on the contrary, can they be a bulwark against loneliness, to face the health crisis whose consequences go beyond the overcrowding of hospitals and the constrained isolation?

As this chapter is being written, two other crises have occurred in France—as in other European countries (Germany, Italy, etc.). Firstly, the scorching summer and the climate crisis confront us with the need to rapidly adapt our cities and territories to the effects of global warming to (perhaps) mitigate its consequences. Secondly, the energy crisis, related to the war in Ukraine, confirms that sobriety is no longer a scenario or a choice, but an obligation linked to the increase in electricity prices and the shortage of power. These two phenomena reinforce the crisis of traditional office real estate in French metropolises, and particularly in Paris Mega Region.

All these combined explanatory factors reinforce the argument in favour of coworking spaces (hereafter: CSs) as solutions for households, self-employed workers, and employees, but also as a means of resolving various forms of territorial crisis (inequality between metropolises and small towns, the feeling of declining in medium-sized towns, etc.). At the same time, they underline the limited scope of this solution, which is still largely unthought of in urban and territorial policies. Our chapter on French coworking narratives in the post-COVID era is based on our expertise in new trends in commercial real estate, acquired through international scientific monitoring, regular press reviews and the production of knowledge on coworking spaces and third places based on case studies located mainly in the Centre-Loire Valley Region, Paris Metropolitan Area and other French regions marked by a metropolis-periphery interface.

2 A Growing Number of Coworking Spaces: Spatial Diffusion and Business-Model Diversification

Since 2012, the number of coworking spaces has increased (Table 1). There are now nearly 2800 in France, one third of which are in the Paris region and two thirds in other French-regions. The Coworking 2021 index published by Ubiq [2], the former *Bureaux à partager*, shows a 60% increase in two years, after a clear pause in 2020, linked to the health crisis.

While the market experienced a clear slowdown during the health crisis, the record number of leases taken out by coworking operators in 2019 (6 players took out 182,000 m^2 of leases in the IDF in 2019) made it possible to support the growth in the number of spaces and the number of square meters over the years 2020 and 2021. Thus, the year 2021 has not been left behind in terms of site openings.

Table 1 Increasing number of coworking spaces in France

	Number	Growth (%)
2012	250	
2015	360	+ 44
2017	600	+ 66
2019	1700	+ 183
2021	2700	+ 58

Source Bureaux À Partager—Ubiqdata [2]

The big trend is towards very large spaces and high-end facilities [2]. Two very large coworking spaces have just opened in Paris: Wojo in the 13th arrondissement and WeWork on Boulevard Haussmann. Bordeaux is experiencing the same boom with the recent opening of two spaces by the firm Héméra, which plans to open a dozen new locations in Nouvelle-Aquitaine by 2025. This success is driven by two phenomena: the increase of self-employed workers and freelancers on the one hand, who are taking up space at these new locations. And companies that lack visibility and do not want to commit to a classic lease, which they cannot break for three years. Any flexibility that can be provided is welcome. In addition to this, there is another trend: to attract and retain candidates, companies are increasingly offering them the possibility of working in 'third places', close to home, and avoiding the daily commute to headquarters. This is one aspect of the new hybrid work that the health crisis has made possible.

The nomadic open space job is clearly no longer the norm in coworking. Inside the coworking spaces, sedentarisation continues: 88% of workstations are to be rented in closed private offices and only 12% of workstations are open to all in open space [2]. The business model is based on renting closed private offices by the month. These offices are growing. While in large cities outside the French capital, 70% of offers are for private offices with less than 5 workstations, in Paris, the majority of these vary in size from 2 to 40 workstations. Ubiq also notes an increase in offers of 40–70 workstations; certain large groups and scale-ups no longer hesitate to position themselves on entire private office floors in coworking, with more than 90 workstations.

In France, and especially outside the major cities of Paris, Lille and Lyon, the business models developed by "pure players" such as Régus and WeWork are not profitable. In intermediate, small, and medium-sized cities, it is often a private market initiative, a private association or a public initiative that leads to the appearance of a new coworking space type. Sometimes the public will has met with private interest around a larger project for an Innovation City (Châteauroux).

Thus, these new workplaces can be set up in unusual environments, such as in Corsica [2], where a former chapel has been desecrated and used as a workspace. In Bordeaux, a former military barracks Caserne Niel that had been abandoned was used as 7000 m^2 of workspace "Darwin Ecosystem". And in Paris, the former headquarters of the Calmann-Lévy publishing house, designed by Gustave Eiffel, with its original bookcases and old rails for transporting materials, now accommodates modern nomadic workers. Elsewhere, coworking spaces are seen as a way of revitalizing territories, around small urban centres, underused station buildings or in a wasteland with a visible industrial or artisanal character. The French Government has committed €130 million to develop them as part of the Recovery Plan.

While in Paris, concentration is making its way to larger and more premium spaces, the market in France's major cities continues to develop successfully. In square meters, the Île-de-France region accounts for 34% of coworking spaces (vs. 35% in 2019) and Paris, with its large spaces in terms of size, now represents only 18% (vs. 23% in 2019) of the total number of coworking spaces in France. We are also seeing strong growth in the number of coworking spaces in the wider regions of Lyon, Marseille, and Bordeaux. Some players have made regional development their speciality, such as the IWG group (349 sites, 284 of which are in the regions), Startway (11 sites in the regions) and many new entrants such as Hiptown (5 spaces in Marseille, Lyon, Bordeaux and Lille), Babel (which plans to set up in Grenoble, Lille and Bordeaux after Marseille and Montpellier), or Flex-O (3 sites in Lyon, Nantes and Lille, opening in 2021, and which plans to open 50 sites outside the Paris region in five years' time) (op. cit.).

In the Centre-Loire Valley Region, between 2017 and 2022, the number of coworking spaces increased from 5 to more than forty. We conducted a study of more than thirty coworking spaces located in a variety of areas (from metropolitan areas to local centres as defined by the SRADDET) in the Loire Valley (Tours, Orléans and Blois), on the fringes of the Ile-de-France region (Chartres, Dreux, Montargis, etc.) and in the rural areas of the southern part of the region (Mézières-en-Brenne, Richelieu, Saint-Amand-Montrond, etc.). This study highlighted the diversity of economic and territorial models for setting up coworking facilities, but also the fragility of models based on purely associative groupings and coworking spaces with too few workstations.

3 New Expectations, Remote Working and Residential Mobility: A Fresh Opportunity for the So-Called "Peripheral" Territories?

Well-being at work has become an important criterion for the upper classes, which leads them to integrate this qualitative variable into their choice of residency, job, company, and workspace. However, the profiles of coworkers are very diverse, bringing together digital nomads (these independent, hyper-mobile, flexible, and autonomous ICT workers), creative people with varying degrees of qualifications but all specialists in a particular field (self-employed and freelancers in the service sector, crafts or agriculture) and employees of multi-localised companies (branches). Coworkers are attentive to the possibility of collaborative work (serendipity of encounters, cross-fertilisation, search for complementary skills, etc.) and to spaces with a carefully designed atmosphere that encourages creativity (architecture, design, and interior layout). Furthermore, coworkers are increasingly involved in ecological transitions and are sensitive to the locavore offer (local supplies from sustainable agriculture), to the recycling of CS waste or to the possibility of alternating active mobility (walking, cycling) and car mobility (essential in areas on the outskirts of very large cities).

Without seeking to replicate an CS model that would be unsuitable for the territory, the pandemic underlined the importance for an CS to offer a reliable internet connection, private offices allowing for confidentiality of exchanges between coworkers and clients, functional and available meeting, and creativity rooms instead of the open-spaces of the flex-office. Places for conviviality, friction and catering are also essential.

In rural areas or medium-sized towns, the hybridization of coworking spaces with other workplaces (third places, incubators, innovation clusters, etc.) or services to the population (public service centres, digital public spaces, etc.) makes it possible to limit the risks associated with the community's investment in the CS. In fact, the CS project can be thought of at the same time with the economic development department, the urban planning department (urban regeneration, transitory or permanent occupation of empty premises, ephemeral CS, etc.), the transport and mobility department (bus timetable, cycle paths, autonomous shuttle project, time management, etc.)

Since March 2020 and the first major lockdown, not a day goes by without the publication of figures on unoccupied offices in the major business centres (La Défense, La Part Dieu, Euralille, etc.), new ways and places of working or the increased desire of the French for a better living environment. It seems that one can prove everything and its opposite. However, telework is a very real trend that may concern the regional territories, especially those in the immediate vicinity of Ile-de-France. Why is this so? Because this first trend is accompanied by a large-scale wave of departure of Parisians and Ile-de-France residents in search of a more pleasant and comfortable living environment.

Thus, according to the Paris Region Institute (2021), telework in administrations and companies could remain at 2.4 days per week after 2022. 9 out of 10 employees wish to maintain their teleworking time to better articulate individual, family and professional obligations, while only 13% of employees are dissatisfied with teleworking because of the deterioration of the quality of professional relations, poor management between professional and private spheres or a decreased efficiency of their working day. Local offices in a dedicated space (coworking, third places, FabLab, business centre, even library/media centre, etc.) are therefore very important to allow at least 2 days of telework in the week, since at the same time 62% of workers consider that their personal living space is not adapted to telework.

These trends are accompanied by an increased need for functional temporary workspaces (CS, shared offices, third places) between home and the head office or company offices, used alternatively. Thus, 45% of workers whose jobs allow them to do so would be in favour of teleworking in a coworking space near their home, especially if the expense is financed by their employer. In this respect, the *Syndicat National des Professionnels de l'Hébergement d'Entreprises* (Synaphe) is working on the formalisation of “office titles” that would facilitate access to local offices. This issue of workplaces is therefore part of the desire of individuals and households to better articulate their work, leisure and family lifetime.

At the same time, of the 36% of Parisians who wish to move, 11% do so each year and 50% plan to move outside the Paris Region [3]. Several reasons—family, professional or heritage—combine with the desire to live in a less dense, less polluted, less noisy area, but also with the need to have access to private nature (garden, terrace, balcony). Before the crisis, 44% of French people already said they preferred to live in a medium-sized town, 36% in a rural area and only 20% in a large town (IPSOS Sondage, 12/2019). Although the Centre-Val de Loire Region continues to be the main destination for households from Ile-de-France [4], access to services in the new intercommunal area of residence is an important factor in the final choice of location. Thus, since 2017, the CSs have seen an increase in the number of former Ile-de-France residents: the TGV effect in Tours and Vendôme, and the effect of Transilien, Intercités and Corail trains in Chartres, Dreux and Orléans. In predominantly rural areas with strong tourist potential, it is the transformation of second homes into main homes for all or part of the week that benefits the CSs of Nogent-le-Rotrou, Mézières-en-Brenne, Richelieu or Preuilly-sur-Claise.

Because of the continuous increase in land and property values, some households go so far as to leave the Ile-de-France to settle in one of the eight neighbouring departments and carry out a home ownership project there [5]. Many of them continue to work in the heart of the Paris mega-city-region, resulting in long commutes, as shown by Valentin’s testimony (Box 1); unless teleworking is possible for a large part of the week, as in the case of Raphaël.

Box 1 So far, so near… They left the Paris Region but kept their jobs there

In March 2021, the Paris Region Institute provided portraits of households that have left Île-de-France for a nearby area but continue to work there. These stories allow us to decipher their motivations and their choices.

Living in a regional capital, Orléans, and working in Paris

Anne and Valentin are 48 years old and come from the Loiret. Valentin began his studies in Orléans, continued them in Paris, then in Caen. It was in Paris that he found his first job in 1999. Anne joined him and the couple moved into a rented flat. Several events prompted them to move a few years later: the birth of two children and the lack of space in their 55 m^2 flat; the landlord putting their flat up for sale; Anne’s loss of employment. They decided to find a more spacious home in a more pleasant environment, but the compromise of the Parisian suburbs did not enthuse them. They then considered returning to Orléans, 130 km from Paris, where they had family and friends.

In 2004, at the age of 32, they rented a 100 m^2 house with a garden in the city centre and near the train station, for the same rent as their Parisian home.

Valentin undertakes the daily train commute to Paris. Transport time: 5 min by bike to get to the station + 55 min by train + 20 min by metro and 5 min walking. Although the city is well served, the lntercity rail network is in a state of disrepair and is currently undergoing work to be completed in 2022. During strike periods, Valentin travels by car. Recently, he has been able to telework regularly, one or two days a week.

For her part, Anne found a new job in human resources in Orléans before a professional retraining that led to a sales position in the medical field in a home office. The family also welcomed a third child. After two experiences in renting and a first real estate acquisition since they moved to Orléans, Anne and Valentin built a house with ecological materials in the city centre.

A participatory housing project in the Perche region boosted by teleworking

Raphaël (44), an administrative magistrate, and Laure (41), a teacher, have two children aged 5 and 6. In 2016, they started thinking about a participatory housing project with a group of friends. At the time, they were all tenants, in Paris or a nearby suburb, and had a complicated daily life with young children in 70 m^2 flats. In order not to increase their housing costs, they wanted to “try something else”, outside the dense zone. The professional trajectories of each of them are not yet fully determined, and it is necessary to continue working in Paris. The participatory housing project had its ups and downs. Finally, two couples with young children and a single man embarked on the adventure, with a more precise geographical strategy: towns served by the TGV were abandoned in favour of those along the Montparnasse/Le Mans TER line. In 2020, the group acquired a farmhouse near Nogent-le-Rotrou, in the Perche region of France, which had already been renovated to 1990s construction standards and had to be adapted to create independent housing. Although the cost price of the property is high, the group purchase allows a considerable reduction in the level of indebtedness.

Telecommuting has undoubtedly consolidated the project. Part of the group continues to work in Paris (1.5 h by train), alternating with two days of teleworking per week. Raphaël can work 80% of his time as a magistrate from home. For Laure, his partner, a local professional reconversion is envisaged.

The households from Ile-de-France who come to live in the Centre-Loire Valley Region and who frequent the CS correspond mainly to three profiles. “Opportunistic” households are young couples without children who left the Region for their studies and who return to settle here for the good life and because of a job opportunity in a high-tech sector (aeronautics, biotechnologies, cosmetics, precision mechanics, etc.). They are looking for a stimulating green work environment that offers new relational opportunities. “Pragmatic” households are couples living in Paris or the inner suburbs, living in a flat with at least two children. They are looking to acquire a main residence or convert their second home to settle in the Region on a long-term basis. These households seek to reduce their daily commuting to the capital and integrate CSs that provide a good infrastructure. Finally, “utopian” households—single women and men or couples—are seeking to live and work differently, in more open, interactive places where the boundaries between aspects of life are less clear and where they can contribute to a more sustainable society. Thus, projects for coworking spaces with coliving spaces (the “phalanstery/familistere” principle with shared living spaces such as the kitchen) may interest them.

4 The Role of Public Authorities in the Coworking Trend

How can the public authorities support coworking as an integral part of the productive city?

A first action might be to identify existing CS projects, whether they are the result of a private commercial desire to diversify activities (hotel, café, restaurant, etc.) or an associative structure (following the example of Châteauneuf-sur-Loire in Transition). Thus, the local authority can dialogue with the project leaders and support the project if the need is expressed through communication actions, temporary provision of premises (identifying unoccupied or under-occupied spaces, etc.), and occasional financial, human or technical assistance to join the human resources of companies located in the local area, for example.

If the elected representatives want to set up an CS or third-party project, then a preliminary study is necessary. Questions must be asked to ensure that the new workspace is precisely calibrated for the territory (what surface area?), that it is also in line with the local production ecosystem (what needs?) and that its insertion into the territorial fabric is relevant (what uses?). The functional mix of these new workspaces is important, as well as their individuality (variable needs of companies: one week of team building in an original CS—boat, castle—or a multinational teleworker in a building rented for the year?), their capacity to respond to the challenges of digital mediation (intergenerational training) and their openness to the city (participative projects, events…).

The initial ambition of the supporting structure is important, as is the definition of a clear line for the CS project. Will it be a space solely dedicated to work or will there be other functions for the place (repair café, social café, farm-to-fork grocery shop, exhibition room, sport grounds…)? Is a new building being constructed or is an underused space in the community being recycled (building in a business park, media library, empty industrial or commercial premises, etc.)? What identity do we want to give to the site, in relation to the site’s amenities, the assets of the local territory, with the local area? Who will run the place and how will the future community of coworkers be gradually extended?

5 To Conclude and Follow the Research Agenda on Coworking

On the borderline between prospective research and action, our qualitative approach to coworking spaces always starts with an in-depth urban survey on site, followed by an interview phase with the creators, managers, and animators of these spaces. Through an online survey and our field visits, we also met the coworkers who frequent the CSs in the region. Their profile is diverse: they are both independent workers in the knowledge economy (translators, lawyers, etc.) and creative people (in the fields of digital, design, art, etc.). Since the COVID-19 pandemic, students (in search of internet connection and socialising) and teleworkers (62% of managers and 68% of microentrepreneurs) are two categories that frequent CSs more.

In this summary note on the narratives of coworking in the post-pandemic era, we wanted to show the interest of thinking of CSs as an additional workspace within the economic reorganization of resilient territories in the face of various crises (economic, health, climate, etc.).

At a time of a plural risk society, CSs can also be levers of development if they are thought of in connection with the overall urban or rural development project. The recompositing of the tertiary real estate landscape (fewer offices in the traditional sense, and more green/open spaces, third-party spaces, etc.) offers the opportunity to think about new urban models.

In this period of multiple transitions (post-pandemic, climate emergency, (re-) structuring of future sectors, etc.), and as practitioners of territorial planning and development, it is essential to question the place of these new workspaces—whatever they are called: coworking spaces, FabLab, makerspaces, third places, clusters, incubators, poles, etc.—in the urban project. Symmetrically, it is also a question of calibrating, through studies prior to the decision and public and/or private investment, their capacity to contribute to more productive and greener territories.

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Impact of the COVID-19 Pandemic on Remote Working and Coworking Spaces in Germany—Narrative Literature Analyses

Marco Hölzel and Thomas Vogl

1 Introduction

Like many European countries, Germany imposed a national lockdown from mid-March 2020 to prevent the spreading of the COVID-19 virus. Shops—except for daily needs—and schools have been closed. Personal contacts have been restricted; borders were also closed. Employees were encouraged to work from home, and employers were asked to allow remote work. Starting from April 2020, the restrictions were slowly released depending on the regional number of infected people.

This situation caused several effects on work and the work environment. The risk of getting infected by other people require to avoid other people. This causes a push for remote work in many industries if knowledge work has to be performed. Physical work isn't possible to be performed remotely. The rise of remote knowledge work, which started in the 1970 and was previously slowly growing and accelerating in recent years by better digital infrastructure and remote access systems [1]. This trend is often named new work, which was introduced by Frithjof Bergmann [2] and leads to new working spaces, such as coworking spaces, fablabs, or makerspaces.

The first German Hackerspace "C-base" was founded in Berlin in 1995 [3], which can be seen as the first approach to community-orientated shared workspace concepts. Apart from that, the first coworking space "Betahaus" was founded in Berlin in 2009 [3] and still exists today. Since then the number of coworking spaces has been increasing continuously. According to a market survey by the Bundesverbandes

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Coworking Spaces Deutschland e. V. [4], the number of coworking spaces increased from 300 in 2018 up to 1268 in May 2020 across Germany. At the same time, the geographical distribution of coworking spaces has concentrated on the big cities and metropolitan regions with good infrastructure connections.

From a real estate perspective studies show that coworking spaces are not just existing in the seven biggest and most important cities for the real estate market (A cities) but also in the German D cities [5] and peripheral real estate markets with no regional or national importance [6].

With the contact restriction caused by the COVID-19 pandemic, remote work received a massive boost ([7], S. 19). On the one hand, people were starting to perform their work from home. On the other hand, the contact restrictions caused a massive drawback on new working spaces, as those were places where people come together and work together to avoid the loneliness of working from home, enjoy encountering other people, network, and develop private and professional cooperation.

The effects of the COVID-19 pandemic and the measures to avoid the spreading of the disease cause changes in different temporal horizons.

Immediately people—knowledge workers—were forced to work from home, and new working spaces were shut down [8]. Due to work being performed from home the daily commute wasn't needed anymore, car traffic declined massively and the occupancy rate of public transport systems was strongly reduced. If available, people moved to their cottages or to relatives in more rural regions to get out of densely populated inner cities [9]. The omitted commute allocate time and financial resources closer to the place of residence and could support shops, services and make encounters more likely in the vicinity, as has been analyzed for the locations of coworking spaces [10].

Medium-term new working spaces were reopened with hygiene concepts of distancing and disinfection. People were starting to use new working spaces or coworking spaces to separate professional and private life and avoid the stress of working at home with family and household issues such as child care, homeschooling, laundering, etc. [8].

In a longer perspective, which is already perceptible to some extent, the real estate market will be influenced. People are looking and partly moving out of inner cities, looking for more space, distance—even to other people—and green. Companies are considering moving to rural areas and following their employees, reducing the footprints of their unused office spaces, or even closing single office branches to reduce rental expenses and create more agile corporate real estate portfolios with shorter and more flexible leases on demand [8, 11].

1.1 Research Focus

This qualitative research aims to give a broad impression of the impact of the COVID-19 pandemic on work, working conditions, and the consequences on other circumstances of new working spaces and the living conditions of knowledge workers in

Germany. The research focus is on new working spaces, such as coworking spaces, and is considering the chronological changes initiated by the pandemic, structured in the immediate, mid-term, and long run.

1.2 Research Questions (RQ)

The following research questions are based on the research aim and design and are pursued by a literate review and interviews.

- How have the COVID-19 pandemic repercussions on work with a focus on knowledge workers, their living conditions as mobility, mental health, work-life-balance **(RQ 1)**,
- new working spaces **(RQ 2)**,
- and real estate market for flexible offices **(RQ 3)**.

In 3 temporal phases (TD):

- an immediate perspective **(TD a)**,
- on a medium-term perspective **(TD b)**
- and in the long run **(TD c)**?

2 Methodology

To investigate the immediate effects of the COVID-19 pandemic we chose a research design based on instantly available sources of information on the regarded subject. In the meantime more evidence-based publications are available. For this paper, we chose a combination of available reports, coverage, scientific publications, and interviews to generate a narration [12] to answer the above-described research questions.

3 Results

3.1 COVID-19 Repercussions on Work (RQ 1)

Before the COVID-19 pandemic, only 4% of German workers usually worked remotely—regular telework was used mainly by highly skilled and self-employed workers on an occasional basis [13]. This may be due to the fact that in comparison to other European countries, Germany has a strong “compulsory presence or attendance culture” at the workplace [14] and to the existing legislation that has no clear definition for remote or mobile work, which are used in connection with activities outside the workplace are applied inconsistently. In principle, an employer is not obliged to respond to an employee's wish to work on a mobile basis [14]. The Working Hours Act (ArbZG) of 1994, updated by the European Directive 2003/88/EC, also applies to employees and trainees in times of crisis. Thus, Germany was lacking behind other European countries as e.g. "The German Arb ZG" dates from 1994 when no internet, emails, or smartphones existed.

The ongoing COVID-19 pandemic has increased the number of people working remotely and forced the rapid adaptation of digital technologies in many business activities in Germany and around the world [15]. With the first version of the SARS-CoV-2 Occupational Health and Safety Ordinance (Corona-ArbSchV), which was intended to minimize the risk of infection with the SARS-CoV-2 coronavirus at work (§ 1 para. 1), contact restrictions due to the spreading of the COVID-19 virus employees were called to work from home as much as possible, and employers were forced to enable that. This option was only available for people whose professional duty is knowledge-based and with that virtualizable. Physical working people couldn't perform their work from a remote place. Therefore, the number of people that worked from home increased to around 25% during the first lockdown in April 2020 and January 2021 [13]. This is accompanied by the temporary approval of remote working regulations and the promotion of digitization and flexible workplace concepts in urban and non-urban areas (TD a).

Indirectly, the ordinance of the SARS-CoV-2 Occupational Health and Safety Ordinance (Corona-ArbSchV) should also relieve local public transport commuters and thus reduce the risk of infection in buses and trains. Therefore, the restrictions and measures taken by governments had a major impact on mobility patterns and flows.

3.1.1 Mobility

With the contact restrictions and the allowance of the employer and the equipment and online accessibility to data and systems of the company, from them as well or partly private owned equipment, knowledge workers could perform their duty from home. With that opportunity, there was no need to commute to the company's office anymore. As a result, car traffic on highways declined up to 50% around Eastern [16] and city traffic [17]. The government called people to avoid traveling: rail traffic also dropped by 85% in long-distance connections and 65% in regional connections [18] compared to the pre-pandemic numbers. Passenger air traffic drops by 97% [19]. Public transport falls to 37% in the number of passengers related to March 2019 in Frankfurt [19] (TD a).

The relaxing regulations after the first lockdown increase the road traffic again, more than the number of users in long-distance trains or public transport systems. It seems that people prefer the exclusiveness of car mobility to avoid contact with other people and reduce the risk of getting infected. The numbers of public transport users were only slightly rising again [20] (TD b).

3.1.2 Mental Health, Work-Life-Balance

The immediate obligation to work from home has developed different impacts on people's mental health and their work-life balance. If working people live in a single household they get isolated, one of the main targets of the contact restrictions, but is completely different if you live in a single household or together with a family. Especially the people who live on their own, were the first and main users of coworking spaces because coworking spaces offer them the opportunity to leave their homes for work, meet other people and avoid the loose loneliness of performing work from their apartment like freelancers. Coworking spaces offer a sense of belonging to a community and therefore enhance the well-being and mental health of remote workers that suffer from social isolation [21]. More importantly, coworking space users tend to receive emotional and social support from other individuals using the workspace [22]. With the disappearance of this opportunity and the general contact restrictions the situation for this group was getting worse (TD a).

If working people live in a family, e.g. with children which normally are visiting schools or the daycare, were facing the double duty of performing their work under unknown and hence challenging circumstances and taking care of their children and pupils. Especially for children and their parents, the situation was challenging, due to the higher supervision effort, in distance teaching. Parents have to organize their own duty online and support their pupils in receiving online lessons [23] (TD a).

With the easing of the contact restrictions, people could escape their isolation, and meet others in public, private homes, and on company premises. Coworking spaces were reopened with hygiene concepts [8] similar to traditional offices with disinfection, mask obligation, distancing, and reduced number of people using a room at the same time [24]. The contact with others isn't that intensive, as it was before without masks, close to others with hugs, cheering, together with many (TD b).

The situation for families depended strongly on the situation in school and/or daycare. If schools were operating again and taking care of the children, the situation for the parents was getting more relaxed, if not the pressure was still high under the demands of work, which were often back at the same level as before the COVID-19 pandemic. Some workers, who could or have not performed their work at the company's office and were stressed by the double burden of professional and private life moved their workstation from home to a coworking space nearby that had positive effects on their mental health (TD b).

3.2 COVID-19 and Its Impact on New Working Spaces (RQ 2)

In Germany, the number of coworking spaces stood at 1268 in May 2020 (Bundesverband Coworking spaces Deutschland e. V., 2020) and were mainly located in big cities and metropolitan regions. This claim could be confirmed by Vogl and Micek [6] who found in the mid of 2021 that around 50% of all coworking spaces are located in the seven biggest cities but also 19% are located in small regional towns or peripheral areas (8%) of Germany.

As already mentioned the COVID-19 pandemic and the governmental regulations led to a rapid increase in the number of people working from home [25] due to the high share of the knowledge-based workforce. Therefore, companies and public services enable employees to work remotely by providing equipment, devices, and remote working/access infrastructure. The contact restrictions didn‘t allow meetings and tenants stayed away. New working or coworking spaces were forced to shut down in the first lockdown and suffered losses. Applying rules for keeping distance and hygiene in the working space, the tenants gradually returned [26]. The massive gap between the contract duration of coworking operators and their tenants was seen as a high risk for the sector [27]. But during the lockdown, a new client group discovered opportunities in coworking spaces. Besides the typical coworker such as e.g. freelancers and entrepreneurs especially employees of companies who get anxious by parallel working-from-home and household duties (including schooling) evaded to coworking spaces. These new clients could partly replace a group of coworking space users which left with the lockdown and never came back to the coworking space [28] and may led to a growth of coworking spaces in more peripheral areas, where many people live (TD a/b).

Consequently, financial support opportunities were established by the European Union (LEADER—Liaison entre actions de développement de l'économie rurale), the federal government and state governments. In this context, the German Coworking Federation, in cooperation with deskmag (2022), conducted an online survey with operators of existing coworking spaces in the summer of 2020. The study found that 62% of the coworking spaces owners applied for urgent financial support in the wake of the outbreak of the COVID-19 pandemic, which nearly 40% rated as very helpful and 56% as somehow helpful. According to the findings it can be said that when help was actively sought and requested, the operators of coworking spaces were mostly satisfied with the support from the German government. Consequently, only 3% of the operators saw their financial situation as acutely threatening their existence during COVID-19 [29]. These findings are in line with Mayerhofer [8] who conducted a survey within the German Coworking Federation (GCF) from June to August 2020 and found that 46% of the respondents reported a satisfactory business situation and just 9% of the coworking space operators considered their situation as very bad and 29% as rather bad in June. Further, the investigation showed that the coworking space operators were optimistic at the beginning of the pandemic which changed with the imposition of restrictions and lockdown measures in April and finally turned back positive in June 2020 when the infection rates decreased, governmental measures were eased, and financial support was offered [8]. Besides, the study asked about the income situation and identified on the one hand an income decline of 36% and on the other hand, a decrease in costs of 18%, which is probably due to financial support and a reduction of personnel costs and energy consumption associated with unused workspaces. Further, the study showed a strong and loyal customer base. Consequently, the surveyed coworking spaces haven't claimed any contract terminations or discounts **(TD b)**.

After the first lockdown, the regulations got relaxed, but still with hygiene concepts of disinfection, mandatory FFP-2 masks, and distancing. It was possible to meet again in the office, but with a reduced number of people. The same was possible for new and coworking spaces, they could operate again, host workers, and give them the opportunity to meet others. Both spheres—the traditional office and new working spaces—were keeping and making use of the opportunities of remote and virtualized work, by installing remote work policies, online and hybrid meetings, etc. [30] **(TD b)**.

3.3 COVID-19 and Its Impact on the Real Estate Office Market (RQ 3)

Major cities in Germany were already suffering from rapidly increasing rents [31, 32] and real estate prices for years [33] due to the financial market and the swarm city-effect [34]. When it was realized how far-reaching teleworking was possible, the first forecasts were made for the housing [35] and office markets [36]. Some authors detect a trend toward rurality [37] even before the corona crisis, and their numbers increased during the last year [38]. Although rural dwellings are generally larger than urban dwellings, there is a growing demand for rural work opportunities outside the home, further intensified by the increasing number of remote workers due to the COVID-19 crisis. Since 2019, CoworkLand has been committed to spreading coworking spaces in rural areas, initially only in northern Germany but now all over the country. The concept of the commuter port is interesting. This concept combines a ring of coworking spaces around a metropolis and relieves commuter traffic [39].

Before COVID-19, Germany, the biggest office market in Europe, was with 3.85% of the global coworking stock considered the fifth largest and one of the fastest coworking markets in the globe [40]. The same applies to the office markets in general. With a total office space take-up of about 4.000 million m^2 in the big 7 cities, Germany shows the second highest value of the last 10 years in 2019. Especially Berlin as the “coworking capital” peaked with its office space-take up around 1.000 million m^2 in 2019 [41]. According to a report published by BNP Paribas Real Estate, this development is, among other things, due to increased demand in flexible workspace facilities [42], which is associated with the entering of global coworking operators in local markets that observed a growing demand of corporate users and the increasing common understanding of coworking spaces as a real estate investment opportunity [8].

As mentioned above the majority of coworking spaces are located in the large big cities of high importance for the national and international real estate office market. But surprisingly, almost 20% were located in small regionally-focused towns with small office stocks and insignificant lease take-ups per year [6]. This shows that aside from the big cities also the secondary locations of low importance for the national and regional office market are attractive for coworking operators.

The implemented regulations to stem the spread of the COVID-19 pandemic affected the office market and therefore the predicted growth of coworking spaces. Thus, most of the studies expected negative effects on the coworking sector that went from lower growth rates to a diminishing number of coworking spaces. Besides, the German real estate office market had a difficult fight on its hands in 2020 because of the restrictions and the associated changes in working life. Thus, the office space take-up dropped sharply to about 2.500 million m^2 to their lowest level in 10 years in Germany (TD a). In 2021, the downward trend has slowly stabilized and the office take-up dropped back with 3.110 million m^2 to the same level as 2015 [41] (TD b).

4 Summary

Restrictions have hit the coworking sector hard at first, but only for a short period as financial support opportunities helped coworking space providers and a new type of coworking space users were found. With the trend that people tend to move out of inner cities and the separation of private and professional life, coworking spaces in the outskirts and hinterland of cities or more rural regions new locations of coworking spaces are more likely to become a substantial way of coworking.

With the contact restrictions, commuting to offices was reduced and coworking spaces close to employees' homes became an attractive alternative for remote workers which is in line with findings from other studies [43]. Driven by these changes and supporting systems, the development of coworking spaces in peripheral locations as well as the subletting of unused workspaces in corporate premises has led to the growth of coworking spaces in non-urban areas [43, 44].

4.1 Conclusions

4.1.1 Outlook of Work, New Working Spaces, and Real Estate Office Market in the Post-COVID-19 Area (TD C)

Work

The COVID-19 crisis gave a boost to remote working [45]. When people were called to work from home as much as possible, and employers were forced to enable that, the number of people who worked from home increased rapidly [25]. Many people preferred to continue remote working even after the restrictions were lifted [46].

As a result of the developments and the expected change in the way of work in some sectors and the public sector, forms of telework according to § 2 para. 7 sentence 1 of the Workplace Ordinance (ArbStättV), mobile working and home office regulations combined with trust-based working time are now integrated into employment contract regulations or in company and service agreements. Further, the

Federal Ministry of Labor and Social Affairs has launched a legislative initiative for a legal regulation on mobile work to promote and facilitate remote work [14]. The draft is currently being reviewed by the individual federal ministries.

Mobility

The numbers of road traffic and public transport systems are back to the levels from before the pandemic. In the meanwhile, other measures like the 9-Euro Ticket (a ticket that allows to ride all public transport services and regional trains for 9 Euro per month—only June, July, and August 2002) were implemented to facilitate commuting and reduce travel expenses. But it seems reasonable that, without the virtualization of meetings and other remote work options, mobility demand would be higher than now. Remote work enabled people to work from other places than the company's office. This trend has already started, before the pandemic and only a few got the opportunity to make use of it. Due to the experience of the pandemic, more companies and people could make use of it.

Mental Health, Work-Life-Balance

In the long run, a growing share of remote work provides several options to be regarded, depending on the perspective and the share of remote work. It will be an issue for companies to keep in touch with their remote working employees for several reasons. Firstly, the level of cooperation within teams has to be kept high, and communication—formal and informal. Secondly, Employees want to be regarded, not observed—more to say—employees want their work to receive attention from the management and leader. Thirdly, avoiding the daily commute could save the time of the employees, which they can invest in their family, friends, the job, or voluntary tasks at or close to their home. Maybe the decision for the place of residence could be taken disregarding the employer's location. Current job offers suggest this option. Some freelancers took the opportunity to work from where they wanted even before the pandemic. It is imaginable that this kind of work will increase more due to a broader acceptance of remote work.

People who get anxious by parallel working-from-home and household duties (including schooling) evade this source of stress by entering coworking spaces. On this matter, many authors predict a boom in coworking spaces after the pandemic crises [47–49].

Real Estate Office Market

From a long-run perspective, we have to look into the future, but it seems as if the trend of remote work and access to data, systems, and services, hybrid or online meetings will continue for several reasons, firstly, professional life is easier to organize. Not everyone on a team has to be at the same place to collaborate. Secondly, employees are saving time and money by working and cooperating with colleagues remotely. Thirdly, companies are saving money if employees do not have to be posted for a project to a remote branch office. Fourthly, companies can decrease their rental costs by reducing the footprint of the office and running desk sharing policy, and enhancing the creativity of their employees by creating corporate coworking spaces concepts.

New Working Spaces

Future predictions of a shift in the use of coworking spaces by corporate remote teams frequenting coworking spaces for their weekly meetings outside of their usual home office [50]. This may further contribute to the growth potential of the German coworking scene, adding to the initially outlined changing perception of flexible office space in the German real estate market.

The phenomena called "Entgrenzung der Arbeit" [51, 52], that comes along with work which is performed remote and hybrid, leads to some new types or models, which partly combine work and life, such as *Coliving*, *Hoffice* (combining ho-me and o-ffice) or *Corpoworking*, and *Corporate Coworking* [53]. These new modes could provide opportunities to renegotiate the relation of time and space as well as work and life.

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Working (and Living) During Corona Times and Implications for Planning and Mobility—The Case of Norway

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1 Introduction

The COVID-19 pandemic has impacted our society and economy. Within the current debate, experts and non-experts have discussed about social, economic and cultural effects, both short and long-term, on our metropolitan regions and rural areas. This has been also the case of Norway, in which one can see the high degree of interests among academics, stakeholders, journalists, and other media, including several interactions between them.

At the time of the pandemic, between the first and second wave, several scholars predicted that the lock down could have created permanent changes to the ways in which people live and work (see for example Florida et al. [1]; Becken and Hughey [2]). Various studies have been conducted in the Norwegian context, including cross-comparison analyses, to explore the future of work from different perspectives such as urban planning, mobility and quality of life (see working from home in the cases of USA, UK and Norway studied by Wethal et al. [3], virtual co-working and remote working in Estonia and Norway, explored by Sinitsyina et al. [4]; 15'–10' city concept and new working spaces examined in Norway and Portugal, in Di Marino et al. [5]; multilocal working in Norway and Finland illustrated by Di Marino et al. [5]. These comparative studies have helped to further frame the implications of COVID-19 at the national and local level in Norway, as well as differences and similarities across some European countries.

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In Norway, governments restrictions and recommendations during the pandemic have generated some changes affecting the economy, working life and educational sector, as reported by CEDEFOP [6]. The COVID-19 has caused new housing demands (for example, requests for larger dwellings with private gardens) [7], increase in using (electric bike and electric scooters, as well as private cars, and consequently, a significant decrease in commuting by public transport [8]. Simultaneously, people have visited more frequently those parks and other public green spaces closer to home [9] as well as multifunctional and flexible spaces in their own neighborhoods [10–12]. Some of these trends are still visible after two years, and some predictions on how these trends will influence planning and mobility are being discussed among scholars, policy makers and stakeholders [13, 14].

To summarize, Norwegians have been adapted to the national health measures and changes due to various waves, between March 2020 and March 2021, despite the above challenges. However, like other countries, government restrictions and recommendations have affected the ways of living and working of people. For example, after two years and a half of pandemic, the commuting from the municipalities of Viken county (Oslo Region) towards the City of Oslo is drastically reduced causing several effects. Among them, one can see an underutilization of office buildings, financial issues of public transport companies, proposal of new flexible travel tickets, and increase in remote working, as well as social isolation among employees.

To understand these new trends, however, it is necessary first to analyze the main impacts of the COVID-19 pandemic within the different waves. This would provide a basis for understanding the most tangible effects for our cities and transportation. Thus, the chapter discusses: (i) the main impacts of the COVID-19 on the Nordic context, considering the different policies adopted by the national governments; (ii) the principal effects of the COVID-19 and national measures in Norway and related changes to the ways of living and working; (iii) the most relevant implications for planning and mobility, and (iv) the current debate in the Norwegian society about the future of work.

2 Impacts of COVID-19

2.1 The Nordic Context and Trends During the Pandemic

In the Nordic countries, less people have been affected by COVID-19, compared to any other developed countries [15]. The Nordic countries approached the pandemic by adopting similar restrictions and shutdowns, except for Sweden which relied on voluntariness and self-regulation [15].

In the first and second wave, Norway, Denmark and Finland were able to keep the morbidity and mortality at a rather low level [16]. According to the scholars, this was associated to some degree with the immediate and rigorous lockdowns, low density, as well as citizens' belief in government and economic strengthening of businesses and workers supported by the oil fund (Holm Ingelsrud [16] referring to Ursin et al. [17]; Christensen and Lægreid [18]). Policy measures focused on limiting the spread of the virus focusing on personal safety and job security [16].

Above all, one of the most important contributing factors to the recession in 2020 was the household consumption. In general, all the Nordic economies recovered in the second half of 2020 and most of 2021, some of them surpassed the GDP-levels from before the pandemic [15]. Between summer 2021 and October 2021, the countries removed the restrictions, but after a while, the governments had to adopted new rules because of the spread of the Omicron variant of the Corona virus [15]. In this context, the restrictions affected the labour market of the Nordic countries, which for decades has been characterized by a high employment rate compared to other European countries. Unlike other crises, COVID -19 affected people some segments of the population, with lower level of education and mainly from the sectors of hospitality industry, retail, culture, leisure, logistics and tourism related industries [15]. The unemployment rate in Norway was relatively high compared to the past, but still rather low compared to the other Nordic countries. The employment rates have been even higher in the end of 2021 than they were at the beginning of the pandemic [15]. People from the above sectors were sent on temporary leave, but some of the Nordic countries adopted that system for short-term layoffs even before the pandemic. This helped the employers to retain their staff [15].

In addition, the pandemic has changed the movements of people in most of the Nordic countries. Figure 1 shows the impacts of COVID-19 on the closure of workplaces in the Nordic context as consequence of the national measures. Unlike Sweden, the other Nordic countries have implemented rather stringent policies. In the first wave, white collars, university teachers and other knowledge workers, were required to stay at home (while in Sweden, it was only recommended). Within the other waves, traditional workplaces and new working spaces were opened with some local variations, considering the hygiene measures and social distancing. However, the commuting across the municipalities and towards the biggest cities was not possible, and thus, most of the working activities, meetings and events were arranged virtually. In Norway and Denmark, the omicron variant severely affected the work life in the first months of 2021. In between the waves, people returned to the workplaces, but the average of workers was much lower than before the pandemic.

2.2 Impacts of the Pandemic and National Measures on Living and Working in Norway

At the beginning of the COVID-19 pandemic, the Norwegian policy measures focused first on limiting the spread of disease, while immediately after on containing economic effects and social costs of the measures (Ingelsrud [16], referring to Ursin et al. [17]). On 12 March 2020, the Norwegian Directorate of Health decided to close

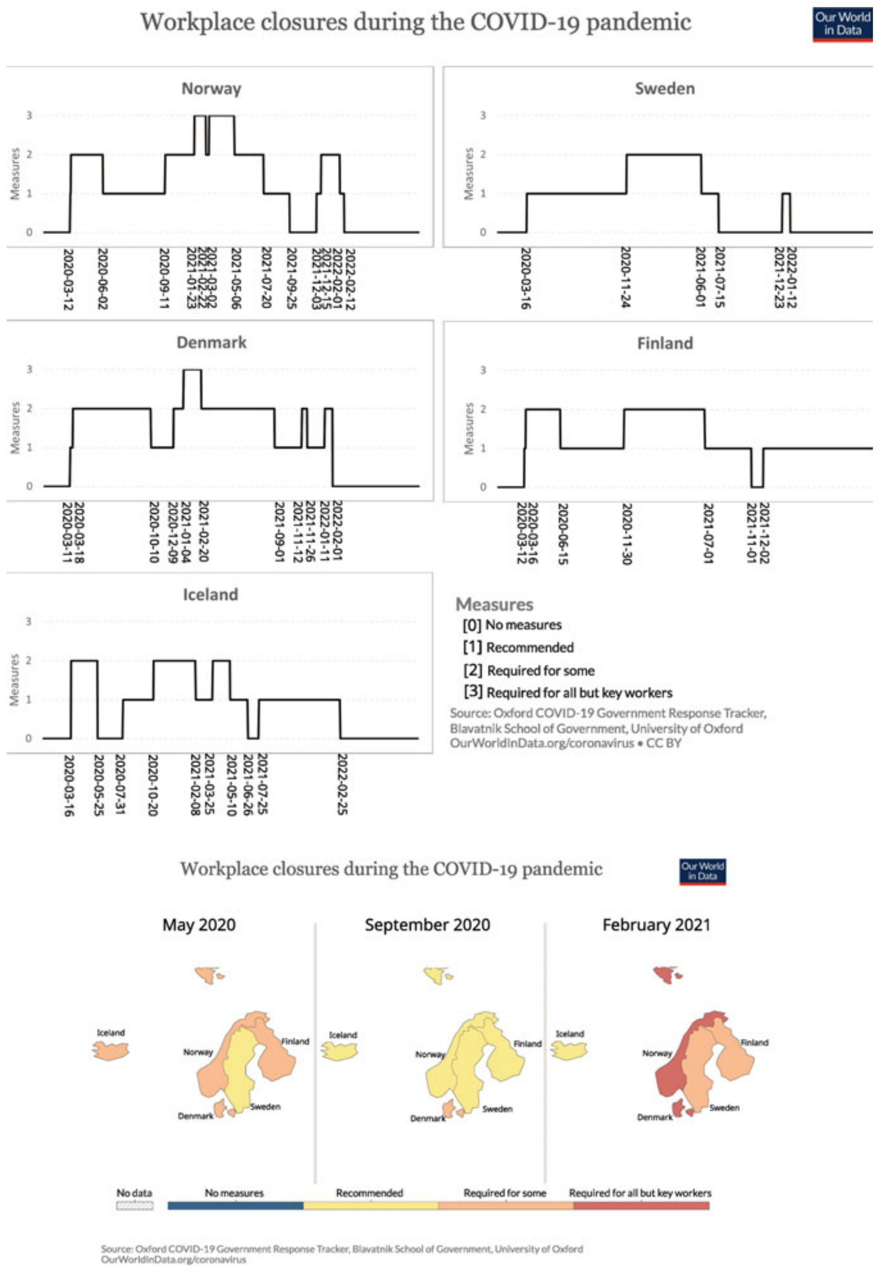

Fig. 1 The closure of workplaces in the Nordic countries. Graphs and maps. Data extracted from *Our World in Data. Source* Google Maps, COVID-19 community mobility report

all education institutions at all levels [6]. On 21 March 2020, a temporary Coronavirus Act was approved by the Norwegian Parliament to mitigate the consequences of the pandemic [6]. In addition to schools, quarantines were introduced, and restaurants and bars had to close [6]. Schools reopened in April 2020, while people were still recommended to work from home. The measures affected all those industries and businesses (e.g. retail, travels, hotels, restaurants) where social distancing was not possible. At that time, gatherings were kept at a minimum, while sports and cultural arrangements could not be arranged [6]. Social distancing rules and hygiene measures underpinned by law have affected Norwegians within the various waves. The number of visitors of certain locations such as grocery store, parks, train stations, retail and recreation, workplaces and residential units, shows the changes to the ways of working and living during Corona Times.

For example, the time spent in the parks has dramatically increased in several phases of the pandemic, considering the travels limitations among the municipalities and other restrictions (such as gathering in indoor spaces). Very few people have used the public transport during the pandemic (Figs. 2 and 3).

This factor is very much related to the large number of remote workers (from home and/or from other place than office). Some positive trends related to the use of public transport were observed in June 2022, and again, in August 2022 (with the opening of all levels of education) (Fig. 2). Nonetheless, Ruter and Vy (the two agencies of public transport in Olso and Oslo Region, respectively) have promoted several campaigns for attracting more passengers. At the time of writing of this

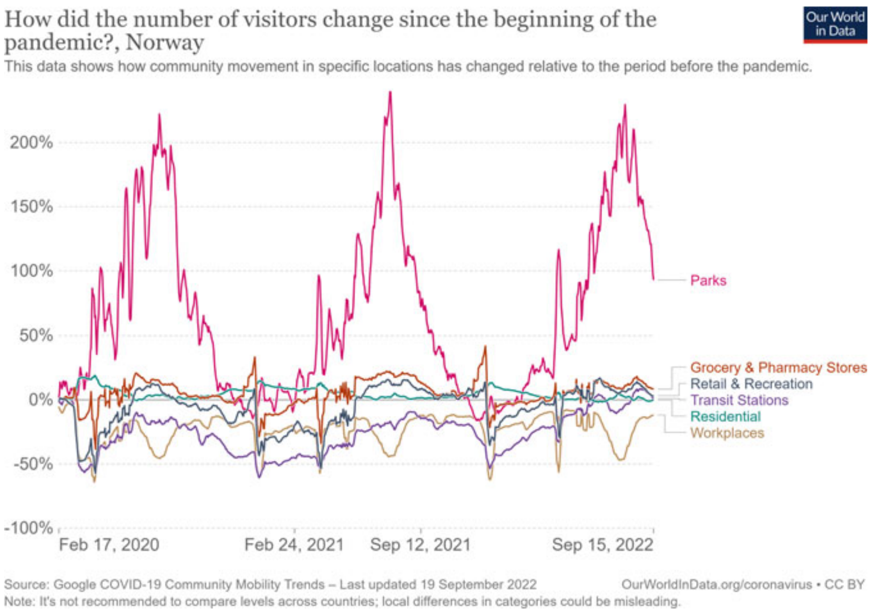

Fig. 2 Number of visitors of different locations in Norway

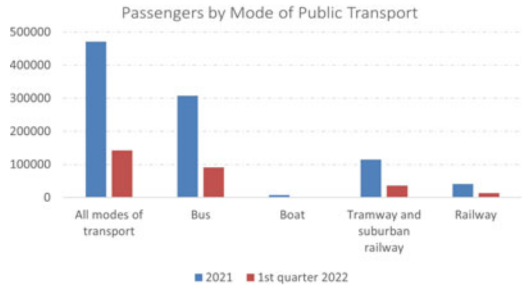

Fig. 3 Passengers by mode of public transport 2021–2022, Norway. [19] *Source* Data Statistics of Norway

book chapter, the city council of Oslo approved a budget of 200 million kroner to make the costs of public transports 20% cheaper [20]. A flexible ticket is thought to be combined with other modes of transport (cycling and walking) and new travel patterns related to home office. This means that a monthly pass will be cheaper if people choose public transport more than 21 times per month.

2.3 New Working Trends During the Pandemic in Norway

Within the waves of the COVID-19, despite the above challenges, knowledge workers in Norway had a capacity to adapt quickly to the changes and work remotely for several reasons. The capacity of remote working (working tasks that are manageable remotely) in Oslo region is rather high [21]. In addition, remote working (so-called *hjemmekontor*) has been a working practice rather established among Norwegian employees, and already before the COVID-19 (ca. 37%, [22]). To this end, it is important to mention that, over the last two decades, a large flexibility at work has been observed in Norway, and this is relatively higher compared to other European countries. Among the factors which have supported this phenomenon, one can see the flexible organization of work since the 2010s (see Eurofund [23]), the high degree of digitalized working practices, as well as the dominance of tertiary industries which represent today 78% of the working population in Norway [24].

Furthermore, during the pandemic, the moving out of the city of Oslo to the neighboring municipalities and rural areas has been documented by the statistics of Norway [19, 24, 25]. This has determined an increasing cost of the cabins and other second homes [25], as well as growth of remote workers (until 60% for some managers and other knowledge workers) [22]. In this context, new working spaces such as public and private CSs, public libraries, coffee shops, second and third homes (such as rented apartments in the cities and cabins, so-called *hytter* in Norway), have been increasingly used as alternative places to the office during Corona Times. The growth of CSs and increased use of public libraries were observed as follows.

New proliferation of private CSs, which are managed by large real estate corporates (such as REGUS in partnership with SPACES) [26], and emerging independent CS in urban and rural areas [11] have characterized the Norwegian context. According to Union [26], which consists of specialists which deliver measurable results in asset management, commercial brokerage and analysis, there has been a significant growth in the demand for flexible office spaces in the last six months, especially hot desks (ca 25% more of members of coworking spaces, compared to 2021). However, in the same temporal window, the supply-side growth of flexible offices has been rather low, thus, the occupancy of these workspace is currently at 80% and increased by 13% compared to 2019 [26]. These trends show a positive development that may continue, considering the reopening of all businesses, the higher employment growth and more people choosing flexible offices [26]. Public and private CSs closed only between March and May 2020. After that, some CSs in the City of Oslo turned into digital services and activities, some of them adopted hybrid forms (both on-site and on-line). On the contrary, in small and medium municipalities, those spaces were mainly open, and it was observed a growth of CSs. According to our data, twelve new working spaces opened around the country during the Corona Times. In addition, 22 CSs in Norway were supported by national funds, for a total of 5.000.000 € [27]. This budget supported new investments in technology and/or innovative projects among the CSs.

During the second wave of the pandemic in 2020, through an informal talk with two managers of Deichman Bjørvika (the central public library of Oslo), we found out an evident growth of users in several public libraries of Oslo, seen as places to study and work. People used to book a single study room or a meeting room for several purposes, as well as occupy other places around the public library. Based on the managers' perceptions and our preliminary evidence about the impact of COVID-19 [10], we can assume that the public libraries were rather crowded considering various factors. For example, people did not have an extra room at home, and/or they could not concentrate on working tasks (due to the presence of children and the spouse). In other cases, students could not go to the universities since they were closed, whereas the commuting to and from Oslo by public transport was not recommended because of the high rate of infections in the capital. Moreover, numerous offices were not enough spacious to keep the hygiene measures and social distancing.

3 Implications for Planning and Mobility

The above trends have partially impacted the housing demands, the modes of transports, and the requests for more hybrid spaces in the cities. 40% out-migrants from Oslo have moved to the neighboring municipalities such as Rælingen, Lillestrøm, Nordre Follo, Lørenskog, Nesodden, Nittedal, Asker and Bærum (in Viken county: the Oslo Region) [7]. The data show that there is an increasing demand for larger dwellings and less close to the city centres [7]. People desire more space, and we can assume additional room for home office and gardens. It is important to mention that, since the 1990s, the compact city model has been practiced in urban planning and developments of Oslo **which is rather monocentric, while more recently, the Oslo Region has focused on a polycentric development** [28]. The latest densifications have prioritized community spaces rather than private gardens. During the pandemic, those people with less access to private green were more vulnerable considering the restrictions of mobility and gathering. Furthermore, studies conducted under the pandemic have shown that some new working spaces in Oslo have become active centres of the neighborhood, for both workers and residents, by providing services which supplement the amenities of the surroundings (see the cases of Gamlebyen Loft, Mesh Youngstorget, and SoCentral in Di Marino et al. [11]). This calls for a new understanding of hybridization processes within the built environment and multi-functionality of urban spaces, including working functions, from a wider interdisciplinary perspective (e.g. planning, architecture, mobility, sociology, information technology and economy).

4 The Current Debate in the Norwegian Society

There is an ongoing debate within the Norwegian society about the future of work, in which, as scholars (and MC Members of the COST Action CA18214 -The Geography of New Working Spaces and Impact on the Periphery'), we have been involved (see for example national and local seminars, workshops, and interviews for various newspapers). During Corona Times, in the seminar organized by the official practitioners of Oslo and Viken County (*The role of retail in sustainable urban development, Oslo municipality with Viken county*, March 2021), we were invited to explain the role of new working spaces in revitalizing the peripheral and rural areas, considering the decreased commuting towards Oslo city, the less vitality of big city centres, as well as new people's habits. In this seminar, we focused on the new opportunities to choose other working spaces, in addition to home working (*hjemmekontor*), which is rather culturally accepted in Norway. We also discussed about the relevance for vibrant city centres and services in smaller municipalities which are chosen by remote workers. Furthermore, a journalist asked us to comment the raise of digital jobs, as well as hybrid forms of working. Within the COVID-19, some businesses in the cities had to close (such as training centers and hairdressers), and thus, some people moved to more dispersed areas and their cabins to reinvent new jobs. This was the case of some digital trainers. Other journalists were interested in understanding new possibilities for working over prolonged time from the cabins (*hytter*) or from abroad such as Spain, one of the most popular holiday destinations of Norwegians. Thus, we explained advantages and disadvantage of flexible working, such as more freedom to choose new working spaces and travel, on one hand, and more social isolation from the working environment, on the other. Then, by arranging a national workshop (in Lillehammer, November 2021,) with local stakeholders and other experts, we contributed to the current debate by showing the growth of new working spaces across the country, including emerging working trends. We also reflected on the strategies for rural and regional development of new working spaces in Norway, since circa 45% of them are located in small and rural municipalities. To conclude, further interactions and collaborations among policymakers, experts, media and citizens are relevant to the societal and scientific debate on the ways of working (and living).

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Not Going Back to the Office any Time Soon: Coworking Spaces in The Netherlands

Martijn Smit, Veronique Schutjens, and Aleid Brouwer

1 The Pandemic in The Netherlands

The Netherlands was hurt similarly to most other Northwest European countries in the first wave of the pandemic: an initial peak in March 2020 (see Fig. 1) led to a lockdown of public life, with all schools closed and everyone working from home as much as possible. In May and June 2020, measures were gradually released. Although commuting was still officially discouraged, public and private transport use rose gradually, with road traffic intensity regaining its usual intensity by week 30 (late July; [1]). The second wave hit the country starting in late September 2020, leading to a (smaller) lockdown, with schools and shops staying open but restaurants and other public facilities closed. Public transport was slightly reduced in late October 2020. However, in December 2020 the country went into a second full lockdown, even stricter than the first, as also non-essential shops closed down. Just as in the spring of 2020, working from home was the norm.

This second full lockdown lasted until April 2021, when the restrictions were gradually lifted. Shops and terraces opened, and schools, the latter enabling many workers with smaller children to no longer work from home every day. The Dutch

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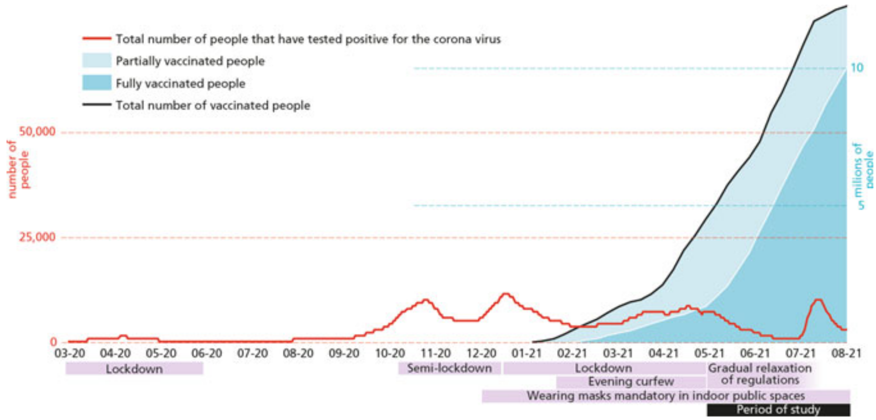

Fig. 1 Overview of lockdowns and infections in the Netherlands, early 2020 to mid 2021. *Source* Visser et al. [2]

vaccination program started in January 2021 and reached a 73.1% vaccination rate in August 2021 (Our world in data, 2022).

2 Coworking Spaces and Other Third Places

In the public discourse regarding the effects of the pandemic on Dutch society in general and daily life in particular, working in "third spaces" was rarely an issue. Most news items as well as policy advice focused on the rediscovered possibilities and problems relating to working from home [3–5]. In fact, coworking spaces (CSs) had closed down during the first wave without particular attention in the press and did not gain particular attention when measures were gradually released in the late spring and summer of 2021 and onwards. Since the pandemic, the average number of hours worked from home has doubled, and now stands at 6, 5 h per week [3]. Yet provincial development plans ("Omgevingsvisie") are slow to incorporate these trends, and even where stimulating working from home is now on the agenda in some provinces, coworking spaces are not.

Non-profit "third spaces", such as coffee shops and libraries, were probably used more as replacement offices in the denser cities, where housing space is more restricted. There is little data available to investigate this hypothesis (but we will be able provide some in §4, below). Official regulations simply emphasized that working from home should be the norm [3]. However, we should note that the Netherlands has always been the leader in remote working [6], but not in CSs. These have mainly been of interest to self-employed, for whom the pandemic was also an advantage: "the normalisation of the virtual office has made it easy for freelancers and small business start-ups to operate without the need for dedicated office space" [6, n.p.].

During the first Dutch lockdown, CSs suffered from a drastic reduction in demand for the rental of meeting rooms; on the bright side, regular employees increasingly found a place at coworking sites [7]. Not long after the start of the pandemic, the first sounds were heard of increased appreciation of the lower densities the countryside has to offer—both as a short-run effect of avoiding the now dangerous density of the city and because of a renewed appreciation of space, particularly garden spaces [8–10], while prices in the core cities remain high. Such a development is in line with international developments [11]. Rather than a general dislike of urban living, a simple expansion of telecommuting options might also spread welfare more evenly and give peripheral regions a much-needed boost [12, 13]. In combination with developments in the re-organization of offices, where large central offices may be on the way out, this may mean an increased interest in regional hub offices, which could take the form of shared CSs.

3 The Effects of the Pandemic on Spatial Distribution of Living and Working—Did the Dutch Periphery Benefit?

Although data is scarce, there are some indications that recently a redistribution of population is taking place in the Netherlands. Whether this is due to the pandemic or to the steep increase of housing costs in the Randstad (the core economic center of the Netherlands) is still unclear. Figure 2 suggests that post-pandemic (2021) migration flows away from the Randstad, the Dutch core area, do not lead to a population increase in peripheral regions [14]. Instead, the areas surrounding the Randstad are more in favor, which points at longer commuting distances. Larger commuting distances can be compensated by [14] fewer workdays of travel to and from work, which to date remains the norm for many larger employers. The website of the Ministry of Social Affairs and Employment reads that the cabinet calls on employers (with over 10 employees) to make agreements with employees to permanently encourage hybrid working [15]. Also, employees can request their employer to work entirely or partly from home. TNO reported in late 2021 that 72% of employees expect to be allowed to continue working from home, and 25% have made a formal agreement; moreover, 43% of employees wishes to work as much at home as on site [16].

However, when investigating the impact of a working from home advice, one should consider the fact that the Netherlands has a fairly high proportion of self-employed people, compared to other European countries [17]. The recent rise of self-employed "can also be seen in light of the growing presence of the third place as a work location" [18], given that self-employed and freelancers are key users of coworking spaces [19]. In addition, flex work (temporary work) and parttime work was and is relatively common in the Netherlands: the parttime employment rate

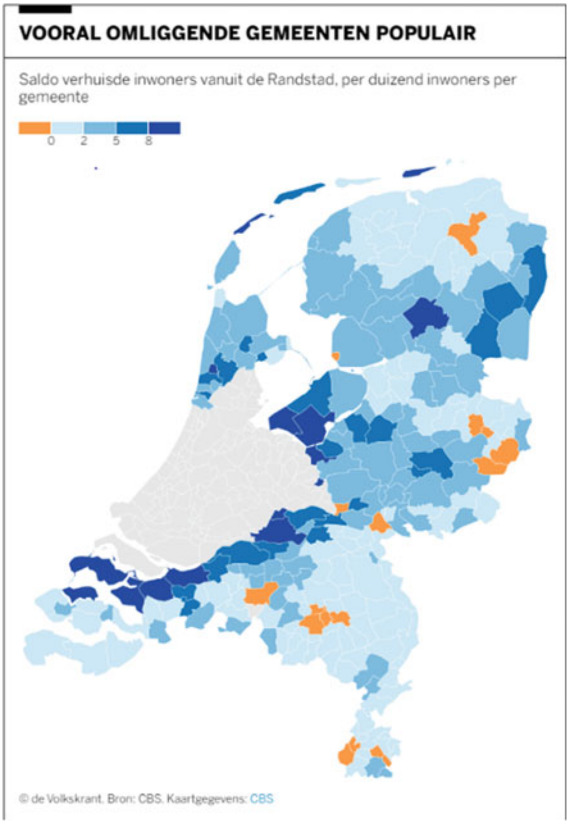

Fig. 2 Net migration from the Randstad area to other municipalities, per 100 inhabitants per municipality (Hofstede [14])

is 36%, versus 16% for OECD, while the temporary employment rate (including freelancers) is 27.4% for the Netherlands and 11.8% for OECD as a whole [17].

This peculiar labour market structure might both mitigate *and* enforce the impact of both pandemic and its related regulations. On the one hand, already before March 2020, many people worked not at the workplace at all, but instead parttime, or temporarily, from home and/or at a (shared) workspace. The pandemic only strengthened this pattern. Due to the pandemic those firms who were not yet set in more hybrid mode did change this now. Compared to before the pandemic, the possibilities to meet online have doubled from 52% in 2019 to 94% in 2021 and nearly all companies offer working from home facilities (increase from 85% in 2019 to 96% in 2021). The number of firms that offers more flexible 'office-hours' also increased from 83 in 2019 to 86% 2021 [20].

In the pandemic, several businesses started paying (more) attention, or in some cases expanded their attention to the mental health of employees. In particular, labour union FNV published (together with political parties from different sides of the spectrum) a call to guarantee the right to work from home [21]. Many studies have been done in the 2020–2021 period on the effect of working from home on workers

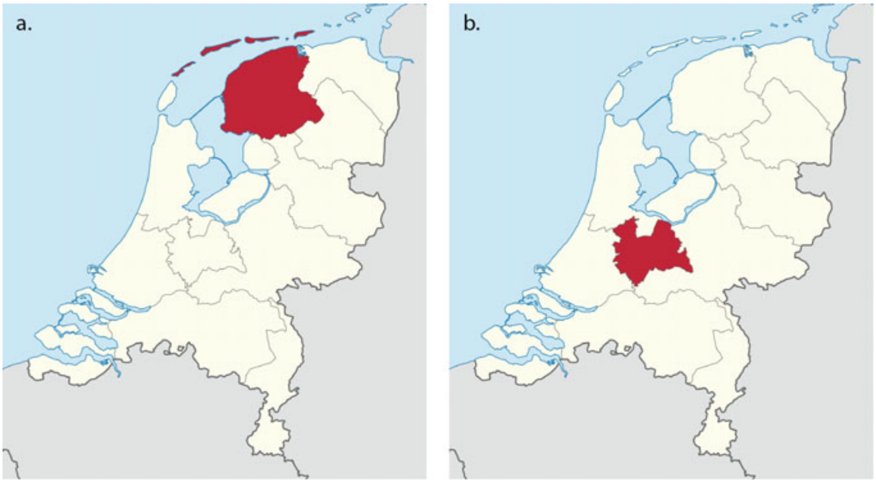

Fig. 3 Provinces Friesland (a.) and Utrecht (b.) in red *Source* Wikimedia commons

themselves. Some find negative effects for prolonged working from home, such as diminishing intrinsic motivation and lack of connectivity (among others [22]) and others find more positive effects such as growth in autonomy and agency (e.g., [23]). So, even though the experiences with working away from the office are moderately positive, also in the Netherlands, it is unsure if the guarantee for the right to work from home would pave the way for more CSs in general and in particular for more peripheral areas in the Netherlands? Unfortunately, a map of Dutch CSs does not exist yet, although various data sets are available, albeit not all up to date. Therefore, we have to take refuge to own data collection in two contrasting Dutch regions, which we briefly present below. As a base line measurement was lacking, we were unable to include changes in CSs presence over time.

4 Spatial Distribution of Coworking Spaces in Two Contrasting Dutch Provinces

Friesland[1] is one of the Northern provinces of the Netherlands (see Fig. 3), and in the rather densely populated Netherlands it is considered 'rural', with a population density of about 200 inhabitants/km^2. Its capital city Leeuwarden (ca. 125,000 inhabitants, 2022) is very much a regional centre of amenities, with museums, hospital,

[1] The field research on Friesland, on which this section of text is based, was performed in the spring of 2021 under the guidance of dr. Schutjens and dr. Smit by Floor Roll, Boris Beije, Arne Eijgenraam, Sterre de Rooij, Merlijne Hermans, and Noa Eijgelshoven. The authors thank these students from the honours programme at UU for their work and enthusiasm.

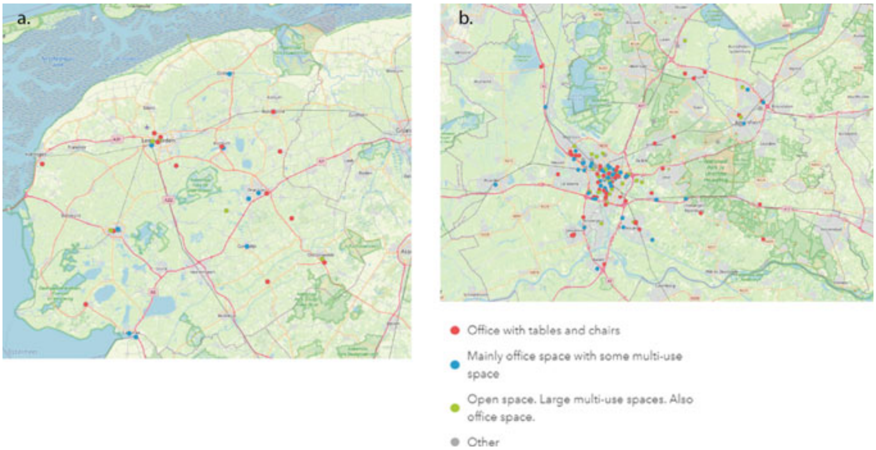

Fig. 4 Coworking spaces in Friesland (a.) and Utrecht (b.)

banks and other companies and two Universities of Applied Sciences. Leeuwarden is regarded the centre of activities for many residents in the province of Friesland.

Coworking spaces are available at different types of locations in Leeuwarden. In 2020, there were 6 operational coworking spaces plus one under construction. However, of these six coworking spaces, three were multicompany buildings, located on industrial sites at the city edge; the one under construction was of a similar type, but located more centrally. The others are located in the inner city and conform more to the ideal type of shared coworking spaces.

For the province as a whole, the pattern is similar, with multicompany buildings located on industrial sites but sometimes in town centers (Heerenveen, Drachten) and in two cases in a residential neighbourhood of a large town. 'True' coworking spaces are few, but they are invariably in town centers, not in the periphery of this already peripheral province. Figure 4a shows the distribution of all 29 spaces as gathered through a web search.

By way of contrast, we look at the centrally located province of Utrecht (see Fig. 3b), which forms part of the Randstad conurbation. At half the size of Friesland, it has over double the population, with a population density of ca. 1000 inhabitants/km^2. We found a total of 240 coworking spaces here, shown in Fig. 4b.[2] A large part is concentrated in the eponymous capital city of Utrecht, with a smaller cluster in Amersfoort (25 km to the East). Here, many different types are present, besides multicompany buildings: there are serviced offices, fablabs, makerspaces, creative spaces, and 'pure' coworking spaces, as well as combinations of the above. We see four reasons for this contrast. Firstly, the phenomenon of coworking spaces is still in a growth stage [24], and this growth starts in the 'core' urban areas, spreading only later to the peripheries. We see this core-periphery split both at the national level

[2] Data were gathered initially by Casper Leerssen in 2019 and updated in 2021 by the team mentioned in the previous footnote.

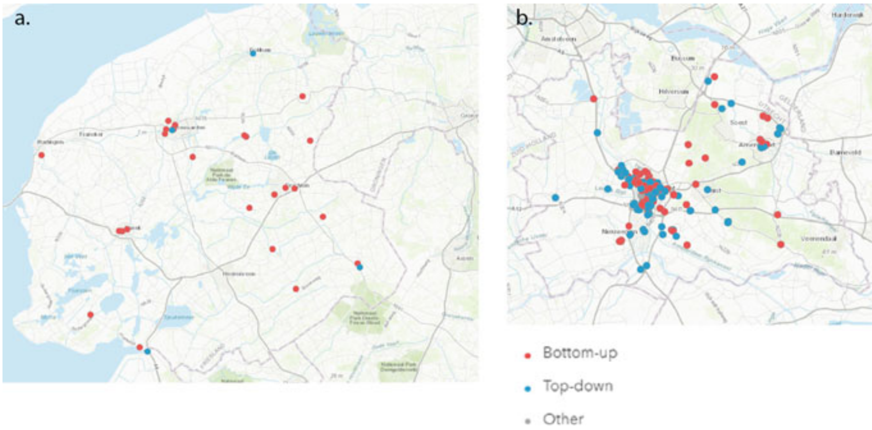

Fig. 5 CSs in Friesland (a.) and Utrecht (b.) by organizational type

(Utrecht first, Friesland follows) and within provinces: in both cases, the countryside and villages lack coworking opportunities (in line with [25]). Secondly, the economic activities of Utrecht (city and province) lend themselves better to coworking spaces: creative and innovative activities are more present in Utrecht than in Friesland (cf. [26]). Thirdly, on the user's side, the housing situation is less dire in Friesland than it is in the Randstad area (and in many cities around the world—[27]), meaning even many of the true creative class [28].

Apart from the classification by type above [29] we looked at the organizational aspect of coworking spaces. There are many small, 'bottom-up' initiatives, often local, sometimes socially responsible and/or non-profit. Just like in any growth market, larger companies form or enter the market, and these have advantages of scale. Following [30] we have therefore classified all observed spaces as bottom-up (her CS1) or top-down—where we mean both her CS2 of government-sponsored individual sites as well as commercial sites, which Fiorentino calls CS3. These are shown in Fig. 5. Interestingly, in Utrecht almost half the spaces are top-down, while in Friesland almost all spaces are bottom-up. Interviews[3] in the field in Friesland confirm the identification as bottom-up; most owners are either local or strongly attached to a local space. Whether this had a positive impact on the surrounding area (as suggested by Fiorentino et al. [30] and identified by Berbegal-Mirabent [31] as the leading topic in coworking research) is unclear, interviews in the field do not indicate a specific local impact.

[3] Interviews were performed 'on the fly' whenever suitable operators or workers at a coworking space were encountered. A topiclist and full report of the interviews are available upon request.

5 Conclusion

The spatial distribution of CSs in the Netherlands closely follows demand by both workers and employers, and therefore also population density. In more peripheral areas, bottom-up initiatives are the norm, while in a more central province also large CSs organizations are active. There is no evidence of the pandemic changing the location choices of CSs nor of their tenants, except for a temporary decrease in demand for CSs during the lock-downs and the closure of a number of CSs due to loss of clients. As the Netherlands traditionally counted many workers already working from home or in third spaces, we expect the effect of the pandemic on working patterns in the Netherlands to be less pronounced than in other countries. Working from home is here to stay!

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Narrations of the Countries in Eastern Europe

The Effects of the COVID-19 Pandemic on the Coworking Spaces in Poland

Grzegorz Micek, Karolina Małochleb, Katarzyna Wojnar, and Maciej Smętkowski

1 Introduction

Since March 2020 COVID-19-driven reduction of contacts and consequently human mobility, reduced the intensity of use of offices. It has led to the enhancement of dynamic capabilities [3] of CSs. During the pandemic, CSs (including their customers) have had to increase their capacity to create, acquire and process knowledge and other resources.

The course of the COVID-19 pandemic in Poland was slightly different than in most European countries. Except for the first wave of the COVID-19 pandemic, the anti-COVID-19 regulations were relatively moderate. Hence, the impact of the COVID-19 pandemic on the coworking sector in Poland has been relatively limited with decreased dynamics of space development [7]. After the first outbreak of the COVID-19 pandemic, CSs in Europe and, in particular in Poland, have become the new normal and attracted new users who wanted to avoid isolation, skipping longer commute [8, 9].

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The aim of this chapter is to summarise the results obtained in previous research conducted in CSs in Poland [6, 10, 13], in particular in Warsaw. Based on our research, we would like to address the following questions:

- What has the resilience of the CSs sector in Poland been like during the pandemic?
- How has the real estate market impacted the CSs sector during the pandemic?
- How has the impact of CSs on local milieu changed during the pandemic?

2 Research Methods and Data Sources

In the chapter, we used a triangulation of sources and methods. First, primary sources have been used that include:

- longitudinal databases of CSs in Poland established in 2019 and permanently updated (last update: March 2022). It consisted of the essential characteristics (location, size, year of establishment, type of ownership, types of services offered) of CSs operating in Poland.
- the subset of the above-mentioned database of CSs in Warsaw (including e.g. location in CBDs).
- Data for these databases have been acquired from various sources including coworker.com, spacing.pl, sharespace.work, websites of CSs, sectoral (real estate) reports, etc.

Secondary sources include three types of interviews and covert participant observation (mystery shopping):

- eight online interviews that lasted between 30 and 90 min. Six of them have been conducted with representatives of open independently-run CSs in Warsaw between February and March 2021 [10], while two interviews have been carried out with key stakeholders with knowledge of the CS sector. The goal of the interviews was to identify the impact of the pandemic on the CS operations, mainly the change in scale and scope of events organized by and in CSs [10].
- four in-person interviews that lasted between 30 and 90 min with representatives of major corporate CSs in Warsaw carried out in June-July 2022. The interviews were focused on the impact of the pandemic, transformation of the location and business model strategies as well as urban impacts of CSs.
- 25 covert participant observations (mystery shopping) carried out between April and July 2022 in Warsaw, that included day-long structured observations and informal interviews with coworking members. CSs were selected according to business mode, location and size to represent the widest possible variety. The observations focused on the occupancy during different times of a working day, design and use of space, member profiles, behaviour, dimensions of proximity (social, cognitive, spatial, temporal) and surrounding audit.
- Computer assisted telephone interviews (CATI). The sample included the general population of over 300 CSs operating in Poland before the pandemic. We received

responses from 76 CSs reflecting the spatial distribution of CSs in Poland [6]. The interviews mainly focused on the effects of CSs on the social, spatial and economic milieu.

3 Results

3.1 Changes in the Size of the Coworking Sector

CSs open, grow and then close or decline after a couple of years. However, the COVID-19 pandemic has accelerated births and deaths of CSs. It has been observed specifically in the case of closures. The CSs sector has declined during the COVID-19 pandemic in Poland. Between March 2020 and February 2021 about 13% of CSs have been closed in Poland. In Warsaw, 25% of CS have been closed in the same time period [13]. The second half of 2021 and the beginning of 2022 have been milder in terms of restrictions what resulted in the opening of some CSs and limited closures of CSs. Smętkowski (2022) reveals that 20% CSs were closed in Warsaw between March 2020 and mid-2022. The same applies to the number of users. In summer 2021 and 2022, the number of CSs' tenants has grown in Poland [2].

The COVID-19 pandemic has not hit CSs equally. The independently-run (bottom-up) CSs have been most seriously hit. The number of opened independently-run CSs in Warsaw has dropped from 58 CSs in March 2020 to 36 in the beginning of 2021 [10]. Corporate (top down) CSs have survived the pandemic quite well. Moreover, some corporate CSs opened during the pandemic.

Our studies carried out in Warsaw revealed that a location in CBDs increased the likelihood of survival during the COVID-19 pandemic. The same supportive role has been performed by the good accessibility to the underground stations. Outside Warsaw, the pandemic has not impacted CS markets so much-much smaller shares of closed CSs have been reported (with the second largest share being in Krakow with about 10% of closed CSs).

3.2 General Situation in CSs (Anti-COVID-19 Restrictions, Fluctuations of Users, Public Support)

For the majority of the pandemic period, CSs have been open in Poland. Most of the spaces were not closed or shortly closed during the first wave of the COVID-19 pandemic in Warsaw [10]. In the first two waves, members of coworking spaces visited CSs less frequently. *After the first wave was established, people started coming more often, because they were fed up with sitting at home (I5).* To sum up, most of interviewees emphasize that the largest drops in the number of tenants were recorded during the 1st wave of the pandemic. In the next phases, some users began to resign due to the need to take care of a child, financial issues or the lack of need to rent a desk. However, in some spaces, there were tenants who did not use their desks but still paid for them.

With regard to measures taken by CSs to mitigate the COVID-19 impacts, some CSs provided new services for members. *An offer of "rotating use" has been introduced, where people working for the same company can use, for example, the same desk during the day, but for several hours. So one desk is sometimes used by 2–3 people (I2).* The majority of CSs introduced a price reduction for tenants for a period of three months for the rental of mini-offices. In some CSs, discounts have reached 20–50%. Another representative of CSs reveals *We often talked privately with coworkers so as to "agree" about the fees (I3).* At the same time, the prices for the virtual office service have increased.

CSs followed the anti-COVID-19 restrictions introduced on the national level. The number of people allowed in common areas has been reduced. The list of people who use the space has been introduced (with arrival and departure time) in some CSs. The state regulations obligated CSs' users to wear masks and apply hand disinfection. Rooms have been ventilated more often. Additionally, access to conference rooms has been banned or restricted to a short period of time during the first waves of the pandemic.

The most common public support for CSs has been the "Anti-crisis shield" (national support programme worth PLN 100 billion aimed at enterprises of different size in order to protect the labour market and provide companies with financial liquidity in the period of serious economic disturbances). A few CSs managed to obtain a non-returnable "loan for an entrepreneur" or a postponement of the social security contributions. CSs' operators have also attempted to negotiate a rent reduction from the owners.

3.3 Changes in the Impact of CSs on Local Milieu

The impact of CSs on local milieu has always been lower in Poland than in the most advanced European countries. Małochleb [6] has studied how the COVID-19 pandemic has impacted the spatial, economic and social milieu of Polish CSs. The COVID-19 pandemic has negatively affected the creation of the inner community, due to an enormous decrease of in-person events (a drop of 64% for internal events and of 80% for external events) [10] and an increase of virtual events [6, 10]. Share of external in-person events in the total number of events in independently-run CSs dropped from 13.6% before the pandemic to 4.6% during the pandemic [10]. We revealed that large in-person events have been replaced by limited scale events (some of charity type) organized mainly by co-workers, and not directly by CSs [6]. To sum up, the largest scale changes between the pre-pandemic and the pandemic period have been observed in terms of the number of events, the negative impact of the COVID-19 pandemic has been weaker with regards to the usage of local services [6].

3.4 Processes Impacting the CSs Sector During the COVID-19 Pandemic

Some trends identified in Western and Southern Europe are not observed in Poland. Coworkation in tourist areas is very limited to very few specific cases. There are almost no CSs in rural areas what is becoming a common trend in France, Belgium, Portugal, Germany or Switzerland [4, 11]. There are few locations in suburban areas and in small- and medium-sized cities. The reasons behind the very limited number of CSs is the lack of temporary migration to peripheries observed in the most advanced European economies and limited number of the creative class in the non-core areas in Poland.

Those are some of the processes in CSs that have been enhanced during the COVID-19 pandemic. At least two of them should be mentioned. First, the growing role of 'corpoworking' [3] is observed that is enhanced by a large resilience of the corporate CSs. Second, the hybridity of CSs' functions has grown during the pandemic. In Western and Southern European countries [4, 11], hybridity of CSs functions matters a lot for the CSs' resilience. The same applies to Poland.

3.5 Office Market and the CSs Sector: The Case of Warsaw

The office real estate market interacts with the CSs scene. It is clearly seen in the case of the capital city of Warsaw. The office real estate market in Warsaw was growing rapidly in the pre-pandemic period. The average annual supply of office space was around 250,000 m^2, albeit with noticeable fluctuations of between 150,000 and 350,000 m^2. The pandemic period, i.e. the years 2000–2021, paradoxically brought an above-average supply of new offices of around 300,000 m^2 per year. This was due to the finalisation of previously started projects and led to an excess of 6 million m^2 of modern office space stock in the capital. At the same time, the number and floor space of office buildings under construction decreased as a result of the pandemic. While prior to the pandemic, more than 700,000 m^2 were under construction each year between 2014 and 2019, by 2021 it was only 310,000 m^2, which was the lowest figure since 2010 [5].

Vacancy rate increased during the pandemic period, reaching 12.7% of office stock compared to around 8% in 2019. However, it was still lower than in 2014–2016, when it was 13–14%. In addition, as a result of the expected reduction in the supply of office space, a decrease in the value of this indicator is expected within two years. On the other hand, it should be noted that some offices, despite existing leases, were not used by tenants and were a reserve in the case of the need to increase the number of employees or of changes in the hybrid operating model. This did not apply to coworking spaces, which in 2022 were characterised by a very high occupancy rate, as confirmed both by a mystery client survey conducted in June 2022 and by reports from consultancy firms indicating a 90% occupancy rate for coworking spaces located in the city centre, resulting in higher rental prices [5]. Moreover, the CS market faced segmentation fuelled by capital and location advantages of corporate CSs located in the CBD in comparison to independent CSs (located mainly at the fringe of CBD and in vibrant urban quarters), that experienced a 45% failure rate. The former experienced a more stable demand assured by a stable core of corporate clients, central location, limited competition and immediate organisational adaptation to the pandemic reality. The latter proved to be less resilient due to a more vulnerable client base (freelancers and SMEs), higher competition, higher rotation rates and modest and less diversified office spaces.

4 Conclusions

The pandemic period was an extreme challenge for CSs in Poland [6]. They had to face external waves of shocks resulting from the anti-COVID-19 restrictions. Based on the above-delivered evidence, it must be argued that the majority of CSs have been resilient during the pandemic despite a decreased number of users. The CATI results reveal that the impact of CSs on usage of local services has only slightly changed during the pandemic. The major changes have been observed in the number of events.

The high supply of new space on the office market in Warsaw in 2020–2021 resulting from the finalisation of office building constructions started in the pre-pandemic period and favoured the development of corporate coworking concepts. This type of coworking has proven to be a particularly desirable type of office space for employees during the pandemic period due to the flexibility of lease agreements.

There are positive expectations with regard to the growth of the CSs sector. High interest in returning to the functioning from the pre-pandemic period is observed in CSs. Individuals are claimed to appreciate finding their third places that are close to their homes and classical offices [1, 12]. Media narrative [2, 12] goes for spatial decentralization of offices. It is illustrated by the increasingly popular hub and spoke model where the reduction of office space on fixed contracts leads to flexible renting of offices and CSs located in non-core urban areas [12]. However, in reality, this are rather rare cases of such a behaviour, rather than a rule of the large spatial dispersion.

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The COVID-19 Pandemic and Its Influence on Coworking Spaces in Slovakia: West–East Division

Eva Belvončíková, Lukáš Danko, and Oliver Rafaj

1 General Description of the COVID-19 Influences on Coworking Spaces

Common feature of the COVID-19 pandemic in Slovakia, regardless of the wave, was the fact that mainly walk-ins and temporary residence were primarily affected. Community managers had to modify the availability for regular members to avoid new contacts and ensure social distancing. This fact left coworking spaces (CSs) with very limited options to manoeuvre through community development and a variety of events that had been ensured before the pandemic situation worsened. Keeping the regulars was of highest priority to be sustainable in the long run, primarily taking turbulent development and restrictions into account. Most CSs were affected by restrictions to operate in a limited mode, without communal rooms (coffee and relax rooms) and with substantial expenses on hygiene (disinfecting open spaces). More importantly, they had to modify open spaces to keep social distance between workstations, or there were plexiglass installations to minimise direct contact in open spaces. At the same time, coworkers were allowed to work from home. Due to the COVID-19 spikes at winter time, shared spaces were a subject to instability. Limited economic opportunities for freelancers and digital nomads raised several concerns regarding an ability to afford paying for their place. CSs managers are also unsure

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whether mid and large companies are able to pay the invoices to CSs members who are their suppliers [8]. This happened to be likewise, the case for large companies and their plans to move employees to CSs for cost reduction.

Nonetheless, there was a certain shift to move employees to available CSs or forming their own internal collaborative spaces. The return, however, was preceded by weeks of preparation with intensive internal communication and, hand in hand with it, the preparation of the premises themselves. Managers of CSs had to ensure cleaning the premises, including tables, furniture or touch surfaces, installing plexiglass where it is not possible to leave the necessary distance, providing drapes or disinfectants to increase hygiene at open spaces—especially after the second wave. The trend will be to combine offices with open space. According to HB Reavis and their survey [9] companies and people need space for community meetings, where CSs play a vital role. The survey revealed that large companies would now take advantage of available coworking space close to the company rather than cramming their project teams into their own existing space, even if it is only a temporary solution with the end of the COVID-19 pandemic.

Even though most restrictions were lifted, CSs in Slovakia registered a certain shift towards a compromise of home office and on-site presence. Some CSs users, whose nature of work allows it, will hold on to the compromise to combine home-office and presence in CSs. Others will use their fixed office space, and larger teams (corporate employees) will use the larger shared space we know today as open space and CSs amenities. More importantly, the pandemic sped up the process of workplace transformation with cost reduction. Compared to renting fully furnished offices, large and medium companies are seeking flexible and short-term lease agreements and an inspiring environment to kick-start a declining corporate culture [11].

More importantly, according to [11] most employees had significant problems with working conditions during the pandemic, a large percentage of respondents were considering changing jobs and the possibility of relocating because of the increased flexibility afforded by teleworking. Furthermore, the survey revealed most employees were not comfortable with long-term home office, but they are also not that interested in returning to their original setup and tend to prefer a combination of working from home and working from the office. Hence, CSs registered interest of companies to locate their employees in their open spaces, especially in those closely located to company premises. This eventually led to the hybridization of work in CSs. At the same time, CSs had to reassess the benefits and size of their amenities, and so-called hybrid places are taking shape. Process of hybridization was amplified by the third wave and after, which required flexibility to modify spaces and meet the needs of changing labour markets.

On the positive note, some CSs decided to develop amenities and activities contributing to flexibility and openness of collaborative spaces, namely Campus City and The Spot. Campus City could be considered an innovative hub with an award of innovative office by CBRE [3]. Hence, this CSs is nurturing both a transdisciplinary and an open environment for digital nomads and creative class. These CSs kicked off a sequence of transformations of work processes, but also of the offices themselves, while adapting the working environment to emerging demands and needs of coworkers [10]. This experience has given CSs a new perspective on the organisation of work, but also on the demands of users on the workspace. The pandemic period has also offered possibilities to strengthen community development as of a CW active in the community field—BASE4WORK Bratislava, was awarded a title "Co-Working Space of the Year" by Frame [7]. This evaluation was made by a jury of experts in the coworking movement. The award portrayed a picture of a thriving coworking movement in the capital city of Slovakia, despite the negative direct and indirect impacts of COVID-19 pandemic on CSs. Furthermore, the BASE4WORK was selected as an innovative office of 2021 by CBRE [4] due to the unique space that attracts innovative and creative companies. This CSs has the potential to create a unique creative hub in a revitalised national cultural landmark with more diverse stakeholders among members despite the COVID-19.

Therefore, some spaces have undergone a significant re-organization and will follow the global trends of flexible environments in the field of workplace strategies.

2 Public Support During the COVID-19

There were several initiatives from the public sector to aid both coworking spaces as enterprises and/or non-profit organisations and coworkers as legal entities, sole proprietors and micro businesses that struggled during the pandemic.

The state aid was delivered by various ministries responsible for industries including small and medium sized enterprises (Ministry of Economy of the Slovak Republic (SR), for financial matters and taxes (Ministry of Finance of SR), for employment support and social care [19] and for the support of cultural and creative industries many coworkers and coworking owners and managers belong to [17].

The Ministry of Finance proposed, and the Slovak government approved the so-called Lex corona 1, 2 and 3 legislation related to deferred income tax return and payments (on income tax, value-added tax), deferred Electronic Registration of Sales, filling various financial statements, stop of tax controls and tax executions, retroactive effect of tax loss, loan guarantees for entrepreneurs, waiver of interest on arrears and remission of tax advances [18].

The highest amount of state aid in order to mitigate Covid-19 impacts was delivered by the Ministry of Labour, Social Affairs and Family (MLSAF) with its scheme First Aid, First Aid+ , First Aid++ . By the end of February 2022, it reached the amount of 2475 billion Euro coming from the European Union Social Fund Operational programme Human Resources and every third working person received some support from this scheme oriented both on employers and on self-employed businesses. The amount of money received was different between various waves and actual First Aid conditions and varied between 270 and 628 Euro [19] with the highest amounts paid in the second pandemic wave (February–May 2021 with 572 Euro and 626 Euro respectively). It was oriented on partial reimbursement of employees' wages in case of the closure or any restriction of employers' or self-employed persons (in case they have employees) activity imposed by the Public Health Authority of the SR and also compensatory bonuses for self-employed persons and small businesses in case of closure, imposed restriction measures or decreases in sales. These payments were made with a delay of one or two months and their decrease in sales was in almost 50% of respondents much higher than the aid in the first wave [25]. One of the benefits of this aid was its distribution mainly to micro businesses (44%), while at the beginning of the pandemic large companies prevailed and only since September 2020 (second wave) microbusinesses started to overcome them. Another positive aspect was an introduction of a long-awaited permanent job protection system called Kurzarbiet introduced to the Slovak legislation in March 2022 replacing the First Aid. Its aim is to support employers in order to secure jobs for employees in the form of working hours shortening because of an adverse situation that he could not prevent or foresee while 60% out of at least 80% monthly wage paid by the employer is covered from the state budget in order to avoid dismissal [14]. Another large scheme was attendance allowance (nursing benefits) for employed and/or self-employed parents when they have to stay with their sick children at home.

The Ministry of Economy offered rent subsidies and payments related to Covid-19 testing of the employers in large firms.

The most criticised tool was support for entrepreneurs from cultural and creative industries (CCIs). Only after several protests from the business entities and publicly known personalities, inviting experts to the process, establishing dialogue instead of fighting each other thanks to other factors the situation improved step-by-step and since November 2020 legal possibilities widen and several new schemes only for this sector have been adopted. The webpage helpingculture (pomahamekulture.sk) was created in order to find all schemes suitable for CCIs. The very first and specifically oriented on this sector was Decreasing of Negative Impacts of Crisis Situation on Culture launched in December 2020 and First Aid schemes were adopted to CCIs representatives' needs. Main schemes came into force in the year 2021 whereas many of them were the same regardless of the applicant, some of them varied for employees and individuals, self-employed, companies and non-profit organisations. A scheme Covid Subsidy for Professionals Working in the CCI Industry and calls 4–8/2021 from various organisations of the MoC, while companies were also eligible for Subsidy for Micro, Small and Medium-sized Enterprises in the Area of CCI (granted by the Ministry of Economy) and MoC Subsidy for single-person Ltd. Companies; non-governmental organisations for Covid subsidies for NGOs operating in culture. In total 111.8 mil. Euro was allocated as a help for CCIs of which almost 60% came from MLSAF First Aid schemes allocated for CCIs [17].

Several initiatives promoting West–East divide were regional and city level support schemes. In addition, the Slovak Business Agency as the central government body belonging to the Ministry of Economy promoted its Coworking programme [24] coming from pre-Covid times as a start-up and acceleration initiative for individuals who have a potential business idea that should be developed under the supervision of relevant experts. The distinction from the pre-pandemic time is a longer acceleration period: instead of 4 months, it was for 6 months in 2021. It has been supported only for Bratislava capital city as this scheme has spatial and personal possibilities in the headquarters of this institution. Another initiative that is worth mentioning for a more complete picture of CSs development during the pandemic in Slovakia, titled “Coworkings open free of charge for women who want to start their own business”. As the name suggests, this initiative is multi-lateral—to support new start-ups and to accommodate female entrepreneurs in supportive communities [26]. More importantly, it was a grass root initiative from managers with mutual agreement in Slovak CSs. The support for female entrepreneurs is based on the mentoring programme to run sustainable business and at the same time contribute to local community development.

Foundation of the city of Bratislava with its community activities and scholarship programme for individuals, self-employed and companies were introduced in the second pandemic wave. Trenčín town in the western part of the country has its own Subsidies for Activities in the Area of Culture and Artistic Activities and also eastern second largest regional centre Prešov Call for Microprogram of Prešov self-governing region—program Culture both suitable for self-employed and in case of companies it also offered Call for Prešov Regional Government—Culture [13]. Companies have even one additional scheme from Bratislava city: Grant Programme Culture—cultural spaces [20]. It is worth mentioning that above-mentioned schemes at regional and local levels have offered understandably and substantially lower amounts of money than those at the state level.

3 From Coworking Cooperation to Institutionalized Networking

One of the aspects Covid-19 brought was in certain time to work from home and as a consequence many people returned back to their hometown and commuted only once in a while due to work meetings in larger towns in Slovakia or in the Czech Republic [12]. Independently-run (or also known as community) CSs not supported by their mother companies started to cooperate and launched a joint initiative *Work where you are* (in slovak *Pracuj tam, kde práve si*) regardless of location where a person is present at the moment, as seen in Fig. 1.

It was started by women owners and/or managers of CSs in the capital city Bratislava and nearby regional capital Trnava and announced in February 2021. Altogether 17 coworking spaces were involved across the country representing all regions, while 5 of them have been from the capital city and 3 from the Eastern part (not Košice directly). This initiative has have twofold aim: first towards the public to help coworkers to find at one place some basic information about coworking spaces: where the space is located, number of various types of desks, such as hot/flexi and fixed desks, number of offices, the occupancy rate of various types of spaces and what services are on offer. Respective prices for such spaces with detailed information on what is included (benefits e.g. coffee and/or tea, small fruit for free or for reduced price) and what has to be paid separately (e.g. phone boots, meeting rooms) was also provided. Second aim is to help providers of the CSs to share best practices

Fig. 1 *Work where you are (Pracuj tam, kde práve si)* initiative. *Source* Cvernovka coworking Facebook page https://www.facebook.com/coworkingcvernovka/photos/a.657463271108937/1590639674457954/. Copyright is provided by the Coworking Slovakia association

and/or know how to run such spaces as work/job flexibility will be more and more important in the coming days. During other COVID-19 waves, those CSs involved in the initiative also shared several online educational activities mostly streamed from Bratislava coworking spaces as they had partners (e.g. NGOs of banks and/or international companies) who financially covered such service and their collaboration successfully continued. The initiative *Work where you are* was built from the bottom as a grass root project and was based on voluntary contributions of dedicated time, effort and willingness to collaborate. Independently run coworking spaces have also lacked an official institution or association to help to share their knowledge and to represent their interests neither towards the coworking community, nor to general public and public administration bodies. Natural outcome of this voluntary collaboration was the project supported by the grant from Active Citizen Fund—Slovakia with the aim of strengthening the capacity and societal contribution of community coworkings in Slovakia started in November 2021 and announced the *Association of coworking spaces* (in slovak *Asociácia coworkingových centier*) officially started to operate in May 2022 under the name Coworking Slovakia [1, 12]. CSs involved in the project have been meeting on a monthly basis either online or in person and they have been working on an awareness campaign, human resources strategy and adaptation of business to current post pandemic conditions. Other activities involve creating workshops and lectures for other coworking spaces and writing a manual for freshly started coworking spaces [1].

4 COVID-19 and the West–East Divide

In order to make a clear picture we acknowledge the classification of metropolitan areas by OECD [21] concerning the number of inhabitants, where Bratislava (west) is considered a sole Metropolitan area in the country. Additionally, Kosice (east) is the only Medium-sized urban area, while other regions are considered Small urban areas. Here we consider the eastern part of the country consisting of two NUTS 2 regions Košický kraj and Prešovský kraj as representatives of the periphery and consequently Bratislava as a representative of the centre. According to [23], at the end of 2019 there were 55 coworking spaces operating in 24 Slovak cities. It means opening up of 31 new CSs in the period 2015–2019 while they spread to 13 towns and cities without any such space before. These spaces largely operating not only in regional centres or in their proximity but also in smaller towns across Central (Banskobystrický kraj) and Eastern (Košický kraj and Prešovský kraj) Slovakia.

The question of how scale and scope of events organised by and in CSs changed between the pre-pandemic and pandemics periods while assuming decrease in in-person events and consequently increase in virtual events as their substitutes is being tackled. Therefore we compare pre-pandemic period with pandemic periods—first wave separately and other waves jointly together as we suppose the highest changes in the pre-pandemic to first wave periods and slow adapting and establishing of new normal in other waves. The *first wave* started in March 10 (in the capital city even a week earlier) and for 6 weeks, the economy was complete closed. Then in the several phases loosening of measures ended up in June 2020 (*March–September 2020*). As the number of dead rates and number of hospitalized patients rose significantly, *second wave* was officially announced and since *24 October* a curfew for ten days was announced while several exceptions, such as the way to work. The measures were released by November 16th. During that time several coworking spaces were closed, but most of them remained open. January 1st 2021 lockdown conditions became even harder and the government ordered work from home for everyone who can work from home. Easing of the strict measures lead to slow end of the second wave in *June 2021* (*October 2020–June 2021*). Even though data pointed at a start of the third wave at the end of July 2021 [22], it was officially announced at the end of *September 2021* and lasted until the end of *February 2022*. Our assumption regarding the events is that due the pandemic they moved from physical activities toward online events. Community CSs in the capital city Bratislava and peripheral Košický kraj and Prešovský kraj are in the centre of scale and scope of events while Facebook profiles of the CSs were used to analyse and summarize posted events. We divided events into three categories as [16] did:

1. Internal physical activities that occurred inside the CSs

2. External physical activities that occurred in the external environment of CSs
3. Virtual activities.

In regards to the pre-pandemic period, considerably more events were organised in the capital city localised in the western part. This enormous difference could be caused by the existence of a coworking space specialised in events and also a presence of a large number of business entities (e.g. almost ½ of cultural and creative sector firms [2] of various sizes from start-ups, sole proprietors, micro-businesses to large multinationals with headquarters in Bratislava city those events are oriented to. Another target audience is the general public as some events' topics are also devoted to personal development issues, soft skills, women on maternity leaves and their needs, leisure-oriented activities such as yoga classes, health related lectures and seminars and some are for secondary and/or university students as possible future clients. Interestingly enough, most eastern localised CSs used external premises for (co)organising their events and focused on certain types of community (e.g. architects, IT specialists) while in the case of the capital city in-house events dominated with previously mentioned wide audiences.

This situation radically changed by the COVID-19 pandemic. We would like to dive into eastern part with medium-sized and small urban areas in Slovakia, where the coworking scene overcame the adversity and challenges caused by the pandemic. To be more specific, we would like to highlight CSs that changed their activities in a considerable way to cope with the restrictions and limited space to manoeuvre. It is worth to mention, most coworking spaces located in the east intensified their activities for community cohesion during the first and second waves of the pandemic. Most of these activities were organised in their own premises despite various restrictions affecting social distancing. CSs were focused primarily on community-oriented events (coffee together, yoga) during the second and third wave. We assume these efforts were part of coworking strategies for coworker retention in a systematic way. Interestingly, as Marchevkova [15] mentioned, during the third wave CSs in the east switched to virtual events (60% or 50% respectively), and only a limited number of physical events (40% and 50% respectively) took place in-house, such as exhibitions, workshops for members and the public.

No external events were organised by any CSs, which may be due to the fact that community managers did not want to put their members at risk. Interestingly, most CSs were more active in organising events compared to the pre-pandemic period, even though events are not the main source of income. The pandemic put a pressure on communities to be more creative and engage in diverse activities (online coffee talks, breaks etc.). Second wave accelerated the transition to virtual space as 60% of events were held online to engage with the communities in CSs. Shifts in organising events were reflected in structural changes as most CSs in the east provided a limited number of flexi desks to maintain social distancing and group cohesion. Marchevkova [15] mentioned most coworking owners/managers did not apply for any financial subsidies mentioned in previous subchapter 1.2. Only one space applied for financial subsidy to cover rent with a successful application in aid packages such as (First Aid, First Aid+ or First Aid++). Moreover, membership fees financed most of these CSs and managers mentioned prices for members did not change even though they could cover almost 90% of fixed costs. Variable costs during the pandemic were identified in the case of purchasing necessary equipment to stream and organize virtual events (audio and video technology).

The CSs in the capital city as western representatives were, similarly to the eastern counterparts, closed for six weeks period ordered by government. Some of them rushed to open their premises, some remained closed and open gradually firstly solely for their office rented coworkers, lately for renting fixed desks and finally for those coming to the open space. Obligatory hygienic measures were obeyed in every wave and lead to some spatial changes mentioned earlier. Number of all events decreased radically (more than four times) in the first wave and was almost equally divided to internal physical events and online events. Managers/owners in the interviews between March–May 2021 claimed that firstly they stopped events completely and then moved their activities into online form mostly until the ease of the closure or strict movement measures application when in-house events started to prevail (mainly in the summer and at the beginning of autumn) and people attended in person. As in some CSs most of educational and training events have been free they were able to organise them either online or in person only with the support of partners (NGO of large multinational companies, banks etc.) and these partners were supportive and understanding during the pandemic. Many such online events were cross-streamed among CSs involved in the coworking association (see Sect. 3). Informal community events were squeezed to minimum, but increased interaction via social media (e.g. articles on how to deal with various aspects of pandemic in business), newsletter or emails together with support and consultations (financial, legal…) stepped in. Later on online yoga classes were added to the offer and only in minority cases online coffee/breakfast. On the other hand, almost every coworking has been helping to build a community with the NGOs, local people or have been involved in charity events on a regular basis and this continued in various forms through pandemics (e.g. online charity event, various campaigns, and continuous support of My Buddy programme). Some CSs located directly or not far from the city centre reported increase in renting meeting rooms as other possibilities to meet business partners were closed.

Most coworking spaces have been hit hard financially so firstly they contacted property owners to arrange any rent deferment, rent decrease or other form of rent subsidies and mostly they were successful. In case of any rent decrease from their property owners, they also decreased payments for offices or fixed desks for their coworkers to help them to remain in the space that was important for CSs having many firms oriented on organising events. In spite of it, many of such firms left CSs unable to pay their invoices and newcomers caused a large change in coworking community. As only a few spaces were eligible for deferred rent from state authorities and those who applied also got it, this measure was not much used in the beginning but became more popular in the second and third waves. Reimbursement of the wage costs of employees offered by MLSAF was also benefited in one interviewed CSs. What is important to mention is the behaviour of the coworkers. Many of them have kept to pay their (office or fix desk) rent also in the periods of the closure or impossibilities to come in person to the space as they wanted to have their place guaranteed but often also to support "their CW". The coworking space oriented on events received coworkers support in a form of online quizzes with voluntary contribution to the CS space.

As Table 1 reveals, the number of events declined even more in the second and third waves in comparison to the first wave taking half a year. It might be partially affected by several coworking spaces launching training and education programmes consisting of several meetings but was promoting on Facebook only once and thus counted only once. Some of them were also in both online and on-site modes according to actual pandemic situation.

Table 1 Independently-run CSs in Slovakia and types and number of events in pre-pandemic and all pandemic periods

Indicators/area	Bratislava	Košice region	Prešov region
Number of CSss opened during the pandemic	6	8	4
Total number of IR CSs	12	8	4
Number of CSs without any Fb event in the whole period	3	2	0
Number of CSs without Fb events during pandemic	4	3	0
Events before the pandemic			
Total number of events	551	21	5
Sum of internal in-person events	90.70%	38.1%	20.0%
Sum of external in-person events	8.20%	61.9%	80.0%
Sum of virtual events	1.10%	0.0%	0.0%
Events during the pandemic			
Total number of events in the *1.wave*[a]	66	12	16
Sum of internal in-person events	47.0%	33.3%	43.8%
Sum of external in-person events	3.0%	66.7%	6.3%
Sum of virtual events	50.0%	0.0%	50.0%
Total number of events in the *2. and 3.wave*	86[b]	12	13
Sum of internal in-person events	20.9%	50%	41.7%
Sum of external in-person events	1.2%	0.0%	0.0%
Sum of virtual events	77.9%	50%	61.5%

Source Research on Facebook pages of coworking spaces [6] and Marchevková [15]
Notes [a]In order to compare to pre-pandemic one-year period, it is worthy of consideration that 1st.way took six months
[b]3 events were jointly on-site and online events. Also similarly to above, this joint 2nd and 3rd.wave lasted one year and 3 months

5 Concluding Remarks

Slovakia was one of the countries heavily impacted by the COVID-19 pandemic. At the beginning, the government imposed very strict measures and closed the whole country for a month and a half that affected the economic and employment slump (GDP decline was more than 5% similarly to Spain, Italy and France [5]. Independently run coworking spaces as one of the business entities felt a strong impact on their operation and activities, which was the focus of this chapter.

The closure and a slow reopening disabled the presence of coworkers on site. Therefore, the number of physical events dropped sharply, and the potential was seen in the online events, mainly educational and training types (e.g. courses, webinars). This evolution was confirmed in central metropolitan area of the capital city Bratislava but opposite happened in rural non-metropolitan areas represented by eastern part of Košice and Prešov regions where the number interestingly increased. Understandable decrease in the number of community activities forced CSs to be more creative and offered a seldom-used online coffee breaks or online breakfast for in-house communities. Contradictory, communities outside the individual CS have been strengthen by cooperation among several CSs across the country and lead to creation of formal association of coworking spaces. It also helped to cross-stream many virtual events, especially educational and training oriented, from Bratislava to other small-sized cities. Generally, the number of online activities rose substantially, and percentage rate increased by each of the following wave. Coworking spaces were also supported by their coworkers as many of them did not cancel membership even in the complete closure and paid their fees in order to secure their office or space. The government also offered several types of supporting tools in order to mitigate the COVID-19 impact but only a few spaces used rent subsidies and/or reimbursement of the wage costs of employees, mainly those located in the capital.

On the positive note, these difficult pandemic years 2020–2022 were also seen as a challenge to change some modes of operation, marketing strategies to attract new coworkers instead of previously granted business entities and invest mainly in ICT devices. New coworking spaces have started to work not only in the capital city both as large coworking spaces (e.g. The Spot [27]) or as the local representative of international chain (e.g. Collabor8), but also in non-metropolitan areas (e.g. Fabrika 48 in Košice region [15]). This trend also emphasis the role of the coworking spaces as the hybrid third places option and help to enable more workers to become more flexible at work possibilities.

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The Booming Growth of Coworking Spaces During the COVID-19 Pandemic in Turkey

Tüzin Baycan, Meltem Parlak Mavitan, and Gülfiye Özcan Alp

1 Impacts of the COVID-19 Pandemic and the Rise of Coworking Spaces in Turkey

The first case of COVID-19 in Turkey was observed on March 11, 2020, the day before the World Health Organization declared a global pandemic. It then rapidly spread across the country through metropolitan cities, such as Istanbul, Ankara, and Izmir. Following the first case, the government developed and implemented different policies and several regulations depending on the number of cases, deaths, and vaccinated individuals to keep the pandemic under control. These implemented policies and regulations can be classified into the five main periods of the pandemic process:

1. *First Case of COVID-19 and First Restrictions (March 2020—May 2020)*: Implementation of strict regulations, including curfews, restriction of public transportation use, working from home, and online education. The slogan of this lockdown period was "Life Fits Into Home."
2. *Controlled Social Life (May 2020—November 2020)*: The Controlled Social Life Program, with the slogan of "mask, distance, and cleaning," encourages people to return to social life.

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3. New Precautions for the COVID-19 Pandemic (November 2020—July 2021): Increase in the number of cases and expanded curfew practices once again, limited vaccination for people at risk and priority groups.
4. *New Normalization (July 2021—May 2022)*: Widespread vaccination, resumption of face-to-face education, and the opening of social activity areas while obeying the rule of “mask, distance, and cleaning.” The slogan of this period having more flexibility was the “New Normal.”
5. *End of Restrictions (since May 2022)*: Removing all restrictions except using masks in hospitals. Back to normal.

During this process, several lockdowns and strict regulations have affected all businesses and companies, especially in densely populated metropolitan cities. The shift to remote or hybrid working has increasingly become a new working model in Turkey. The shift to flexible working conditions has also triggered the need for flexible working places, and the already rise of CSs has gained momentum with the COVID-19 pandemic.

While the rise of teleworking and coworking has been remarkable in Turkey, especially in the last decade [8, 9], the country has experienced a boom in CSs during the COVID-19 pandemic (Fig. 1). According to the registered CSs data from coworking.com, the total number of CSs has increased dramatically from 71 in 2020 to 162 in 2022; therefore, the increase is more than doubled [2]. Updated data with the non-registered CSs to coworker.com network, actually the total number of CSs has shifted from 86 to 170 in Turkey (Fig. 1).

Besides the hybrid working model and the need for flexible working conditions, the rise of CSs during the COVID-19 pandemic was also triggered by the sharp depreciation of the Turkish currency in 2021 and the major hikes in electricity and natural gas prices that have pushed many firms and freelancers towards a cheaper option. Therefore, CSs have become a cost-effective and innovative alternative providing a unique opportunity for their users to socialize during the COVID-19 pandemic and rising prices. These reasons have led Turkey to experience a boom in CSs in recent years.

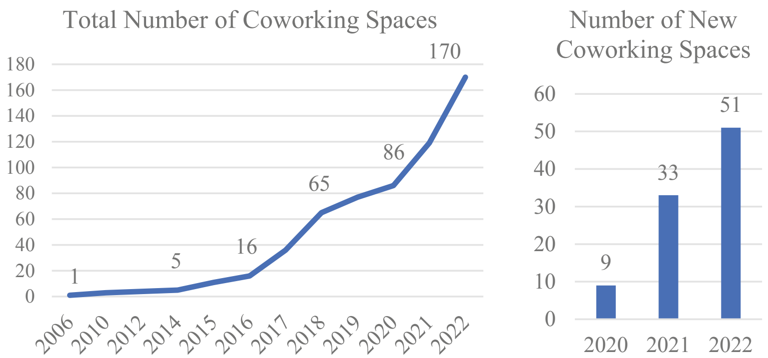

Fig. 1 The rise of CSs in Turkey (produced by authors)

Fig. 2 *Distribution* of CSs in Turkey (produced by authors)

Although the total number of CSs has increased in various cities in Turkey, a remarkable increase has been observed in metropolitan cities: Istanbul is leading with the total number of 125 CSs, Izmir and Ankara follow Istanbul with the total number of 12 and 10 CSs respectively. In addition to the top three metropolitan cities, the rise of CSs has been observed in the coastal cities of Antalya and Mugla, where 10 CSs are located (Fig. 2).

The rise of coworking has not been limited to the increasing number of spaces. Still, the demand for these spaces has also changed and diversified with new and increasing services offering: a 'virtual office' option based on providing legal company address, receiving cargo and telephone, networking opportunities; organizing 'online events'; and even emerging new types of CSs such as 'beach club' or 'surf house'. Recently, the demand for CSs has also increased internationally because of the war between Russia and Ukraine. Geographical proximity and Turkey's position as a mediator have created attractive conditions for both countries' employees escaping from war. The following section focuses on the reasons behind the rise and the response of CSs to the COVID-19 pandemic in Turkey.

2 The Response of Coworking Spaces to the COVID-19 Pandemic in Turkey

As mentioned in the previous section, following the first case of COVID-19 in March 2020, several regulations, including the closure of all workplaces except essential sectors, curfews, remote working, online education, and so on, were developed and implemented immediately by the government. The impacts of the first strict regulations were sharp on all businesses and also CSs. In the following periods, CSs have gradually developed their own strategies to respond to the challenges of the COVID-19 pandemic and to meet the rising and changing demands of coworkers.

This study aims to investigate the reasons behind the booming growth of CSs during the COVID-19 pandemic in Turkey and to understand the response of CSs to the implications of COVID-19. To do so, a small survey based on semi-structured in-depth interviews was conducted with the CSs managers in Istanbul, Ankara, and Izmir, the biggest metropolitan cities where almost 90% of CSs in Turkey are clustered. In addition, the activities and visibility of CSs in social media, websites, and blog posts during the pandemic were examined to support the interviews. Different typologies of CSs have been selected for the survey, including international chain CSs located in different cities of Turkey; local brand CSs located in a single city with several locations; and mostly community-based CSs situated in a specific city; in order to understand their reaction to the pandemic comprehensively. The following sub-sections focus on the general COVID-19 precautions implemented by CSs in Turkey as well as their response to the challenges that emerged with the pandemic.

2.1 General COVID-19 Regulations in Coworking Spaces

During the normalization process, The Ministry of Family, Labor, and Social Services and the Ministry of Health announced regulations regarding re-opening offices. While some regulations were mainly related to physical space, some correspond to users and employees. Thus, COVID-19 restrictions have been implemented to have a safe working environment in CSs. Reducing the overall capacity, raising awareness of users and employees, and regular disinfection of CSs were other necessary COVID-19 precautions. Table 1 and Fig. 3 show general precautions implemented by various CSs in Turkey.

Table 1 General COVID-19 precautions implemented by CSs in Turkey (*Source* [3, 5, 10])

Physical space	Reducing capacity by half for meeting rooms and lounge areas
	Using plexiglass as a separator for the large tables
	Social distancing signs in the working place
	Using a thermal camera and a heat meter to detect people with a high fever
Users and employees	Compulsory face mask usage for users and employees
	Health status information at the entrance (vaccination, recovery, or a negative PCR test result performed within 48 h)
	Limitation of guest entries
Sanitization	Disinfection of the whole space frequently
	Creating disinfection stations for hand sanitization
	Increase the cleaning frequency of surfaces and work areas

Fig. 3 Social distancing precautions in Regus (*Source* https://www.regus.com/tr-tr/s/OurResponseToCovid19)

Modifying the physical space according to the new physical regulations was one of the regulations that CSs quickly adopted. Ministry of Health announced 14 basic rules which regulate social distance rules, hygiene suggestions, and mask usage in closed spaces. A personal code called HES activated each citizen to enter various closed spaces, from hospitals to shopping malls. The CSs quickly implemented these rules, and most of them announced their regulations on their websites to inform their potential and existing members. In addition, they have implemented their own precautions, as summarized in Table 1.

2.2 *The Response of the Coworkers*

The first rapid effect of remote working was seen in the membership numbers of CSs. According to CSs managers, the first reaction of the members was to cancel or change the membership type. In response to this, all interviewees stated that they suggested different solutions for their members instead of cancelling. These solutions include: not getting a membership fee from the sectors with payment difficulties, no increase in membership fees; discounts; and freezing the membership status. However, these solutions comprise the short-term effects of the pandemic. Overall, the number of members increased during the pandemic, and one of the factors that affected the number of members in the long term has been the migration of coworkers to abroad or to other small cities in Turkey, as mentioned by one of the managers of CSs.

The second most common reaction, other than the cancelation, was the transition to a different membership type. Most of the CSs managers stated that with the first wave of the pandemic, many coworkers who actively use the physical space asked to change their membership to the 'virtual office' option. This membership option has different facilities for different CSs. Basically, it is a membership option based on providing a legal company address, receiving cargo and telephone, networking opportunities, and usage of the meeting room and common area for a limited time. The coworkers mostly changed their membership to this option.

Despite the decrease in membership at the beginning of COVID-19, the pandemic has positively affected the growth of CSs. After the adaptation process, both the number of members and the number of locations of CSs increased. According to coworker.com data, the number of CSs has significantly increased. Interview results support this positive trend. A CS manager from Ankara states that many universities switched to distance education during the pandemic, which caused a rise in demand for students who needed to have quiet places to study. According to the Sales Manager of a CS, they opened three new locations in Istanbul during the pandemic. This Sales Manager describes the need as follows: '*As a result of the spread of the vaccine and the ease of treatment, we gradually started to get more demand since the beginning of March 2022. Our occupancy rate has been 80% since the beginning of March.*' Moreover, he attributes this positive trend to the changes in the perception of working. He continues: '*Companies got used to flexible working methods during the pandemic. However, sometimes working from home cannot be efficient. In this case, companies are looking for a solution to provide a working space for their employees in the closest location. In addition, customer confidentiality is an issue that companies pay great attention to. It is difficult to provide privacy in areas such as cafes. Solution partners like us, who ensure this confidentiality and provide a space where people can focus on their work, are gaining more importance.*' Similarly, a CS manager from Ankara expects a new rise in demand since working at home is tiring for many people, especially those who do not have a proper working setting. Moreover, the co-founder of another CS, supports this idea. He expresses that '*Hybrid working model is now becoming permanent. Demands from corporate companies that we receive are always in this direction. They want to register their employees for a type of membership that they can come and use at certain times.*' According to this co-founder, another reason for the increasing demand for CSs in Istanbul is the war between Russia and Ukraine. He states that there are too many employees from both countries in Istanbul due to Turkey's position as a mediator. He added that they are looking for Russian-speaking staff for their locations.

2.3 Changing Daily Routines and Events

One of the basic services that CSs provide is knowledge transfer, informal exchange, cooperation, and forms of horizontal interaction with others and business opportunities for its members [6]. It creates a collaborative community that generates from sharing the same environment with other individuals. It also affects fostering information exchange and creating new business connections caused by the geographical proximity of those places [11]. However, pandemic regulations limited the opportunities that the physical environment provides. Because the government has cancelled all face-to-face events. In response to this regulation, CSs quickly transformed all their events to virtual instead of cancelling them. Basically, there are two types of events organized in CSs: the first type of events is organized for members, while the second one is open to the public. Events to socialize and share knowledge and experience among members have been held online by some CSs. This shift has been observed more in community-oriented CSs. In this context, members gathered virtually to provide psychological support to each other to cope with the difficulties the pandemic brings. On the other hand, all public events were immediately transferred to virtual environments for all types of CSs. In contrast, it has been observed that CSs with many branches tend to organize only online public events instead of member-exclusive virtual meetings. It is also observed that the content of the virtual public events adjusted for the pandemic situation. Most CSs organized specific events for the pandemic or shifted their regular events. Online hackathons and ideathons were organized for this purpose. For example, a CS changed their 'New Creators' event to 'Creators at Home' event.

When the obligation to use masks in closed spaces and public transport was completely lifted in May 2022, face-to-face events were gradually encouraged by CSs managers. Although summer break has a negative effect on organizing events, interviewees state that the frequency of face-to-face events increased after May 2022. Nevertheless, CSs managers are still taking advantage of virtual events and organizing hybrid events. A co-founder of a CS from Izmir states that: '*Although we mostly went back to face-to-face events, we keep organizing virtual events. Virtual events allowed us to host speakers and guests from out of the city. We still use the advantage of this situation in some cases when it is more meaningful to organize it virtually.*'

2.4 New Concepts and Future of the Coworking

Coping with the crisis and adapting to different conditions are significant features of the emergence of the coworking concept. While the concepts such as: 'hybrid work'; 'remote working'; 'flexible working hours'; spread globally thanks to the pandemic, flexible solutions created by CSs have become essential [4, 7]. Moreover, the downsizing of the companies, demand for companies to decentralize employees to the closest locations to their homes to avoid traffic and changing working habits have increased the importance and visibility of CSs in the crisis environment. A CS manager summarizes this process as follows: "*Emergence of CSs roots for their adaptability to the crisis. The future of our sector was about advertising our spaces and expressing ourselves with more people. The pandemic did it for us spontaneously without any extra force. We had a chance to reach more people we could not imagine before the pandemic.*"

The pandemic resulted in the transformation of working styles and triggered the emergence of new concepts. In Turkey's case, new coworking concepts emerged in the coastal cities of the country. Some CSs brands opened seasonal branches close to the beach (Figs. 4 and 5). The Co-Founder, and CEO of Kolektif House, who is also one of the founders of coworking in the beach, stated in an interview that: "*As Kolektif House, we are challenging the limits of traditional ways of working*

Fig. 4 Kolektif House on the Beach (*Source* https://inceleme.co/kolektif-house-ilk-pop-up-lokasyonunu-cesmede-acti/)

Fig. 5 Workinton in Urla Surf House (*Source* https://tr.hotels.com/ho649352512/urla-surf-house-urla-turkiye/?pwaDialogNested=media-gallery)

with the mission of leading this transformation in business life. We take the working experience to the highest level with new generation solutions that support the hybrid working system. In this context, we have added a beach office to the central office, which is used in rotation in business life, and to the satellite office options close to the *employees' homes. We launched our first pop-up location at OM Paparazzi Beach, the first beach club established in Çeşme's Aya Yorgi Bay. Enjoy the sun above you and the sand at your feet and meet the new generation of freelance work with Kolektif House services*" [12].

3 Concluding Remarks

The use of CSs has dramatically increased with the rise of hybrid working during the COVID-19 pandemic. As a result of the dramatic shift in work modality, space considerations have also changed, leading to the rise of CSs. The rise of coworking has also been remarkable in Turkey. The country has experienced a boom in CSs during the COVID-19 pandemic due to the rise of hybrid working but also negative economic implications of COVID-19 reflected in a sharp depreciation of the Turkish currency, dramatic rise in inflation and following a sharp increase in transportation, housing, energy, and furnishings and household equipment [1]. Given these circumstances, CSs have become a cost-effective and innovative alternative providing a unique opportunity for their users. Turkey, especially its metropolitan cities leading by Istanbul, have experienced a dramatic rise in CSs.

The rise of coworking has not been limited to the increasing number of spaces in Turkey, but the demand for these spaces has been also changed and diversified with new services and even emerging new types of CSs such as 'beach club' or 'surf house'. Recently, the war between Russia and Ukraine has also led to increasing demand for CSs by both countries' employees escaping war. Therefore, CSs in Turkey have faced so many challenges, including changing demands and emerging new types of working spaces.

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Coworking Places in Hungary During the COVID-19 Pandemic

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1 Introduction

In this chapter, we focus on the changes brought by the pandemic and the different adaptation strategies which coworking spaces needed to use to adjust to the challenges during this period. We aim to give an overview of the Hungarian situation which has one speciality for coworking spaces. In contrast to Western Europe, these places had to rely completely on their own because they did not receive any financial aid from the Hungarian government.

This study begins by introducing the context of the Hungarian COVID-19 situation shortly. Then it gives a brief overview of coworking spaces and their spatial differentiation at the national level. The legislation is discussed in the next part. Subsequently, the different adaptation strategies are explored.

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2 Context: The Hungarian COVID-19 Situation

In Hungary the first confirmed case of COVID-19 was reported nearly after three months of Wuhan cases, on 4th March 2020 [23], exactly one week before WHO declared the virus as a global pandemic. In the first year, there were two distinctive waves (in spring and in late autumn/winter), which pattern is similar to most European countries [7]. We call this first year a highly disruptive initial period when the novelty of the virus and the lack of vaccines forced governments to apply strict control measures which affect mobility, and mass gathering to reduce transmission and avoid overburdening the healthcare system [16]. In Hungary, control measures affected the entire country with negligible regional or local differentiation. Only one exception was in May 2020, when the capital (Budapest) experienced a delay in lifting earlier restrictions.

In the first wave, the diffusion followed a core-periphery pattern. Thus, early cases were reported from the capital and suburban settlements encircling Budapest [22]. Later, territorial differences started to change: the virus appeared also in settlements placed lower in the hierarchy. Similarly, to the first year, in 2021 two distinctive waves occurred with one difference; new ways of protection appeared as vaccines started to be available to the wider public. The third wave (from February to May) was the last one which required significant control measures, for example, school and restaurant closures or a night curfew between 8 pm and 5 am. The next surge started in late summer, September 2021. In 2022, the nature of the virus has changed: the active cases were the highest in the fifth wave in late January-early February. However, despite that, the death rate appeared to decrease and consequently measures, and restrictions were not as strict anymore. The latest sixth wave occurred in the summer months of 2022.

To conclude, since the virus first appeared, the initial period, especially the first wave, caused the highest disruption in nearly every aspect of life in Hungary, not because of the number of active cases but the novelty of the virus and the lack of effective treatment against it. Although later surges with new variants also influenced different activities from trade to tourism, adaptation started to develop.

3 The Rise of Alternative Workplaces

Coworking spaces started to appear in Central and Eastern Europe in the first decade of the 2000s, just like all over Europe, with the first Hungarian one starting in Budapest in 2009. They were getting more and more popular, especially within self-employed and creative industries, helped somewhat by the burgeoning start-up scene too—and spread also in some countryside towns with different owner profiles, sizes and user groups. There are some larger CSs with over 100 desks and several meeting rooms, while many are smaller with less than 20 desks, and quite a few renting out office spaces for SMEs. Managers of coworking spaces are typically under 40, many are also owners of the CS and without exception are higher educated. In terms of users, some rely on standard members, or renting out office space, while others have a mixed crowd of local and international users (digital nomads)—in Budapest, each CS has a slightly different profile [14]. In 2019 the total number of CSs was around 54 in the country—36 in Budapest and 18 in the countryside, however the COVID pandemic has affected the sector heavily. At least 14 are suspected to have closed business forever due to the pandemic.

Just like everywhere, the number of people working from home skyrocketed in the first wave in Hungary. In May 2020, 17% of the active workers did their job outside traditional offices. This number started to decrease when the first surge ended. In autumn, parallel with the second surge, the ratio rose again to 12%. Compared to the pre-pandemic level, the proportion of remote workers increased from 2.9 to 8.6% [11]. This trend also suggests that remote work persists after the initial shock, but the range of users decreases after the peak in numbers.

Not every segment of the labor force is affected by opportunities of working from elsewhere. There are territorial, sectoral and socio-economic differences across the country in terms of telework. Sectors connected to information and communication technologies, research and education were the leading examples of telework. The level of education and the location of the workers also influenced the patterns—contributing to regional differences. Findings reflect that these are not country-specific, but similar to international trends.

4 Centre and Periphery in the Hungarian Creative Economy: Where Do New Working Spaces Fit?

Patterns of post-industrial development have inscribed multiple centre–periphery relationships on the Hungarian space economy: the country itself in relation to the EU core; the Budapest agglomeration in relation to the provinces; and (non-metropolitan) cities in relation to the spaces of small towns and rural areas. The creative sector, as a special segment of the post-industrial economy, is also structured accordingly. While post-industrial activities in the service sector make up for the bulk of employment in every region, value creation outside the capital is still heavily rooted in manufacturing activities, showing the limits of the post-industrial model in regional development [18]. Issues of both supply and (local) demand are apparent. The high value-added segments of the creative economy are metropolitan; that is, largely capital-centric in their geographies.

Tourism and the creative industries are often considered proxies for 'culture' in economic development [9]; and new working spaces can be counted as one facet of the latter. But as Evans remarks, smaller cities with weak agglomerations find it hard to turn their cultural profiles into effective creative industries, and risk becoming dependent on exogenous funding. van Heur [24] notes that due to the metropolitan bias of creative industries research, issues of insufficient agglomeration benefits, connections, visibility, as well as a different orientation are often overlooked, and thus failures may result in the absence of a critical mass. Furthermore, assumed job creation and income generation effects may remain unrealised, and structures created with public assistance may be highly sensitive to exogenous crises [21]. It is therefore imperative for successful creative industry strategies to adapt to the specific circumstances and endogenous development potential. Comunian and Mould [8] emphasise the significance of focusing support on the local cultural ecosystem; and thereby urge policymakers to bridge "the structural gap between the public interventions and specifically the new flagship cultural institutions created and the local creative economy base" (p. 72).

Due to both a lower development level and the absence of strong, metropolitan regional centres, the creative economy in Hungary is more heavily concentrated than in the EU core. This concerns particularly activities involved in commercialisation and value creation. Critical mass issues are apparent across minor cities [17], and even more pressing in small towns and all but a few rural areas. Absent strong local social and financial capital, development planning remains funding-oriented, and operates along an exogenous model directed from the capital and bypassing local stakeholders with weak ability for capacity-building [10, 19, 20]. Therefore, localities are weak or absent actors in this formula, often remaining dependent on sustained public transfers for their survival. New working spaces operating outside the capital benefit from transfers to the local cultural ecosystem but find it hard to transcend funding dependency. In the long run, as Hudec and Džupka [13] show, the success factors are to be found in finding the right scale, community, and stakeholder involvement, as well as strong and focused vision. New working spaces, as places where stakeholders congregate and act, are important nodes of this development—but the peripheries merit different considerations and success criteria than the centres. Transforming exogenous support into endogenous resources (territorial capital) should be understood as their main benefit to their local and regional environment.

5 COVID-19: Hungarian Legislation and Control Measures Affecting Coworking Spaces

Hungarian legislation applied three main types of control during the epidemic. In the beginning, so-called epidemiological measures were published: Act CIV of 2020 laying down certain rules on epidemiological measures [5] and amending certain acts on epidemiological measures and Decree 409/2020 on certain rules applicable in the case of epidemiological surveillance for COVID-19 [6]. The two prior measures mainly responded to the impact on persons: introduction of quarantine obligations, role of contact persons, etc. The impact on workplaces and community offices, apart from the mandatory measures, compliance with decontamination procedures and distance, is not significant. The impact of the economic and so-called protection measures is already more significant from 2021 [3, 4]. The economic protection measures were about different regulations in emergency situations (e.g. credit moratorium, restricted travel and accommodation). The protection measures are contained in Act CXXX of 2021—on certain regulatory issues related to emergency situations [2, 4]. Government Decree No 77/2022 abolished the obligation to wear a mask, the rules on the use of an immunity card and the restrictions on crossing borders [1].

Compared to many European countries, Hungarian restrictions were typically shorter, testing and masks not so universally provided, neither easily accessible, health care system overcrowded, vaccine take-up lower than western EU countries, which lead to greater than average deaths, yet an eventual negligence on both the part of authorities, employers and the population. The government provided some state aid to counter the economic downturn and save jobs, but only in a limited fashion—only certain sectors, specific actors were offered help. Coworking places had access to no state aid at all throughout these years.

The digital explosion created by the first total closure has had an extraordinary impact on new types of workspaces. The digital transition had to happen from one day to the next in Hungary, but neither education nor the world of work was ready for it. The period of forced closure also kept coworking spaces closed. Only online contact and one-on-one, one-key-at-a-time access on a confidential basis were possible. In Hungary, online platforms and contact spaces have been the absolute winners in the epidemic. In addition to the most popular Zoom and Microsoft Teams, the Hungarian Government has created a dedicated platform for primary and secondary education institutions. The majority of businesses have moved their day-to-day communication to MsTeams or Zoom.

Due to the epidemic restrictions, all community spaces, including coworking offices, have been forced to close. It can be seen that the pandemic has rapidly changed the habits and lifestyles of the populations in each country, and that this will have medium- and long-term effects beyond the visible short-term effects. The need for 'social distance' has stimulated a rethinking of working practices, and this has been particularly visible in the service industry, where teleworking has been in the spotlight [15]. If the "second location" (office) is not suitable for work and home ("first location") is not the best option (e.g. small, crowded and noisy), the "third location" (e.g. coworking places) may better meet the needs of the worker. In Norway and Spain, the government has promoted the location of public workplaces in peripheral areas with the aim of facilitating teleworking, thereby reducing commuting to urban areas, congestion and pollution, and facilitating work-life balance. In contrast, in Hungary, coworking offices also closed down during the first waves of COVID-19.

The restrictions of the coronavirus and the quarantine period have opened new doors for many. A useful use of leisure time was learning and training [12]. In the labour market, the role of knowledge has become more important in recent decades, so those who had access to free online training materials improved their skills in the pandemic. In particular, coworking groups in the capital organised online training and lecture series, keeping in touch with co-workers.

6 Discussion and Conclusion—Different Adaptation Strategies in the Coworking Ecosystem

In Hungary, coworking spaces did not receive any financial aid during the pandemic from the government regardless of their location or their operator. Hence, these places were left on their own to adapt to the emerging challenges brought by the pandemic. The disruptive nature of the COVID-19 was particularly strong in the first wave. As the Hungarian coworking landscape is quite diverse, coping mechanisms also differed. However, one of the common responses among them was applying different precautions for coworkers' safety, for example, usage of social distancing measures and hand sanitisers. The maintenance of a safe working environment was ensured by frequent cleaning, clearly visible signs, information boards and the restructuring of offices. Because of social distancing, coworking spaces also had to limit group events, be it social or professional—which was a major disruption in their functioning, a huge revenue loss, as events used to be a major revenue source for most CSs, they typically even rented out their spaces for outside organizers. Some CSs within Budapest, that need to pay rent themselves also had to relocate from downtown to cheaper districts of the city, as they suffered significant revenue losses.

Another pattern can be identified from a spatial viewpoint. There was an observable shift in locations from city centres to the outskirts of cities, especially in suburban areas. This may have been caused by the depletion of services in the Central Business District (CBD). Because of restricted mobility, white-collar workers tended to prefer areas near their residences for remote work. Solymár and Zebegény, in the vicinity of Budapest are such examples [14], where new coworking spaces have appeared during the pandemic period (2020–2022).

The increase in the number of people moving into/out of rural areas has also shaped the spaces/locations for alternative work. In Hungary, more coworking offices have opened remote from the capital in the last ten years and also during the Covid-closures on the shores of Lake Balaton. In addition to the suburban towns, the settlements around Lake Balaton with recreational summer houses and good accessibility to Budapest also increased their popularity among high skilled co-workers/remote workers—thus these settlements were more advantageous for opening coworking spaces.

One of the main differences is that services in such touristic area CSs are more diverse in contrast to CSs located in the capital. For example, LOFFICE in Balatonföldvár and Portushome in Vászoly also operated not just as a space for working but as accommodations. Thus, they could rely on other adaptation strategies and revenue sources to survive the pandemic. It is important to note, however, that several of CSs have already been there in the pre-pandemic era as this region is one of the most important for seasonal tourism in Hungary.

In general, informality also played a significant role in the adaptation strategies. For example, one coworking place KOHO in Pécs officially stayed closed, but their regular coworker members got keys and they could use their desks at flexible times. Most people have children who worked here. Therefore, home office has not been a favourable option for them, so they had an increased need to stay in third places as well. There was another reason why they wanted to sustain their usual routine. According to the operator, they missed the working environment which a coworking place offers for them (to socialise, collect ideas). We found that for the Hungarian coworking offices internal communication improved during this period, the community was able to survive in the online space, partially thanks to several events and trainings organized by international big coworking chains, and for some coworkers, the motivation to "go in" was maintained and regained later.

We also found examples of a complete transformation of the office function. A coworking space in a residential office closed during the epidemic and was used for family use—a kind of quarantine or separation room. The function of incubation offices and shared spaces run by municipalities has partly changed during each wave. In smaller municipalities (typically under 10,000 inhabitants), these community spaces were either completely closed or open during school hours (facilitating educational activities for disadvantaged children). Coworkers had no or only partial access to these spaces (split days and time slots). As can be seen, this type of change was unfavoured for the workers, but places find a niche brought by the pandemic (education, childcare).

To conclude, the shocks caused by the pandemic have challenged both coworking spaces and coworkers. Location change, size reduction, change of function, and relying on informal networks are the identified coping strategies which appeared in the Hungarian coworking landscape during Covid-pandemic. It is a question for future research if these strategies were successful in the long run or only offered a temporary escape for CSs and how and to what extent they need to transform themselves due to the changing nature of work.

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Narrations of the Countries in Southern Europe

Italian Experiences in Coworking Spaces During the Pandemic

Ilaria Mariotti and Michele Lo Russo

1 Introduction

Coworking spaces (CSs) are usually presented as "joining a community" [1, 7, 19]; they represent community-based organisations founded on mutual help and collaboration, that are crucial aspects in the emergence of innovations [4].

The COVID-19 pandemic has had several effects on working modalities and workplaces, including the CSs, which is the present chapter's object. On the one hand, legally imposed closures and the reorganisation of spaces to ensure social distancing have reduced its revenues. On the other hand, the increase in the number of remote workers has opened up interesting possibilities for these spaces that can improve workers' satisfaction and well-being and foster a better work-life balance [2, 13].

In 2018 Italy hosted 549 CSs, mainly located in urban areas because CSs tend to be knowledge-intensive places for creative people [11]. In 2020 there were about 760 CSs, approximately one CS for every 70,000 inhabitants. Compared to the year 2018, during the pandemic, CSs also started investing in peripheral and rural areas, and attracting remote workers and digital nomads. This new trend confirms that the dense networks of the inner city are not the only environment in which creative industries operate because of the complexity of their geography [5]. In Italy, remote workers increased from 570,000 in 2019 to 6580 million in March 2020 in total lockdown; the forecast for 2022 is 4380 million workers [18]. The economic activities that

The chapter presents and updates the results of the IC-Surveys in 2020 and 2021, described in Lo Russo and Mariotti [8].

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show greater ease of working remotely, e.g. at workers' homes, are professional, scientific, technical activities; finance and insurance; professional services; public administration [3]. However, the home is not always considered the ideal place to work; workers complain of inadequate technology, a sense of isolation, difficulties in work-life balance and a feeling of being always connected [18].

This chapter describes the results of the survey conducted by Italiancoworking[1] and addressed to CSs in Italy in 2020 (IC-Survey2020), and the survey conducted by Italiancoworking together with DAStU and the Cost Action CA18214 in 2021 (IC-Survey 2021). The measures the CSs have adopted to cope with the pandemic are described, and whether and how the CSs have increased the resilience is explored.

2 Coworking Spaces Facing COVID-19

2.1 Survey During the Lockdown at the Beginning of 2020

The first survey was launched by Italiancoworking in the period 26 March 2020 and 2 April of the same year. The coworking spaces in Italy, registered by the italiancowoking.it platform were 760 in 2020, approximately one CS every 70,000 inhabitants. Twenty-five per cent of CSs in Italy responded to the questionnaire. The temporary closures of spaces in the first lockdown, and those that followed at the end of 2020, turned, in some cases, into long-term closures. Over 100 spaces closed for the whole year 2020 and a large part of 2021 waiting to reopen, while 66 closed permanently already in 2020, and as many more will follow in 2021. The closure of spaces is partially counterbalanced by investments planned and/or initiated before the pandemic, which saw 36 new CSs opened in 2020.

However, the restrictions adopted at the beginning of the pandemic affected the sector unevenly across different types of spaces and territories. The most resilient were the large spaces that housed companies and workers in essential activities. Only 14% of spaces larger than 1000 m^2 closed completely, with a cancelled membership rate of 16%.

Southern areas registered a higher degree of space closure (70%) probably because CSs are less frequented by companies, are smaller in size and involve less investment. In Northern Italy, one out of two spaces were operational despite the restrictions to fight the pandemic, which led to a drastic reduction of services. The spaces affected by the closure were mainly non-profit managed spaces (74%).

During the closures, the CS managers aimed to keep the community alive and not to dissipate the wealth of relationships and synergies that previously characterised the spaces through investment in communication channels and the organisation of many online or in-presence events while respecting security measures. New online activities such as "coffee breaks on zoom", "aperitifs on Meet", "Fuckup Night online", "Help

[1] See: Italiancoworking.it.

Desk" for companies and professionals (online support in organising and managing smart working), training courses, etc. have been experimented. Nevertheless, the attempts to maintain the community were not very effective. They were dispersed in the nebula of online services and content proposals that began to increase during the lockdown period. Only organisations operating facilities larger than 1000 m^2 could use more elaborate interaction channels, such as virtual events and the promotion of community activities. Some CSs migrated services previously offered on-site to digital platforms.

During the pandemic, remote working has grown, and CSs have attracted these workers because they offer the flexibility and tools they need. Knowledge workers who did not find working from home (WFH) the best choice started looking for a workplace nearby. Even policymakers promoted near working, as in the case of the Municipality of Milan, which allowed its workers to work e.g., in public libraries, and CSs, close to their homes. This phenomenon triggered the development of CSs and hybrid spaces in peripheral and rural areas: at the end of 2020, around 20 new spaces opened up around Milan's urban belt, while in the South about 13 spaces opened in cities of under 100,000 inhabitants. The renewed attractiveness of the southern areas is related to the so-called South-Working phenomenon: the return, even temporary, of workers originating from southern regions who choose to live in the South and work remotely in the North [17].

About 46% of the CSs managers that answered the survey expressed confidence in the new opportunities represented by remote work and the push towards digitisation of the population. Although all operators emphasised the importance of the innovations brought by the pandemic, a large proportion was more cautious or doubtful (34%), if not sceptical, about the future of coworking (20%).

2.2 Survey During the Pandemic: End of the Year 2021

The second survey (ICSurvey 2021) carried out during 26 October and 31 December 2021. One hundred thirty-six administrators and CEOs of CSs, flexible offices and other shared workspaces participated in the online questionnaire. The objective of the new survey was to understand how the continuation of the health emergency over almost two years has affected the coworking industry and the operators' perspectives.

The data collected revealed, not without surprise, a remarkable degree of resilience in Italian coworking spaces. In December 2021, the following elements have returned to their pre-pandemic level, if not in some cases increased compared to the 2018 and 2019 ICSurvey surveys: (i) number of CSs surveyed; (ii) average level of profitability of spaces; (iii) other indicators of the level of confidence on the performance of coworking activity.

Coworking profitability, in particular, returned to the values tracked in 2019: approximately 50% of those involved in coworking and flexible offices as their primary activity have a positive balance sheet, while the share of those who make a loss (less than 20 per cent) is residual. One of the consequences of the pandemic has been the professionalisation of the market offer of flexible workspaces: more than 90% of the 107 coworking spaces which closed down in Italy, between 2019 and 2021, were operators whose coworking activity is residual or not prevalent. This also covers a part of those spaces in the non-profit or public area that did not reopen after the various lockdowns. As a further confirmation, more than 40% of the operators whose motivation for starting a CS was to reduce their facility's expenses declare a loss-making budget (12% are positive). The emergency period also seems to have impacted the type of investment operators have to make. The experience of forced closures and the associated losses were much more manageable for those who did not have to pay rent. Another factor in the professionalisation of supply is the size of CSs and flexible office facilities. CSs hosting, on average, 50 coworkers or more and in particular those above 100, reacted better and had a fast growth perspective. The occupancy rate declared by the operators confirms that the largest CSs are also those with the highest ratio of available desks to occupied (over 75%); while those below 20 desks, which alone account for about 55% of Italian coworking facilities, show a low occupancy rate (51%).

It is interesting to note that Southern Italy results more vulnerable because of a low presence of large CSs, and a lower density of firms operating in knowledge-intensive sectors. However, 72% of CS managers in the South experienced an overall increase in members in the last 12 months (although these are short-stay members) and 45% see an increase in remote workers. Notably, the ICSurvey 2021 recorded a general attitude of confidence among respondents, which was confirmed by the outlook on membership increase provided by operators.

Although the picture is patchy and overall not very rosy when looking at the 2021 occupancy rate and other indicators, more than 63% of Italian CSs operators expect an increase in membership in 2022 and an upturn in other services such as room hire and in-person training. Over 70% of respondents expect to maintain or increase the workforce employed to manage their facilities and the price of services to the public in the coming year. All this despite crisis mitigation tools and policies by local and national governments that were generally absent or useless in the perception of operators. Only a residual minority had access to tax instruments, utility reductions, rent suspension, loans and contributions, or support for their workers. Among these, even fewer rated the measures they had access to as helpful. But even with private counterparts, operators found little room for manoeuvre to mitigate the crisis phase. Few respondents claimed to have been able to renegotiate rental contracts (33%) or have a reduction in long-term rent (25%), or to terminate contracts at shorter notice (4%). None were able to involve the property owner in sharing in the dividends of future income. Finally, only 37% of the operators were able to postpone rent payments on the property.

3 Conclusions

The IC surveys (2020 and 2021) have shed light on the impact of the COVID-19 pandemic on CSs, and the strategies they have undertaken to respond to this exogenous shock. The most recent survey results show that the number of CSs surveyed has returned to its pre-pandemic level, as has the average level of profitability and confidence in coworking performance.

Coworking is, therefore, facing important challenges in the present and future. Firstly, companies are changing their business model by investing in flexible and hybrid spaces closer to their employees and opening new geographically dispersed hubs. Therefore, CS could be adopted by individual companies as a model for organising work internally to maximise interactions and relationships, especially in a situation where workers only go to the office a few days a week [9]. Moreover, policymakers promote near working in third spaces that can accommodate remote workers, both in large cities as in the case of Milan, and in peripheral areas in the South of the country [16]. CSs could therefore become multifunctional/hybrid environments (equipped with services for childcare, professional skills updating, aggregation and socialisation, etc.) to rebalance the family-work balance and, in suburban and peripheral areas, contribute to reducing commuting to big cities and, therefore, congestion, pollution, traffic, offering space users higher levels of well-being and less perceived stress [6, 12, 15, 20]. Recent studies have shown that CSs in suburban areas are more likely to organise and participate in activities with a potentially positive impact on the area in which they are located (e.g. facilities with bars and shops in the neighbourhood, outreach events and cultural activities open to the outdoors and/or dedicated to the neighbourhood), compared to CSs located in urban areas [10]. Furthermore, coworkers working in CSs in the suburbs are more likely to increase their revenues than those in urban areas [14], and experienced a higher well-being [2].

Finally, it is interesting to note how in the peripheral areas in southern Italy the return migration of southworkers has led to the establishment of so-called 'community garrisons', mainly public and ready to host remote workers and 'retain' young people by offering them training courses [16]. Remote work to be carried out in third locations is an interesting opportunity that the South and, in general, the internal Italian areas should be able to seize to attract professionalism and retain young and qualified human capital.

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The Impact and Complex Effects of the COVID-19 Pandemic on the Working Environment and the Use of Coworking Spaces in Malta

Bernadine Satariano and Thérèse Bajada

1 Introduction

The COVID-19 pandemic and the restrictions related to it during the first wave have altered the way people used to operate and work across the world, including that of Malta [2, 13]. This chapter will focus on how the COVID-19 pandemic has impacted coworking spaces in Malta and how this may affect the future of coworking spaces within Malta.

Malta is located in the centre of the Mediterranean and is a highly densely populated country. The population of Malta is continuously increasing, yet the highest population increase was mainly due to the increase in foreigners living in Malta for employment purposes. As a matter of fact, the population has increased from 9% of the total population in 2014 to 20% in 2022 [11]. Indeed, the idea and use of coworking spaces in Malta started around 2014 when Malta increased its incentives concerning the quaternary industry [1, 8]. The number of Maltese employees working remotely or teleworking until the COVID-19 pandemic was 11.7%, below the average of the European Union [7]. Within the Maltese context, the possibility of remote working highly depends on the employer and the type of work [3]. Yet, during the pandemic months of March and April 2020, around a third of the Maltese population was working from home [10].

Presently, there are around 30 official coworking spaces in Malta, most of which are predominantly located in very central areas: Valletta, Sliema, St Julians and Mosta [9]. Informal coworking spaces such as libraries or cafeterias have been long

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established in Malta. However, such spaces have not been utilized by employees but by self-employed persons and students.

Considering the scenario, this chapter aims to explore how the COVID-19 pandemic may be considered a determinant of change, causing a shift in where people choose to operate and work within the Maltese context. During the COVID-19 soft lockdown that took place between the 12th March and early July 2020, Maltese employees in the public and private sectors worked remotely, mostly from home. Therefore, this chapter aims to explore: (i) if coworking spaces may be considered an alternative space of work and; (ii) if coworking spaces can be utilised as places of work during and following the COVID-19 pandemic.

2 Methodology

In order to understand the nature of change in working spaces and the complexities created by the COVID-19 pandemic, this chapter makes use of data collected from two owners of coworking spaces centrally located in Malta, five traditional employers and two members of an employers' association entity. The semi-structured interviews conducted between November 2020 and February 2021 followed a 'tree and branch' approach [12]. The coworking space owners were asked about the choice of location of their coworking space and how this influences their business and the number of users. They were further asked about how the COVID-19 pandemic measures at that time were impacting their business situation and how this scenario will impact the future of their business. On the other hand, the traditional employers and the members of the employment association were asked about their perception of the future of coworking spaces and how, with the pandemic, these workspaces may be affected. They were also asked about how the pandemic has affected their business and what decisions were taken to tackle such problems.

Interviewing these varied respondents, has enabled the possibility of better understanding the complex and nuanced experiences related to the effect the pandemic has on coworking spaces. The narratives were analysed using a constructivist-grounded theory approach [4]. This enabled a better understanding of the participants' viewpoint and the meaning of how things operate within the participants' contextual environment [6]. Through qualitative interviews this approach gives the possibility to the participants to narrate what is important to them. The verbatim transcripts were coded under themes and topics related to coworking spaces and the effect of the pandemic, thus making use of an "open coding" approach [5] (Table 1).

3 Analysis

From the narratives it emerged that there are a number of issues related to the pandemic and the contagion which are influencing the use of coworking spaces

Table 1 List of participant respondents

Type of employment space	Participant	Location	Years established
Coworking space owner (CWS)	P1	Valletta	3
Coworking space owner (CWS)	P2	Birkirkara	3
Traditional space owner (TWS)	P3	St Julian's	2
Traditional space owner (TWS)	P4	Birkirkara	5
Traditional space owner (TWS)	P5	Luqa	17
Traditional space owner (TWS)	P6	Lija	3/10 (two companies)
Traditional space owner (TWS)	P7	Paola	11
Employment entity	P8	Floriana	72

in Malta. The first section will analyse how the COVID-19 pandemic has directly affected the use of coworking spaces while the second section will analyse the possible effects of the pandemic as interpreted by the different respondents indicating how much the COVID-19 pandemic has created a shift in the way people may work in the future and make use of coworking spaces.

3.1 The Immediate Effects of the Pandemic

Coworking spaces were primarily affected by the measures taken by the government ordering social distancing. This therefore made people stop from making use of coworking spaces. Those individuals who chose to work in coworking spaces for the purpose of social interaction and the possibility of new business opportunities were highly affected as the measures taken to stop the spread has affected their interaction and also the possibility of new business opportunities.

> The lull in occupancy because a lot of people pull back, the business uncertainties, marketing gets cut. (P1)

In view of this, people did not see it viable to pay and reserve a place in a coworking space as this started being perceived as an extra expense.

> Something like a coworking space arrangements can be seen maybe as somewhat of a luxury, if you can just work from home and have to work from home anyway. So, I think this industry, took a significant hit during the pandemic. (P4)

The fact that one has to wear a mask throughout the day may influence some individuals to opt to work from home rather than making use of a coworking spaces.

People may decide to remain at home as they do not work comfortably for eight hours a day with a mask.

> Well look, at the moment, because of the measures… in terms of actual functionality because anyone here has to wear a mask. I don't have to wear a mask at the moment because I'm in this closed booth, but if I was in the common space I'd have to wear a mask and some people don't really like wearing masks so they decided, you know what I'll just stay at home. (P2)

With the pandemic those who used to travel to work using the bus started using alternative modes of transport to the bus as they did not consider it safe, such as using a taxi.

> So in terms of mobility they would just kind of stay home instead of going out to the office, sort of thing. (P1)

People also may have stopped using coworking spaces with the pandemic as it was not considered safe to use a working space after another person. This is so since the surfaces used may be contaminated with the virus in comparison to the spaces at home.

> Coworking spaces, my impression is, it was affected because of the fear of getting the virus if you go to work in a place where other people are present as well. So unless one would have his or her own office space and it's shared office space, definitely, it was affected because of protocols and safety issues and even fear of not being physically in presence of other people. So most probably there was a downturn in the demand of those venues as well. (P5)

According to the employers' association coworking spaces were mostly used within a Maltese context as a space where business ideas were being tested. However, with the pandemic these business ideas, projects or opportunities were all halted due to fear of bankruptcy. Therefore, the users who were using coworking spaces for the possibilities of such opportunities stopped from making use of such spaces. Furthermore, those users who made use of coworking spaces as previous to the pandemic could not find available office spaces, with the pandemic this scenario changed for them. Office spaces started becoming more available as some offices released their offices since their employees started to work from home. Therefore, according to the employer association coworking space owners suffered also as they did not continue to receive new users.

Another emerging effect was the fact that a coworking space environment is built and designed in a manner that fosters social interaction. Therefore, some spaces do not afford to keep a safe distance from one desk to the other. This lack of safe distance may hinder individuals from making use of such coworking spaces. Furthermore, with social distancing measures there would be limited desk use within coworking spaces.

> COVID-19 and coworking spaces… safe distancing between desks is going to limit the use of coworking spaces definitely they will have to be—tenants would have to be separated a bit more obviously you can't fit one person per 10 square meters, one person per five square meters anymore, they have to be more secluded for safety and health reasons, definitely. I mean, that's it. I think everything else should be, more or less, business as usual. (P6)

Additionally, within a coworker space one may not know the daily habits of socialisations or the health conditions of the other coworkers working in close proximity. This lack of knowledge of people's health circumstances and lack of trust in other coworkers' hygiene might deter individuals from making use of such spaces. Participant three compares this with a traditional office spaces environment where employees know their colleagues well and their health circumstances.

> It's quite a big effect in my honest opinion… you don't know who's going to be working with you that day. With regards to traditional office spaces I am in the office, three, four times a week with people that are there every single day and I know who they are so I feel a lot a lot safer. If you had to look at co-working spaces on the other hand you don't know where the person who you literally working next to has been so it's more unsafe in that case. (P3)

3.2 The Complexity of the Future of Coworking Spaces

The coworking space owners no matter what, look forward to how the pandemic itself may change the way things used to operate in Malta. They feel that since in Malta most of the working environments are private offices now with the idea of moving from a mostly physical to a more online approach, employees have the possibility to work from anywhere.

> But I think that it will—there will be a bounce back such that the value of this sort of offering will become very evident to many companies, very suddenly. (P2)

Some coworking space owners argue that although the pandemic has caused the closure of some coworking spaces across the globe, there may be the likelihood that the pandemic will result in changes of how Maltese businesses start to operate. This change may be as business owners may not be able to afford the rent of the office and will start making use of coworking spaces for when there is the need of certain meetings. Therefore, there may be the possibility of a change in relation to use of coworking spaces. Indeed, COVID-19 has also enabled many companies to go online. Companies who in the past never thought of going online have now shifted to this approach only due to the pandemic. This thus facilitates the option of working in coworking spaces as most of the work can be done online.

Yet, according to Maltese traditional employee respondents, one of the aspects that may be determining why within a Maltese context coworking spaces might not increase in popularity even after the pandemic, may be the awareness of the benefits of working from home. The COVID-19 pandemic started shifting the idea of working in an office environment and it has become more acceptable to work from home. Therefore, those who used to work in coworking spaces in order to show that they are operating in an office environment are now finding it more acceptable to use their home as an office as it has become an acceptable norm.

According to employees and some employers it is being realised that they can make better use of the time they used to spend travelling.

> In the sense that if you can work from home, I think with… all the traffic that we are used to I mean…, I would say that with the pandemic and this is the new mentality of people being able to work from home, I think mobility will improve simply because all those people staying at home will automatically create more room and space for those that need to drive and are finding less people on the street. (P5)

On the other hand, coworking space owners argue that the home environment is not always considered as healthy and efficient, and employees are not used to work within the home environment. Therefore, according to coworking space owners, employees are likely to seek a coworking space as it is an in-between space from home and an office environment.

> I think in general it has a positive effect because, whereas before, especially pre-COVID employees were for the most part expected to go into the office to work, now, given the opportunity to work from home, it could be that employees decide not to go to the main office but to go to a coworking centre so that they're not at home either on a kitchen table with all the mental cues that are so distracting when you work at home, but they don't have to make the trek all the way to central offices, they go to a coworking space. (P1)

However, some respondent employees who work from home are also seeing ways and means how to use places within the household that can only be dedicated for work within the household so that they can delineate between work and relaxation at home.

> I have a well set up home office space …when I close the door, I try to stop working…. it's not easy, but it's better than driving to an office every day (P4)

Respondents coming from small and medium businesses pointed out that within the Maltese context it would be more beneficial that people work from home rather than using coworking spaces in order to reduce traffic.

> I think I'd rather offer them [the employees] the possibility to work from home than from a coworking space because mobility is even much, much easier, you don't even need to drive to that coworking space. (P6)

Yet the traditional employers also pointed out that when individual employees feel the need to work in spaces that enable human interaction and socialization there is the likelihood of making use of a coworking space environment.

> Unless it's obviously the desire of the employee … that is working far away from the office only has an option to work from home and is feeling very isolated … then obviously, coworking spaces in those cases may make sense because if they're adding some socialising aspect to it and therefore the effort of mobility would at least be countered by the socialising piece. (P5)

Nevertheless, some traditional employees point out that within a Maltese context the need for socialisation is less valid. It was pointed out by one of the participants that since the Maltese community is highly bonded with their family and community there is little need for people to look for coworking spaces solely for socialisation.

> For the Maltese, there isn't a great need for coworking unless it is to have a slightly social side and to be working in a social place but as they generally are coming from a village or a town where their family are, and they've got friends from school, even if they work from home they still have an existing social life. So for the Maltese, no it's not like you're going to move to another end of the country where you don't know anyone. Part of the fact of a small country people generally don't move from one end to the other. So there's less benefit for coworking for the Maltese. (P7)

4 Conclusion

This chapter has shown that within a small densely populated country like Malta the impact of the COVID-19 pandemic has had an immediate and drastic impact on the use of coworking spaces. This chapter has indicated that the pandemic has multiple effects on the few coworking spaces in Malta and following the restrictions the future of coworking spaces emerged to be complex and uncertain. Several factors may be damaging for the industry such as the idea of 'back to normality' and therefore people will go back to offices. Furthermore, it seems that what was enticing people to work in coworking spaces such as the idea of having an office, the possibility of involvement and investment in new projects and the need to go to a place of work now with the predominant culture of working from home and with the fear of a recession these demands have disappeared and so had an indirect effect on coworking spaces. Yet, the coworking space owners are hopeful that the pandemic will create a shift in how employers operate. Once the lease of offices has stopped, they might start seeing the idea of renting a coworking space as an alternative for a physical meeting. They are also hopeful about the fact that the pandemic has created the need of socialization even stronger than pre-pandemic and therefore, people are less likely to continue working from home and would be more likely to move out of home and work in spaces that provide socialization. Nevertheless, what is most determinant for the future of coworking spaces in Malta is the type of incentives that the government gives to both the employers and the employees in order to use the pandemic as a possibility of change which will enable people to have a good work life balance with the use of coworking spaces.

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Dynamics of Change at Work and Reactions of Coworking Spaces in the Aftermath of the Pandemic: Notes on Portugal

Elisabete Tomaz, Maria Gato, and Gislene Haubrich

1 Introduction

The COVID-19 outbreak forced governments to intervene to contain the spread of the virus and mitigate the multiple impacts on various aspects of economic and social life. These circumstances have had significant effects on the forms of work and the workspaces not yet sufficiently analysed. This exploratory research aims to provide a brief overview of the impacts and subjects related to CSs activity in Portugal, highlighting how they were affected by measures such as restrictions on mobility and telework regulations. It was carried out from January 2021 to September 2022 through desk research, fact-finding visits, and formal and informal interviews with coworking managers[1] and key informants in different locations across the Portuguese mainland to apprehend their reactions and perceptions about the current situation as well as the forecasted future.

[1] The CSs managers interviewed are included in a database in continuous update, which intends to map all CSs of Portugal.

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2 Brief Notes of a Pandemic and Its Effects

2.1 Main Pandemic Peaks and Policy Responses

Portugal registered the first confirmed case of COVID-19 on 2nd March 2020. The government quickly took a set of extraordinary measures[2] trying to contain the spread of the coronavirus, such as the closure of schools and universities, the temporary suspension of a wide range of non-essential public and private services, the prohibition of non-essential travel and public gatherings; the mandatory adoption of teleworking, among other measures (e.g., [2]). In the following months, successive pandemic waves hit the country, and several legal, financial, and regulatory measures to protect and support businesses and individuals were implemented by public authorities.

The teleworking regime was imposed on all functions that allowed it, urging companies and workers to adopt prompt solutions to continue operating under new safety measures. From the use of face masks to the rotation of work scales and time-lagged working hours to reduce interpersonal interactions and daily commuting, the entire society had to be mobilised to keep the country functioning while trying to control the pandemic.

Renewed twice, the first State of Emergency ended on 2nd May 2020.[3] Followed by the State of calamity (which covered the period between May and June), a plan of confinement in three phases was launched, allowing a gradual reopening of several activity fields, although maintaining partial confinements in municipalities with high and extreme risks. Later that year, after the summer and with infection rates rising from September, the government reintroduced restriction measures concerning social gatherings, namely in restaurants, culture, and leisure venues.

A new State of Emergency[4] had to be declared at the beginning of November, and stricter restrictions were implemented. The number of cases exploded in early 2021, and a second lockdown started on 14th January 2021, forcing the use of tighter measures again.

[2] Decree of the President of the Republic No.14-A/2020 of 18 March 2020, available in Portuguese at: https://bit.ly/2RAHCiS. During this period, the state of emergency was regulated by Decree No.2-A/2020 of 20 March 2020, available in Portuguese at: https://bit.ly/2V4qRie.

[3] On 2 April 2020, the state of emergency was extended until 17 April 2020, and was then renewed again until 2 May 2020. Decree of the President of the Republic No.17-A/2020 of 2 April 2020, available in Portuguese at: https://bit.ly/2Xz3vml. During this period, the state of emergency was regulated by Decree no.2-B/2020 of 2 April 2020, available in Portuguese at: https://bit.ly/34E3grY. Decree of the President of the Republic no.20-A/2020 of 17 April, available in Portuguese at: https://bit.ly/2KrNKGi. During this period, the state of emergency was regulated by Decree No.2-C/2020 of 17 April, available in Portuguese at: https://bit.ly/3bA7ROr.

[4] Decree of the President of the Republic no. 51-U/2020, of 6 November and successively renewed until April 30, 2021.

2.2 Impacts on Work and Ways of Working

The declaration of a State of Emergency determined that teleworking was mandatory if the job performed allowed it. Until then, teleworking in Portuguese companies was almost uncommon and used mainly by highly skilled and self-employed workers on an occasional basis. According to Eurostat data, only 6.5% of Portuguese employees were in teleworking regime in 2019. However, containment measures due to the pandemic have led companies and workers to adopt quick solutions to continue operating.

The shuttering of many workplaces and schools has triggered an explosion in the number of new teleworkers, especially in the service sector (notably in education, financial services, insurance, consulting, and public administration).

During the second quarter of 2020, about half of the Portuguese companies operated in a teleworking regime, of which 90% were large companies and about a quarter were micro-enterprises [3]. In May 2020, the percentage of teleworking employees increased significantly, ranging from 30.4% reported by micro-enterprises to 93% in large companies [2]. In many cases, most such work was carried out from home, rather than any other location, under challenging conditions. The need to reconcile work and childcare, particularly by adapting domestic spaces and adjusting access to internet networks and technological devices in families with school-age children, was a significant challenge, especially for women.

Many urban dwellers, especially families when the schools closed, decided to temporarily move to second homes outside the big cities. Some managers interviewed by CSs in non-metropolitan areas revealed that broadband access was a motivation for desk rental, particularly those without a good internet connection at home. This situation was particularly noticeable in the Lisbon Metropolitan Area (LMA), where service workers predominate. According to Statistics Portugal [1], 15.6% of the employed population worked remotely in Portugal from April to December 2020. Among the seven regions (NUTS II), the LMA recorded the highest proportion (27.9%), concentrating 48% of the employed population in telework in the country. In the other regions, the proportion of the employed population working remotely was lower than the national average and was below 9% in the autonomous regions.

Many tourist developments, such as hotels and short-term accommodations, have been hit hard by the pandemic and provide all or part of the unit for other compatible uses, namely office and coworking spaces. The adaptation of its offer to a new customer profile, namely telework and digital nomads, has become constant.

In this period, several extraordinary social and economic procedures were also taken by the government—adjusted or strengthened as the pandemic situation evolved—to maintain household income (such as subsidies and justification of absences from work in case of illness or assistance to family members; moratoria on loans, etc.) or support business activity and employment. These included measures for the temporary reduction of standard working time or suspension of the employment contract (simplified lay-off); financial incentives to support the resumption or normalisation of firms' activity; government-backed loans; incentives to support the normalisation of the firms' activity, extended support for workers' lost income and coverage for those without access to unemployment protection.[5]

After a year of pandemic, many workers continued to have multiple resistances to leaving the permanent or partial teleworking regime (c.f., [5]). The possibility of decreasing the exposure to the virus has been converted into another type of argument listing the advantages of the option of teleworking, both for employees and companies. For the former, the timesaving in commuting could be converted into working hours and increased productivity, with cost savings in transportation and other expenses in the scope of professional activities.[6] From the side of the companies, the same operational results could be guaranteed with some cost production savings, namely in energy, space rental and other consumable supplies.

2.3 The Resilience of Coworking Spaces

Having emerged in Portugal in 2009/2010, the CSs phenomenon was in a cycle of pungent growth, with the opening of new spaces—increasingly diversified in their nature and location, when the pandemic suddenly hit the country. Of the 184 CSs in mainland Portugal at the time, 52% were located in the LMA (n = 95), with 43 new CSs opening in 2019 (about 45%). In the Porto Metropolitan Area (PMA)[7] there were 32 CSs before the pandemic, a little more than 17% of the total number of CSs in the mainland.

During the first lockdown, many CSs in Portugal had to close. Only a few remained open to answer to regular subscribers who got the mandatory justification for working outside the home. Faced with the unexpected situation that called into question the coworking principles, managers sought to maintain online activities to support their user community. As a result, many coworking spaces have developed virtual subscriptions (e.g., online memberships, virtual office services, online social events, etc.).

After the lifting of the mandatory confinement, the CSs gradually reopened, trying to recover revenues and the community of users, despite the uncertainty. They adapted their spaces according to the guidelines of the government and the Health Directorate-General, namely, applying additional hygiene rules, wearing face masks, reducing capacity to enable a greater physical distance between users, and providing only fixed desks for a longer period, among others.

[5] Measures approved by the Portuguese Government through different entities to support citizens and businesses are available on the portals of Social Security (MTSSS) (https://www.seg-social.pt/covid-19); Institute for Employment and Vocational Training—IEFP (https://www.iefp.pt/covid19) and IAPMEI - Agency for Competitiveness and Innovation). See also Martins et al. [4].

[6] See also the study of *Robert Walters Consultants* about Portugal. https://www.robertwalters.pt/hiring/hiring-advice/produtividade-portugueses-aumenta-com-teletrabalho.html.

[7] The PMA integrates 17 municipalities under the influence area of Porto, the second largest city in Portugal. Unlike the LMA, which is an independent NUTS II region, the PMA is part of the Norte region (NUTS II).

During the summer of 2020, a period with lower occupancy, many CSs experienced an increase in demand, especially from occasional users and digital nomads.

The second lockdown was much less severe, and the vast majority of CSs interviewed remained open, following the respective governments' guidelines and measures. The need to answer to the new challenges also led to new forms of organisation to jointly seek solutions. For example, five CSs in Porto organised themselves in a partnership to find solutions to maintain the spaces running in case of new temporary closures and answer new pandemic challenges. The regular contact between the five founders was one of the aspects that they valued most. Besides, they used this partnership to make collective purchases like hand sanitiser and obtain financial deals with suppliers. They also created the campaign #SafeCoworkingPorto regarding the expected behaviour while returning to space through social media and placing posters strategically in each CSs area (Fig. 1).

In general, in the following months, the demand for spaces seems to have changed: from spaces for larger groups to smaller and more flexible configurations, and social events in-presence to online community-building events. For the private CSs, this situation has compromised an important income supplement from the rental of event space or meeting rooms.

In many interviews with coworking managers and key informants, the mandatory, and later, the recommendation of keeping the remote work was seen as an opportunity for the growth of these spaces in alternative to traditional offices. It was widely reported that daily users sought better access to the internet and separation between private life and professional activities in an environment that could improve their productivity. In addition to the generalised fatigue related to the overlapping of daily activities confined to the domestic space, the advantage of enjoying a work environment that is, at the same time, a meeting place for equals allowing separation between professional and private life, was also highlighted.

The demand for companies was a new feature also reported in the interviews. After improving digital tools, several companies started reconsidering their investment in office spaces, mainly those traditionally located in the city center of Lisbon and Porto, where the rental prices are quite high. Alternatively, several companies started offering CSs user passes to their employees, keeping them in telework but not necessarily confined to the domestic space.

Some respondents also predicted that the physical relocation of companies to suburbs and smaller towns could be a significant trend in the future.

The health crisis has undoubtedly caused financial difficulties for CSs and their users. Some private managers reveal that they had to negotiate with the property owners to pay the rents since they did not have the support of public entities, as well as their tenants, for example, reducing the prices of their offer.

Finally, it should be noted that CSs continued to grow with resourcefulness. COVID-19 demonstrated that it is possible to work anywhere, generating even more interest in places with greater flexibility in rental contracts and working hours, and avoiding the social isolation inherent to work from home.

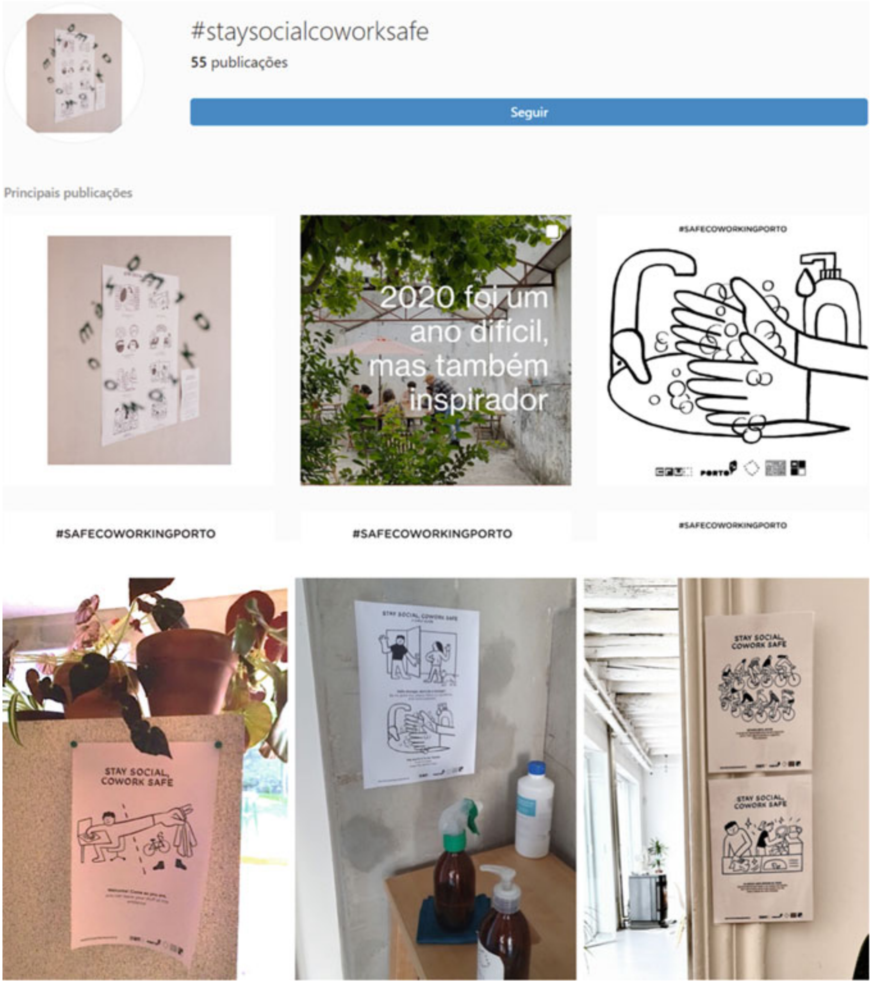

Fig. 1 Social media campaign #SafeCoworkingPorto and orientations to operate during the pandemic (author's photos)

3 Policies and Trends Toward Coworking Spaces

Local governments play a vital role in promoting the business ecosystem and developing CSs as innovative and collaborative practices for fostering cities' dynamism.

Regarding the policies, many changes in labor legislation were implemented during the pandemic crisis, leading to the approval of new labor legislation in Portugal in December 2021. The new laws that came into force in January 2022 aimed to frame and protect remote workers but also to make Portugal an attractive destination for digital nomads, the foreign remote workers known for their distinctive lifestyles and high mobility. Although Portugal does not have a visa program especially directed at digital nomads, the attraction of this new type of mobile worker has been receiving new legal frameworks (e.g., Lei nº 23/2007 recently changed in August 2022). The government concedes D2 Visa intending to raise external resources and investments. This Visa allows entrepreneurs, freelancers, and independent service providers (non-EU/EEA/Swiss citizens) to reside temporarily in Portugal.

These are some examples attesting the production of legislation to frame a new way of working that will be maintained. From an atypical, marginal, and deviant contractual modality, teleworking has become a "normal" way of providing work, putting an end to a long-standing claim expressed by workers in various sectors of activity. Along with new rights[8] and duties, the new Labor Law[9] defines telework as "the provision of work under the legal subordination of the employee to an employer, at a location not determined by the latter, through the use of information and communication technologies." This law frames hybrid or mixed work regimes and allows employees to work in a place not determined by the company.

Considering the multiple resistances and mistrust that employers in public and private sectors maintained toward the teleworking regime until the pandemic crisis, and considering above all the specificities that are at the root of the emergence of CSs in Portugal, it became clear the strong impact of the pandemic on the increase of CSs throughout the country.

Between 2020 and the beginning of 2022 emerged in the Portuguese mainland 62 new CSs, which joined the 184 already existing. This represents an increase of slightly more than 25% in just two years (Fig. 2).

Of these 62 new CSs, only four are public spaces,[10] notably municipal ones still waiting for equipment to be used by municipal employees and others. This great disparity can be linked to two factors: (1) the attentive and timely response of private initiatives to the growing trend towards dematerialisation of companies in connection with digitalisation and new working possibilities; (2) the continuous resistance and mistrust on the part of the public sector towards teleworking. This reality also helps to understand why part of CSs Portuguese arose anchored in startups and the national network of incubators [6], as well as the unbalanced distribution of CSs across the territory. About 50% of the existing CSs in the Portuguese mainland are in the LMA and together, the two Metropolitan Areas (Lisbon and Porto) concentrate 88% of the CSs currently existing in Portugal mainland. This illustrates the unbalanced distribution between the two large cities and the rest of the territory.

[8] As the right to "disconnection", in which the worker has the right to disconnect and be unavailable after working hours.

[9] Law nº 83/2021, of December 6 that enter into force on January 1, 2022.

[10] Among the CSs that arose from private initiative, there are cases in which the municipalities provide the space within the scope of partnerships established with non-profit associations or private entities.

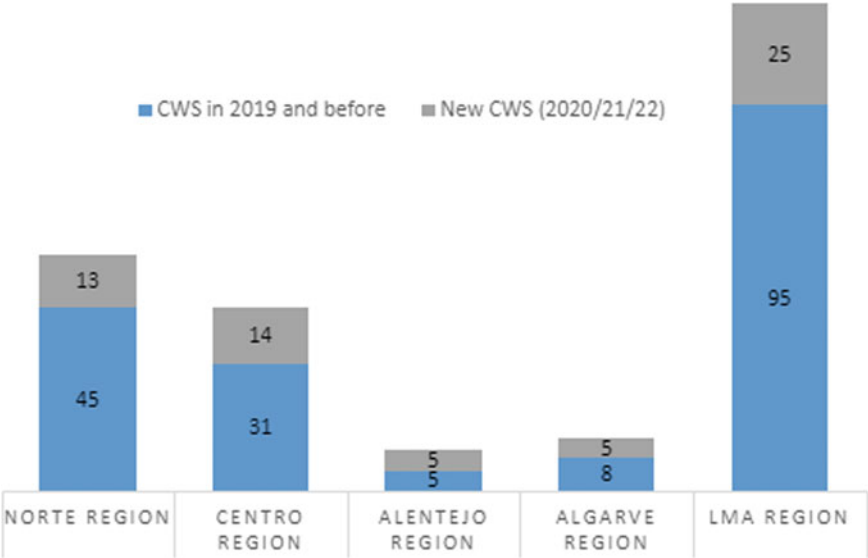

Fig. 2 Number of CSs in Portugal mainland by region (NUTS II), before the pandemic and the new ones (own elaboration)

Despite the significant effort of many municipalities in the interior to promote conditions of digital accessibility and the empowerment of their residents, there are still clear asymmetries in this area, and the distribution of CSs is only one example. However, the pandemic has accelerated an evolutionary work trend that goes beyond workspaces.

4 Final Notes

COVID-19 occurred during a particular moment in CSs history when the number and types of CSs were expanding sharply. It has also shifted the attention from the Lisbon and Porto metropolitan areas to smaller urban cities and rural towns.

During the pandemic crisis, the variability of advantages and disadvantages for employees and companies in terms of work regimes, spaces, and organisation of people's daily lives has become more evident. It is not expected that CSs will replace traditional offices that have been dematerialised in the meantime. In the post-pandemic "normality", it is likely to be frequent to use flexible spaces, such as CSs, in combination with work from home and presence in company offices.

Furthermore, some irreversible transformations in the Portuguese labor field have come to respond to long-standing demands, framing the rights and duties generated by new ways of working in new workspaces. Portugal was the first European country to legally regulate the telework regime in the private sector. In December 2021, a new law came into force, introducing an unprecedented openness in the work regime and promoting the proliferation of CSs, both directly and indirectly.

Being particularly attentive to the new concerns on the part of workers and the more flexible reactions on the part of companies, several private entrepreneurs saw the circumstance generated by the pandemic as an opportunity to install CSs in new locations inside and outside cities and develop attractive offers to meet the needs of new users.

At the same time, the CSs market is increasingly seen as appetising for large real estate companies and other sectors, which can undermine the original mission of CSs—providing collaborative and community environments. In addition, some firms are renovating their offices following the CS model to attract their employees back.

Beyond all the advantages in terms of working spaces and facilities, the social dimension of CSs and the intrinsic philosophy of co-participation and collaboration are becoming more and more important, given the growing labor autonomy.

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Concluding Remarks: European Narratives About the Effects of the COVID-19 Pandemic on Coworking

Marco Hölzel, Mina Akhavan, and Divya Leducq

1 Structure and Origin of the Sources

This book aimed to get an overview of the effects of the COVID-19 pandemic on work, new working spaces—as direct effects—and the effects on people's daily routines, work-life, well-being, real estate markets etc., from different countries. This book has collected narrations from 12 European countries on our object under investigation. The chapters are based on a working paper from 2021, which was used only internally, and authored by members of the Workgroup 2 ATLAS of the COST action CA18214 (2019–2023) 'The Geography of New Working Spaces and the Impact on the Periphery'.[1]

[1] www.new-working-spaces.eu.

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Regarding the differing situation, the sources and perspectives of the chapters vary and offer a broad spectrum of insights and findings from the different participating authors and countries. The collected conclusions are structured like the following structure and as far as on hand in the chapters:

- Effects on Coworking Spaces (CS)
- Governmental Measurements to curb the Pandemic
- Effects on Work, Remote/Telework Work, Working-From-Home (WFH)
- Effects on Commuting, Transportation Mods and Services
- Effects on the Housing, Place of Residence, Office and Real Estate Market
- Effects on Tourism
- Effects on Urban Planning.

2 Core Discussions: Various Topics about the Direct Effects on Coworking Spaces

The share of people working in public or coworking spaces are still low in **Estonia**. Still, an increase is estimated due to a general rise in remote work to growing awareness by companies, employees and the government. A government-owned company was issued to create buildings for staff and offer remote workplaces and public services in several counties already in 2018. New types of coworking spaces have occurred recently, like libraries, community centres, extraordinary spots like igloos, radio stations, art galleries etc., for an impressive work experience—transferring work to an event. The massive increasing number of Coworking Spaces in **France** before the pandemic received a drawback during the pandemic but is still growing. Besides, freelancers and self-employed workforce companies rent desks in Coworking Spaces to avoid the long-lasting restraints by renting an entire office unit compared to the sort lasting leases in coworking spaces. In regions with lower demand for desks, the combination with other uses offers an opportunity to lower the investment risk. After the closure of Coworking Spaces in **Norway** from March to May 2020, they were open again. Some activities have been virtualised or hybridized, and the number of CSs have grown in the following month. Libraries have become a new place to work or study remotely. Some centrally located CS started offering additional services and becoming an active part of the neighbourhood. In total, 45% of Norwegian CS are located in small and rural towns. The increase in the number of CSs in **Germany** has continued for years and was only slightly affected by the pandemic. Thanks to a governmental economy support program, most CS could weather the decrease in uses and bookings. During the lockdown, people stressed by the double task of private and professional life found an alternative to commute to the company's office in CS, closer to their residence. To perform work remotely was usual in the **Netherlands**, as well before the pandemic, but to work in a CS was not. The lockdown cut the yields from hosting events and meetings in CSs. People moving to lower-dense settlements could offer the opportunity to CSs to host remote working employees.

The measures tackling the spreading of COVID-19 hit CS in **Poland**, but they have been proven resilient, just losing some users and a massive decline in events. The pandemic accelerates the trend from bottom-up founded and operated CS, which are declining, to top-down corporate CS, which are growing in number and size. CS outside of the capital seems to be less affected by the pandemic. The contact restriction thwarts in-person meetings and reduces the establishment of a milieu and cohesion within the CS community and with the surrounding services [7]. Due to the contact restrictions, coworkers avoid CS, and online events increase as a substitute in the main cities of **Slovakia**. In more remote regions, the trend was the opposite. Several supporting schemes were taken to mitigate the effect of the ant-COVID-19 measurements on businesses. International operators of CS open new spaces in Slovakia, not only in the capital and offer flexible third places to perform work. CS increased the number of events, primarily virtual ones, in the COVID-19 waves, especially in east Slovakia. The pandemic and the migration of refugees from Ukraine raise the growth of the CS sector, especially in the main cities of **Turkey** but in remote touristic regions. CS offer new services such as virtual offices with a postal address, cargo and phone receiving. Companies are starting to book desks for their employees in CS to offer alternative workplaces and reduce office maintenance costs. Starting in Budapest, the capital city of **Hungary** with a considerable post-industrial economy and creative business, in 2009, Coworking Spaces have spread sparsely in other regions in the last ten years and continued this trend during the pandemic. Without any support from the government, coworking spaces must solve the pandemic situation on their own. Cancelled events, an important revenue source, forced some CSs to move to the periphery. In remote regions, CSs have been used for quarantine separation rooms or to offer remote teaching.

In **Italy**, CSs have been affected by the COVID-19 pandemic in varying kinds. Large CSs, which also give leases to companies, were more likely to survive the pandemic, but several were shut down. A similar trend occurs in remote regions where the CSs also stayed more stable. In general, the number of customers is rising, financial aid by the government does not offer accessible support to CSs, and only a view could negotiate rent discounts and the like with their landlord. Spatial redistribution of work provides a chance for local CSs. Additional to the service of desks and workspace, they could provide services like childcare etc., to facilitate work-life balance. Since the occurrence of CSs in **Malta** in 2014, they have been used mainly by freelancers and self-employed. With the experience of working from home, it is expected in the future that work will be performed by employees not only in the company's office but also at home or in a CS. The missed social contact while people working from home could be offered in CSs. In the first wave of COVID-19 in **Portugal,** CSs could not stay open during the lockdown. The reduced number of users generates a loss of yields. Rural CSs could gain new customers, especially if they could offer high-speed internet access. Stressed by the overlapping private and professional life, people working from home seek an option to separate both sides and found that in nearby CSs. At the same time, the CS offer alternative or additional social contacts and interaction.

3 Discussion of other Topics Related to the Effects of the Pandemic

3.1 Governmental Measurements to Curb the Pandemic

In the globally connected world, it was just a question of e few days until every European country was affected by infected people and the governments must adopt measures to reduce the spreading of the virus. According to international recommendations and scientific standards, e.g., personal and physical contacts have to be reduced, the transmission path through the air should be reduced by declining the number of viruses in the air by wearing masks, raising the air change rate etc. and obligatory use of hand sanitiser to avoid contact transmission. Depending on the different situations in the countries, the measurements adopted by the government were slightly different.

For **Estonia**, the governmental restrictions to stem the pandemic were not as intensive as in other European countries. In **France**, the batch of restrictions, administrative closures, and barrier gestures was set with the spread of the COVID-19 virus first in main cities, alter in the countryside. The restrictions due to stem the spreading of the virus were strict in **Norway** related to other Nordic countries. The **Netherlands** received two primary waves of COVID-19 with a lockdown of public life.

The anti-COVID-19 restrictions in **Poland** were relatively moderate, related to other European countries. **Slovakia** was heavily affected by the COVID-19 pandemic, with a drop in GDP, like Spain, Italy and France. The governmental measures to tackle the spreading of the pandemic boost inflation and currency crises in **Turkey**. **Hungary** was challenged by spreading the COVID-19 virus in a core-peripheral pattern in the first wave, followed by several. The restrictions enacted were shorter than in other EU countries.

To tackle the spreading of the COVID-19 virus, **Malta** was put in a kind of soft lockdown. To avoid an infection, people avoid meeting others. With the arrival of COVID-19 in **Portugal,** the government has taken measures and set regulations to protect lives and mitigate the economic and social effects of the contact restrictions.

3.2 Effects on Work, Remote/Telework Work, Working from Home (WFH)

Estonia put its effort into the ICT sector already before the pandemic. Hence people were well prepared for the demand of remote work. Blurring the boundaries between private and professional life is a challenge to be regarded, like social isolation, work environment etc. The Estonian Parliament is also working on an act to secure healthy work conditions for remote work. The government is pursuing a policy to keep the share of central administrative staff low and hire people from more rural regions, to stay there and work remotely. In pre COVID-19 times, **France** was not keen on remote work. With the need to reduce personal physical contact to stop/reduce the spreading of the virus, employers and the entire society must reconsider this. Germany got a boost in remote work from the contact restrictions and calls to work from home. Some employees get stressed by the double task of private and professional life; after lifting restrictions, people still prefer to work from home. The government is working on an adaption of the employment law regarding mobile work opportunities. **Norway** has already before the pandemic a high share of jobs in the tertiary sector. The kind of work in the tertiary sector is mainly knowledge work which could be performed remotely in huge shares. Different from other countries in the **Netherlands,** people are used to working remotely, from cafes, libraries, CSs—third places—or from home. In inner-city districts, where space is scarce and expensive, working from third places such as libraries or Cafes is common.

After lifting contact restrictions in **Slovakia,** workers tend to keep shifting between onsite presence and remote work from home as a comfortable option to make use of both types of working [3]. **Turkey** has experienced a remarkable rise in remote work in the last decade, already before the pandemic, starting from Istanbul and spreading to other major cities and later more remote locations [2]. Remote work received an enormous boost in **Hungary** of the contact restriction due to the pandemic and nearly triple the share. After the ease of restrictions, the numbers decrease slightly but are still above pre-pandemic. Regarding sectoral, socioeconomic and territorial verities, not everyone can work remotely.

Traditional employers in **Malta** maintained the work-in-the-office culture. With the contact restriction, work must be performed remotely. This experience seems to change the common way of working in the office culture. The contact restriction creates a lack of social contacts. Working at home could not substitute these social interactions. To reduce physical contact and reduce the spreading of the virus, **Portugal** set up a telework regime wherever possible. The number of remote working employees skyrocketed, notable in the service sector, e.g. education, finance, insurance administration etc. Before the pandemic, remote work was uncommon, with only high-ranked staff and occasionally.

3.3 Effects on Commuting, Transportation Mods and Services

Regarding the yellow vests protests in **France**, mobility costs were already an issue. With the option to work remotely, the cost of work issues can be reduced, and it becomes more likely and cost-saving to move to the periphery, more remote areas. Some remote peripheral CSs come along with an opportunity to live in combined housing and working project. During the COVID-19 waves, the number of users of public transport services drastically dropped in **Norway**. Campaigns are launched to get people back to public transport, especially if they commute less often. During the high waves of COVID-19 in the **Netherlands,** it was recommended to avoid the commute. With spatially dispersed workspace hubs in **Italy,** employees could save the commute and use the time for work-life balance.

Two new imperatives have emerged due to Covid and directly concern home-work mobility. On the one hand, it is a matter of encouraging the connection of coworking spaces to public transport and, on the other hand, of promoting active modes of mobility and the city of proximity thanks to coworking spaces which concentrate on other amenities than the only workspace.

3.4 Effects on the Housing, Place of Residence, Office and Real Estate Market

While the number of visitors in grocery stores, train stations etc., dropped, increases the number of users in parks—outdoor, open-air amenities in **Norway**. People start moving outside main cities and demanding larger properties, shifting the view from the city core to more remote, green and lesser dense locations for residents and offices in **German.** This offers opportunities for dwellers and companies to save money and time. With no need for a short trip to the office or school, people in the **Netherlands** tend to lower dense settlements with easier accessibility open green spaces or private gardens.

The demand on office market in **Poland** is looking for short-term leases, like cooperate coworking, to keep maximum flexibility. Besides the typical office locations, the demand seems to move closer to the residence and is less centralized. The occupation rate in CSs is higher than the typical office market vacancies. Companies are looking for short-term leases in **Slovakia,** and the marked demand moves from typical offices to ready-to-work, furnished and installed desks, ass CS can offer. The conversion of cultural heritage buildings provides an opportunity and could set a new trend. Forced by the contact restrictions, people moved to their hometowns, only travelling occasionally for meetings in major cities. Suburban towns and attractive regions, like, e.g., Lake Balaton, ca. 1 h from Budapest, are gaining population in **Hungary,** still in the pandemic, especially with highly skilled people.

With the fading pandemic in **Italy,** companies have started to run hubs geographically dispersed, offering their employees desks and a place to work closer to their place of residence. With the experience in **Malte** that employees could perform their work from home, employers could realise, there is no need to own or rent a company office just to offer a desk. As an alternative, CSs could offer desks and meeting rooms for occasional encounters in real life. With the lockdown and contact restriction in **Portugal,** urban dwellers moved to second homes in rural regions. When offices and schools were closed, the demand for commuting vanished. Companies are considering a move outside of city centres: some offer their employees CS memberships, and others dedicate their floorspace for coworking.

Among the points of convergence that can be noted in the various chapters are the attention given or sometimes found for rural areas and small towns on the margins of metropolises and large cities. Indeed, in France, Estonia, and Portugal, the possibility of high-speed connections to work from anywhere has allowed many households to invest in these territories and settle there during the pandemic. The question is, how long will these territorial effects last? Are they long-lasting? Rousseau M [5] show that these newcomers to the countryside are, in fact, few in number and that the trend has been confirmed mainly by COVID-19.

3.5 Effects on Tourism

In Southeast **Estonia**, a region with a declining population, from July 2020, a company has been organizing hosts in this region for people who want to stay in the countryside and get the opportunity to work from there. The company has widened their target group from domestic now to neighbouring countries like Poland and Germany. Without the need to commute to the office, many people in **Norway** moved to their cabins/weekend cottages in rural, sometimes touristic regions, spending more time and money there.

As a new trend, CSs have been opened in touristic destinations in **Turkey**. Some coworking spaces in the main touristic region around Lake Balaton in Hungary offer not only desks and workspace but they also provide accommodations. During the COVID-19 restriction, this combination offers a greater source of revenue. Hotels and other touristic enterprises in **Portugal** have been hit hard by the lockdown. They could cover some losses by renting rooms for businesses or as coworking spaces.

3.6 Effects on Urban Planning

By questioning the workplaces, COVID-19 re-examined the question of the quality of urban life, and the possibility of densifying urban living spaces while preserving quality and meeting spaces for the inhabitants (green spaces, public spaces). It also re-interrogated the role of actors, public (mayors) and private (small and medium enterprises, local agencies…), as capable of understanding the bottom-up dynamics of coworking, co-living and the capacity of other semi-public spaces to become commutators for the city (café, thirds spaces, library…). The last point that the pandemic has shown in terms of land use planning is the great interdependence of the territories concerning each other, beyond the revenge of the small and medium-sized cities on the metropolises.

4 Final Remarks: A Framework for Future Research on the Effects of Coworking Spaces

In this final chapter, we summarised and highlighted some of the core topics discussed in the previous chapters regarding the effects of the pandemic on CSs. The findings discussed in this volume confirm the previous studies on the effects of the new working spaces in general (see [1, 6]).

Although the literature on this topic is growing fast, empirical studies on the effects of new working spaces are limited (see, for example, [4, 8]). Table 1 summarises the main topics related to studying the direct and indirect effects pre and during the COVID-19 Pandemic. This can be used as a theoretical framework for future empirical studies on the effects of NWS, particularly CSs. This book intended to contribute to empirical studies. Future research works should consider seriously producing evidence that can be transferred to policymakers at different levels: regional level (EU, for example), national (in particular deprived and marginal areas of the country) and local level (city administrative and municipalities) so they can consider tailored policies and planning for better diffusion of such new working spaces for all.

Table 1 Direct and indirect effects of the new working spaces; positive and negative effects of the pandemic

Direct effects (on the individuals)	Cost saving (office rental, office energy consumption); increased flexibility for employees (reduction of time lost by employees due to commuting to work; higher motivation and work-life balance; reduce their risks of isolation; increase meeting and networking opportunities; boost business collaboration and promote innovation; foster employee work productivity and working efficiency; improving job satisfaction and well-being; help mitigating gender issues (specialized female-focused spaces); keeping older generations in the workforce		
Indirect effects on the living, working and built environment)	Space and economy	Environment (energy)	Urban planning and policy
	• **Urban regeneration** and **revitalization** of abandoned/underutilized spaces. Development of spontaneous **communities** in the neighbourhood (i.e. Social Streets in Italy) • Transformation in the **public space** (temporary installations, permanent/new elements) • Pandemic "working from everywhere" → **development potential for peripheral areas** • Enhancing rural attractiveness • Gentrification effect (digital nomads vs. local village population)	• **Pollution** reduction • Decreasing **traffic** congestion • Enhance the **energy use** patterns both at home and associated with travel/transportation • Reduction of greenhouse gas emissions • Rebound effects (private mobility increases during the Pandemic—also in the case of peripheral and remote areas)	• Changes in the urban transport planning • Policy on remote working and teleworking • Alternative uses for traditional office spaces and changes in real estate prices • Rethinking local urban plans: the **concepts of 15-min city** and neighbourhood coworking—due to pandemic restrictions

(continued)

Table 1 (continued)

Effects—during the pandemic	Negative impacts: • Imposed working from home: many NWSs were closed—and then re-opened with few coworkers • Imposed working from home: social distancing, isolation issues, and need for more proximity • Gender issues? Some data say that work-life balance has been harder for women during the pandemic Positive effects: • The rise of remote working: less community, less traffic, less centralised office spaces needed • "Working from everywhere": potential for peripheral areas and rural development? • Teleworking revolution and public awareness of teleworkable sectors • Gender issues? Women can benefit more from flexible working models → NWSs may become the future of workplaces, replacing the traditional office concept → Reshaping local urban plans: the concepts of 15-min city and neighbourhood coworking? → Will NWSs thrive in the post-pandemic society?

Source Adapted from Mariotti et al. [4]

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