Means of organizing used by sole, micro-, and small entrepreneurs

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Abstract

Various means of organizing can be identified in crisis situations and examined using the structural approaches of organization, management, and complexity theories. These theoretical perspectives are needed because they complement rather than exclude each other. In the present study, data were collected via interviews with sole entrepreneurs, micro-entrepreneurs, and small entrepreneurs (N = 32) who worked in the taxi industry in the Helsinki Metropolitan Area, Finland between March 17, 2020 and July 16, 2020. During that period, which marked the first wave of COVID-19, public restrictions in the Finnish capital region were at their strongest. The qualitative data analysis results showed that, during this exceptional pandemic crisis, the participants organized their work based on complexity strategies of simplification and complexification. Instead of employing a single means of organizing, the entrepreneurs simultaneously implemented economic, knowledge-based, and/or innovative organizing, which strengthened, enabled, and/or limited their business operations.

Keywords

organizing, complexity strategy, complexification, simplification, pandemic crisis

Introduction

The first wave of the coronavirus disease (COVID-19) pandemic and related government restrictions extensively affected social activities worldwide and created an environment of uncertainty. In enterprises, uncertainty leads to the inability to predict or prepare for a course of action that will lead to the desired results (Donaldson, 2015). On March 17, 2020, the Finnish government imposed a rare state of emergency and related social restrictions under the Emergency Powers Act (1552/2011). Finland had last enacted emergency legislation during World War I and World War II in the first half of the 1900s.

COVID-19-related restrictions directly affected the taxi market in Finland by significantly restricting the movement of people. The Finnish government (2020) restricted travel, including airport-related transport, closed the borders of the Helsinki Metropolitan Area in the Uusimaa region to almost all traffic, restricted movement at the country’s external borders, and mandated remote work. Similarly, strict restrictions on movement and gatherings were imposed in other countries to prevent the spread of COVID-19. These restrictions reduced or hindered market functions in various ways, depending on the nature of the affected industries (Bartik et al., 2020; Etemad, 2020; Haneberg, 2021; Klyver & Nielsen, 2021; Tchinda & Dejardin, 2021).

In response to changes in the external operating environment and the uncertainty caused by the pandemic, entrepreneurs took various actions to manage their altered working conditions and limited financial and human resources (Boiral et al., 2021; Childs et al., 2022; Pathak et al., 2022; Vinberg & Danielsson, 2021;
Zheng et al., 2021), which can be examined through the concepts of organizing and complexity strategy. The structural approach contributed by organization theory to management research is often criticized for ignoring the external environment by focusing on the organization’s internal means of organizing (e.g., Aksom & Firsova, 2021; Donaldson, 2015; Peltonen et al., 2018). However, to meet the demands of the external environment, means emanating from the organization are needed, and structural approaches to management are suitable for studying, for example, work performance, employee turnover, or work attitudes (Pfeffer 1991).

Interaction related to complex phenomena and the resulting cooperation with internal or external actors in changing circumstances also require the organization to provide concrete tools and working methods, as well as strategies based on them. A theoretical contribution of this study is combining two structural approaches of organization and complexity theories—simplification and complexification—in the working environment of the pandemic crisis, which has not been studied to such a degree in previous studies. Complexification and simplification research developed by Joosse and Teisman (2021) is still in its early stages (see also Joosse, 2022). However, these complexity strategies can contribute to understanding the significance of organizing during an external pandemic crisis and the diversity therein.

Schindehutte and Morris (2009) examined the model of strategic entrepreneurship and stated that without complexity science, the relevance of most firm-level theories in strategic entrepreneurship can be considered descriptive, static, or focused on interaction and reversible processes; they thereby simplify the complex reality of decision-makers and neglect the dynamism inherent in entrepreneurial systems. The authors called for considering key features of strategic entrepreneurship in qualitative rather than quantitative approaches because it ends at the same numbers as strategic management and concentrates on the growth or superior financial performance of the firm (Schindehutte & Morris, 2009).

In this study, entrepreneurs qualitatively assessed the financial situations of their enterprises as they organized their work and evaluated the effects on their business operations during the pandemic. Instead of complexity, strategies during the coronavirus pandemic crisis have been studied from different perspectives, such as defending and offensive approaches (Manolova et al., 2020), along with accommodative strategy (Thakur & Hale, 2022) or integrating both micro- and macro-perspectives (Newman et al., 2022). Entrepreneurs’ organizing is also closely linked to, for example, various coping strategies of crisis (e.g., Wentzel et al. 2020; Puumalainen et al. 2023), in which case it is possible to examine, for example, entrepreneur-related factors, such as resilience (e.g., Belitski et al. 2021; Portuguez Castro & Gómez Zermeño, 2021), or organizational and strategic routine and their related entrepreneurial orientation (e.g., Cougar et al. 2023; Lukito-Budi et al. 2023). In addition to the strategic perspective, according to Fasth et al. (2022), 72% of small and medium-sized enterprises (SMEs) did not have a crisis plan before the COVID-19 pandemic, and most companies’ working methods were based on the process of an emerging nature of situation where decisions were made by gut feeling. Thus, it could be assumed that due to the lack of planning, their means of organizing and the related problem-solving were emphasized as they managed the difficult situation in the early stages of the coronavirus pandemic.

In this study, the importance of reconciling the organization’s internal working environment organizing and strategies for the complexity of the external environment became clear, especially in the spring of 2020. At that time, companies in different sectors in Finland were able to apply for various forms of financial support granted by the Finnish government (Ilmakunnas et al., 2022) to improve their operating conditions during difficult economic situations. The first round of subsidies from Business Finland and the Centre for Economic Development, Transport, and the Environment (ELY Centre) targeted small, medium, and large enterprises. To receive subsidies, companies had to meet certain criteria to show that they had been able to operate before COVID-19-related restrictions. Although sole entrepreneurs were excluded from these subsidies, they were able to apply for municipal support between April and September 2020. According to Vinberg and Danielsson (2021), micro-enterprises might have been in a vulnerable position in terms of obtaining information about subsidies and engaging their related networks of authorities and companies during this period.

A survey by Tesi (2021) revealed that 59% of Finnish small and medium enterprises (SMEs) felt that the restrictions that began in March 2020 weakened their business operations, and 73% tried to influence their
businesses through various actions. Although the survey did not include enterprises with fewer than five employees, Tesi’s observations indicated that those companies were hit the hardest by the pandemic. Furthermore, Childs et al. (2022) and Etemad (2020) found that SMEs around the world faced stronger negative economic impacts from the pandemic than large companies and public institutions. Research findings on sole, micro-, and small entrepreneurs’ organizing during the COVID-19 pandemic have been internationally similar (e.g., Childs et al., 2022; Etemad, 2020; Siuta-Tokarska, 2021; Vinberg and Danielsson, 2021; Zheng et al., 2021), but the means of organizing have remained isolated or dispersed as a function of entrepreneur management to increase understanding in the most surprising situation of the pandemic. Therefore, their theoretical use from both the organizing and strategic perspectives of complexity still requires further research.

Crises involve considerable complexity, especially if their occurrence and consequences are difficult to predict and if very little research data on their progress exists. With the COVID-19 pandemic, efforts have been made to understand the significance of the pandemic crisis for different actors in society and more widely in different industries. The pandemic crisis has been used as a separate type of external crisis. Crises can be divided into the following categories based on their nature: political, economic, social, conflict, natural disaster, and pandemic crises (Miklian & Hoelscher, 2022). This study focuses on external crises to pandemic crises, meaning a global outbreak caused by a virus for which the population has little or no immunity (World Health Organization, n.d.). The lack of information and difficulty in predicting the novel virus and its potential severe form of disease or risk of death (World Health Organization, n.d.) made the first wave of the COVID-19 pandemic and the corresponding governmental responses through strict restrictions a discernible research phenomenon, context, and time period compared to the later waves of the COVID-19 pandemic.

The limited change in the operating environment as a result of the COVID-19 pandemic can be considered an exceptional external crisis of the organization, which differs from previous pandemics and the resulting financial difficulties in enterprises (e.g., Childs et al., 2022; Etemad, 2020). An exceptional operating environment has been defined as follows:

[It is] an extreme context as an environment where one or more extreme events are occurring or are likely to occur that may exceed the organization’s capacity to prevent and result in an extensive and intolerable magnitude of physical, psychological or material consequences to – or in close physical or psycho-social proximity to – organization members. (Hannah et al., 2009, p. 898)

Although crises are characterized as low-probability situations, they result in events that can threaten the most fundamental goals of an organization (Weick 1988). To respond to crises, enterprises must leverage decision-making and organizational skills and consider strategic options that differ from those used in normal times (Bressan et al., 2021; Etemad, 2020; Lei & Ozbay, 2021; Siuta-Tokarska, 2021; Vinberg & Danielsson, 2021). Crisis management is based on the fundamental tasks of management, which are influenced by the abnormal characteristics of crises and the ability of companies to respond to them (Siuta-Tokarska, 2021). In a crisis-ridden market, slowing or stopping demand requires companies to be competent, forward-thinking, and innovative so that they can identify alternative ways of maintaining their operations (Belitski et al., 2021; Etemad, 2020; Portuguez Castro & Gómez Zermeño, 2021).

The present study focuses on sole, micro-, and small entrepreneurs who owned their enterprise and were operating at the onset of the state of emergency in Finland and continued, interrupted, or closed their business operations as a result of COVID-19-related restrictions. Compared to medium and large enterprises, micro-enterprises, which have less than 10 employees, and small enterprises, which have less than 50 employees, tend to have fewer resources to influence their external environment, recover from acute crises, and maintain their business operations (Bartik et al., 2020; Miklian & Hoelscher, 2022; Sydnor et al., 2017). Complexity theoretical thinking about simplification and complexity identifies the different ways of organizing for enterprises to continue operating in a financially weak market situation. The aim of the study is to increase understanding of organizing concerning entrepreneurs’ various actions to manage work tasks of themselves and employees in altered working conditions, and its related strategies of simplification and complexification,
which benefit business operations in contexts governed by new pandemic crises and their public restrictions.

The starting point of this study’s qualitative data analysis (Miles et al., 2019; Saldana, 2021) is the formation of a preliminary understanding with the help of a theoretical framework. The framework used in this study was built upon structural and complexity theory perspectives of organizing. The theoretical sections examine the concept of organizing from the starting point of classical organization theory to the definition of the concept of organizing in the postmodern time of the 2020s, considering the coronavirus pandemic crisis, which is the focus of this study. Organizing is then examined from the perspective of complexity strategies for simplification and complexification. Through the preliminary theoretical understanding, the qualitative data analysis and related data collection were guided by the research question: How did sole, micro- and small entrepreneurs providing taxi services organize their work through business operations based on complexity strategies in a restricted operating environment during the first wave of COVID-19?

**Literature Review**

**Organizing as a Concept**

Organizing is one of the key tasks of the leader of the organization. Above all, it focuses on the tasks needed to organize human resources, which, in turn, shape the operations of the entire organization. This research focuses on organizing as one of the managerial functions, and it has a long history in organization theory concerning both private and public organizations. This study focuses on the COVID-19 pandemic, during which public restrictions had several impacts on entrepreneurs’ and employees’ work. For example, the movement of people in the taxi market was strongly restricted, which, therefore, might have had an impact on, for example, the use of human resources by enterprises. Further, the protection of personnel from the risk of COVID-19 infection may lead to the reorganizing of working conditions in this context.

The conceptual problem with the term ‘organizing’ is that it can be defined in many ways. Organizing can be used in a broad sense, meaning that any organizing or its content can be defined very precisely. For example, Weick and Sutcliffe (2015) described mindful organizing as a combination of expectations, sensemaking, organizing, and managing, of which organizing means ensuring that different things are where they are expected to be (Weick and Sutcliffe 2015). However, they distinguished it from organizational design, to which organizing is linked in the present study. Weick and Sutcliffe (2015) emphasized that in managing unexpected or disruptive events, sensitivity to operations helps to understand the strategic nature of organizing (Weick and Sutcliffe 2015). In the next section, strategic thinking related to organizing will be examined through strategies for simplifying and complicating complexity.

A leader’s organizing can be considered in the meanings assigned to it at different times. In classical organization theory, the concept of organizing is combined with the functions of administration and management. Organizing is one of Henri Fayol’s (1973) five elements of governance, along with planning (prévoyance), coordination, command, and control. In this context, organizing refers to the construction of a material- and human (labor)-based organization that can adapt to the demands of situations (Urwick, 2003). Information, as well as its investigation, plays a key role in governance because it can affect planning and expectations related to activities (Urwick, 2003). However, a crisis situation usually requires quick decisions and may not leave enough time for planning. In addition, different business functions (such as manufacturing or logistics) have been found to require different approaches to planning (Gupta & Maranas, 2003; Pathak et al., 2022).

Gulick (2003) expanded Fayol’s description of governance to include planning, organizing, staffing, directing, coordinating, reporting, and budgeting (POSDCORB). Gulick (2003) also stated that organizing involves the creation of a formal authority structure in an organization through which labor departments are organized, defined, and coordinated to achieve a predefined objective. Herbert Simon divided similar management codes into complex architectures to describe complex systems (Chalekian, 2016). Furthermore, in a critique of POSDCORB, Simon (1997) emphasized organization theory as organizational design, which, according to Chalekian (2016), Gulick actually represented. The need for organizing has been clear since the development of classical organization theory, and this concept has been updated to reflect the contemporary management context (Weihrich et al., 2020).
It is essential to examine the various factors that influence a crisis situation, which are at the center of the theories taken into account by an organization’s operating environment. Contingency theory, which is based on systems theory, explores the systemic nature of the internal states and processes of an organization and the demands of the external environment (Lawrence & Lorsch, 1967). Organizational variables have complex interrelationships with each other and the conditions in their environment (Lawrence & Lorsch, 1967). Moreover, to improve performance, an organization needs an optimal structure that fits the contingents, the keys to which are environmental uncertainty, strategy, and size (Donaldson, 2015). According to Burns and Stalker (1994), organizations have management systems that fall along a continuum from mechanistic to organic and operating environments with a range of stable and dynamic characteristics.

An organization can be seen as consisting of two primary systems: (1) an operational system, which involves a formal—and sometimes bureaucratic—organizational structure and management tasks, and (2) an entrepreneurial system, which drives organizational change primarily through informal structures and uses various means to develop innovative new business areas (Uhl-Bien & Arena, 2017). Taking into account the internal and external environments of an organization, the present study defines organizing as the task of management to identify, through organizing, the roles of employees, the purpose of their work, objectives related to employee contributions, and the adequate authority, tools, and knowledge employees need to perform their tasks (Weihrich et al., 2020).

2.2 Organizing from a Complexity Theory Perspective

In a crisis-ridden environment, entrepreneurs can engage in organizing in different ways (Bressan et al., 2021; Etemad, 2020; Lei & Ozbay, 2021; Siuta-Tokarska, 2021; Vinberg & Danielsson, 2021). Since a restricted operating environment enables complex behavior (Cilliers, 2016b), entrepreneurs’ organizing can be explored from a complexity theory perspective. Complexity thinking, which is linked to systems theory and chaos theory, has led to several decades of research. Nevertheless, it is not a unified theory but one that includes theories, models, and concepts from different disciplines (e.g., Poutanen et al., 2016). The theories about complex systems that are used in management studies can be divided into three categories: complex systems theories, complex adaptive systems (CAS), and organizational cybernetics (Arévalo & Espinosa, 2015). CAS theory has been used to define an organization as a complex system as follows:

From the complexity standpoint, organizations are dynamical systems. They are complex adaptive systems comprised of agents [people] who experiment, explore, self-organize, learn and adapt to changes in their environments. They exist at the individual, team, divisional and group level[s] and also in a much larger web of external complex adaptive systems – their economic, social and political environments. (Carlisle & McMillan, 2006, p. 8)

From a complexity theory perspective, organizing can be examined using complexity strategies. Joosse and Teisman (2021) used simplification and complexification strategies to solve complex, wicked problems. The concept of simplification has a long history, starting with Scott (1998). Joosse and Teisman (2021) developed the complexification strategy, which refers to the division of an issue or phenomenon into parts to enable problem-solving. Using this strategy, problems can be solved by dividing them into sub-problems or combining them with other problems. This process may require opening up problems, identifying their variety and diversity, and employing a non-mechanical way of working, such as improvisation or the utilization of new and different actors. Complexity is not just an abundance of different tasks; it manifests in the interchange and relationships of complex behavior (Cilliers, 2016b). Simplification involves features typical of a mechanical organization, such as hierarchy and task-bound relationships, as well as the division of a limited problem into sub-problems to find a suitable means of resolution, which is then implemented according to a predetermined process or mode of operation (Joosse & Teisman, 2021).

Furthermore, Joosse and Teisman (2021) associated simplification strategy with path dependency, which limits choice, and complexification strategy with path creation, which increases opportunities. The simplification strategy aims to reduce complexity, but it can also limit an enterprise’s opportunities to organize. This can lead to a certain kind of path dependency, in which case a complex situation cannot be solved. For
mature enterprises, it is typical that their previous history limits finding new opportunities, which can lead to path dependence, while new enterprises are quicker to react to changes in their operating environment because they have not yet established a specific way of working (Ebersberger & Kuckertz, 2021; Schreyögg & Sydow, 2011). The complexification strategy sees complexity as a positive matter (Castelnovo & Sorrentino, 2018; Joosse & Teisman, 2021) and seeks to create choices, which can lead to path creation. Through various organizational successes and failures, new opportunities can be found that help solve complex problems. This can also be understood as fostering or increasing complexity (Joosse & Teisman, 2021).

Methods

Sample Population

Sole, micro-, and small entrepreneurs providing taxi services were selected as the research targets for the present study because they were affected by long-term social restrictions and strong changes in the market due to the COVID-19 pandemic. The restrictions did not prohibit the operation of taxi enterprises, and operational decisions were left to entrepreneurs. In addition, taxi enterprises played an important role in transporting quarantined persons exposed to COVID-19. To cope with the effects of the pandemic crisis, sole, micro-, and small entrepreneurs sought various forms of support and investigated their significance for their business operations.

The study population consisted of 2 small entrepreneurs, 16 micro-entrepreneurs, and 14 sole entrepreneurs (N = 32) who owned their taxi enterprises but were also members of the local taxi dispatch companies. A discretionary snowball sampling approach was used to identify the participants. In this type of approach, the researcher initially has one key person who recommends one or more informants, and then those informants recommend others (Brewerton & Millward, 2001). In this study, 11 interviewees were suggested by the first key person, after which they presented their own candidates for interviews. For example, one participant had seven informants, which was the largest amount in the “chain” of snowball sampling (Table 1).

Table 1. Stages of collecting interview data using snowball sampling

<table>
<thead>
<tr>
<th>Interview data collection using snowball sampling</th>
<th>Key person</th>
<th>Interviewees suggested by the key person</th>
<th>2. Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Pilot interviews</td>
<td>1</td>
<td>1</td>
<td>0³</td>
</tr>
<tr>
<td>II Research data of interviews</td>
<td>1</td>
<td>1</td>
<td>0²</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>Total</td>
<td>1</td>
<td>11</td>
<td>5</td>
</tr>
</tbody>
</table>

0¹ The proposed interviewee has already been taken as an informant.
0² The proposed interviewee has already been taken as an informant.
0³ The proposed interviewee cannot be contacted by phone.
0⁴ The interviewee did not have a candidate to present for the interview.
0⁵ The proposed interviewee cannot be contacted by phone.
The informant was still thinking about the next candidate to interview. The informant suggested that another person already interviewed give candidates for the next interview. The informant did not have a candidate to present for the interview. The proposed interviewee has already been taken as an informant. The informant did not have a candidate to present for the interview.

The informant suggested a candidate for an interview, but the candidate was no longer interviewed, and the collection of interview data was stopped here because the data began to repeat the same content.

The criteria for selecting the key person and the informants were taxi entrepreneurs operating in the Helsinki Metropolitan Area, either as sole, micro- or small entrepreneurs, when the initial COVID-19-related restrictions were implemented. As the aim of the study was to obtain information on entrepreneurs’ different experiences of organizing in their enterprises, the selection criteria included entrepreneurs who continued, interrupted, or closed their businesses at any time during the public restrictions of the first wave of coronavirus. The study population included entrepreneurs who continued (n = 24) operating their businesses, as well as those who interrupted (n = 4) or closed (n = 2) their businesses due to COVID-19-related restrictions. The participants reported Helsinki, Espoo, or Vantaa as their main place of business, and all worked extensively in the Helsinki Metropolitan Area. Except for three participants, the rest of the entrepreneurs worked as drivers during the first wave of the COVID-19 pandemic. All had several years of experience as taxi entrepreneurs. They had usually worked previously as taxi drivers in other taxi enterprises before starting their own taxi enterprise. All but one of the study participants were men.

Data collection

The data for this qualitative cross-sectional study were collected between June 9, 2020 and July 23, 2020 via open interviews. Open-ended questions were suitable for data collection because the aim of the study was to examine the interviewees’ different experiences of organizing and the possible complexity strategies formed by them. Pilot interviews were conducted to verify the validity and reliability of the interview questions. The data from these interviews were not included in the final dataset. After two pilot interviews, the questions were updated to better explain the concept of organizing and to ask about public support measures with more specificity.

The interviewees were asked open-ended questions about organizing their business operations and applying for COVID-19-related support. They were also asked about the effects of COVID-19-related restrictions implemented from March 17, 2020 until the interview period. The interviewees spoke openly about their business operations, supplemented with more detailed questions, if necessary. The purpose of the study was not to find out in monetary terms the revenue or other financial numbers of their companies, which allowed them to be more relaxed about discussing their own means of organizing involving the enterprise’s personnel, financial situation, acquisition of knowledge, innovation in services, and financial support sought.

The interview data were collected via telephone as soon as possible after the state of emergency ended on June 16, 2020; thus, the situation during the first wave of the COVID-19 pandemic and the related restrictions was still fresh in the participants’ memory. The interviews, which lasted from about 20 minutes to 1 hour, were recorded and transcribed into a total of 98 single-spaced pages. Consent for the interviews and the recordings was obtained from the participants by phone. Data retention procedures were followed, and research integrity considerations were observed in accordance with Finnish data protection legislation and ethical guidelines for qualitative data analysis (see Miles et al., 2019). Entrepreneurs were willing to participate in interviews, supported by information about maintaining their anonymity throughout the study, including quotations from the interview data presented in the article. Notably, the interviewees could refuse to participate in the study at any stage, even after data collection.

Qualitative Data Analysis
The interview data were analyzed using qualitative data analysis according to Miles et al. (2019). This method is suitable for the purpose of this study to gain knowledge of the little-studied phenomenon of complexity organizing and strategies. Miles et al.’s (2019) qualitative data analysis method is mainly based on ethnography and grounded theory. However, it does not exclude the possibility that qualitative data analysis may also be based on other philosophical arguments of science. This research focuses on ethnography because qualitative data analysis as an interactive model is suitable for locating the meanings of the experiences of people operating in natural conditions, such as sole, micro-, and small entrepreneurs in their businesses, and connecting them to the surrounding social world, such as taxi markets regulated by public restrictions (see Miles et al., 2019). Although the entrepreneurs were interviewed by phone rather than face-to-face, for a larger proportion of entrepreneurs, the interviews took place during their working hours, when they were in a taxi in their usual working environment. This research could also be grounded theory-based, since the main focus is on the data and its meaning of data-driven theory (Corbin & Strauss, 2014). In this study, this is reflected by the formation of codes, magnitude codes, categories, and themes from participants’ interview data in the targeted area of activity. This study used inductive reasoning to move from one conclusion to the next and to compare the qualitative data obtained from the participants and with opposites to identify patterns and regularities (Miles et al. 2019).

The interactive model of qualitative data analysis consists of four components—data collection, data condensation, data display, and the drawing and verifying of conclusions (Miles et al. 2019). Following this model, the data were selectively collected based on the research question, which guided the analysis of the data and the delimitation of data outside the research question (such as excluding the impact of the 2018 reform of taxi legislation on taxi operations). The researcher constantly took notes and coded them in Microsoft Word and Excel formats during the data collection and analysis. The interview data were also read several times as the interviews and the analysis progressed. After each interview, the gradual coding and drawing of conclusions from the analysis required returning to previously collected data and the codes from them before collecting the next interview data—that is, there was a repeated, cumulative relationship between the previously collected data and the data collected next. Therefore, data condensation, data display, and the drawing and verification of conclusions are intertwined before, during, and after data collection (Miles et al., 2019).

During the process of data condensation, the researcher selected, centralized, simplified, and abstracted the research data with the notes of data collection and analytical memos of interviews (see Miles et al., 2019). The codes were enclosed in parentheses after each data excerpt about the code in the interview data to distinguish them from the rest of the text using Microsoft Word. The interviewees and their codes and magnitude codes were entered in Excel, but their labels and classifications changed and became more precise as the data collection and analysis progressed. Excel was also used to create a display of codes, magnitude codes, categories, and themes, but the final display was made using Word’s table function.

The analysis proceeded according to Saldaña’s (2021) first-cycle coding and second-cycle coding phases. The first-cycle coding generates codes based on the presence of similar coded data excerpts derived from words or phrases from the data. At this stage, magnitude codes began to emerge, clarified by entrepreneurs’ descriptions and evaluations of the effects of codes on their business operations. Magnitude codes are the subcodes of the codes in this analysis, according to magnitude coding (Saldaña 2021). The second-cycle coding analyzes first-cycle codes, reducing their number pattern codes, which, in this study, refer to categories and the themes covering them. As the coding of the data progressed, a display was gradually built with codes, magnitude codes, categories, and themes. Miles et al.’s (2019) qualitative data analysis does not limit the representation of display to a specific form but allows the researcher to freely form “at a glance” an observable display from the results of the analysis that describes and/or explains results. A total of 37 codes described different situations, events, topics, and measures related to organizing work and managing business operations and, therefore, responding to the operating environment restrictions during the COVID-19 pandemic. The codes were grouped into six categories with similar meanings that described the associations between the codes on a more general level, after which the themes began to form. The entrepreneurs’ organizing was divided into three themes: economic organizing, knowledge-based organizing, and innovative organizing.
themes describe, on a more general level, the nature of codes—that is, the means and their categories of organizing. Magnitude codes began to take shape during the formation of codes, and at a later stage, they described and explained the relationships and differences between codes. The complexity strategies were formed from codes, and they had strengthening, enabling, or limiting effects on the entrepreneurs’ business operations. These strategies and their effects were the interviewees’ evaluations of the experiences they had gained using the means of economic, knowledge-based, and innovative organizing. The themes were also derived from the data and were not based on previous theoretical concepts or models. An example of qualitative data analysis is presented in Table 2.

Table 2. Example of qualitative data analysis

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>Code (limiting complexity strategy as magnitude code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge-based organizing</td>
<td>Difficulty reconciling information</td>
<td>Difficulty in identifying relevant information from different sources</td>
</tr>
</tbody>
</table>

The results of the analysis were sent to the interviewees to correct any factual errors or misunderstandings, which strengthened the validation of the research findings (see Miles et al., 2019). Although the interviewees did not point out any factual errors, they emphasized the importance of the entrepreneur’s experience and competence in responding to fluctuations in demand and suggested an impact assessment of subsidies as a topic for further research. As a final step, the research results and conclusions were examined using the theoretical framework of the preliminary understanding and previous research results. Previous theories and studies did not guide the analysis of the results, although they were formed into a theoretical framework that supported preliminary understanding, but the researcher focused on the meanings contained in the data and the formation of their interpretation with the help of codes, magnitude codes, categories, and themes. The qualitative data were abundant in terms of quantity and content; thus, codes, magnitude codes, categories, and themes had to clarify rather than complicate the interpretations of the data (see also Miles et al. 2019). Although Miles et al.’s (2019) qualitative data analysis does not emphasize saturation filling, the data can be said to have approached saturation because the content of the data began to repeat itself (see Corbin & Strauss, 2014). New topics that deviated from the research question would have led to new research questions and the collection of data concerning them. Therefore, the results of this study can be deliberatively applied to similar operating environments of sole, micro-, and small entrepreneurs.

Results

Means of Organizing and Their Effects on Business Operations Amid COVID-19-Related Restrictions

The participants decided whether to continue operating their businesses fairly quickly once they had accumulated sufficient experience and information about the situation caused by the COVID-19 pandemic and the restrictions imposed by the Finnish government. The entrepreneurs expressed surprise at their ability to make quick decisions that radically affected their business, even though they were unprepared for the situation and had no time to make detailed plans due to the rapid spread of COVID-19 and the short notice period before the restrictions were implemented.

The decision about continuing business operations was based on considerations of health security and financial profitability. Regarding health security, a few entrepreneurs interrupted their business operations at the beginning of COVID-19-related restrictions. In these cases, protecting the health of loved ones—especially family members—was considered a more important reason to interrupt operations than protecting the entrepreneur’s own health. Most of the participants continued their business activities without interruption, despite the stopped market situation, and they tried to solve their business problems through various means of organizing. One participant described the situation as follows:

This was evident in business during a total collision. That changed overnight. It was somehow crushing [. . .]. I would describe it this way. It was a great surprise that it was possible, as [if it happened] in the blink of an eye, in our industry, that customers disappeared as if overnight [. . .] there was no demand left
the next morning. It was really fast this change, although there had been such economic recessions before. It has never been [like this before]. Although things have gone badly [before], it did not happen so quickly. (H10)

The situation caused by the COVID-19 pandemic was exceptional compared to previous economic downturns in Finland. Taxi enterprises had never before experienced such a radical, rapid change, which resulted in the near-complete slowdown of the taxi services market. With the onset of the restrictions, key customer groups disappeared (see also Lei & Ozbay, 2021). The participants estimated that revenue from customer rides dropped by 50% to 90%. The stopped market situation continued unchanged throughout the state of emergency from March 17 to June 16, 2020.

The means of organizing can be divided into economic, knowledge-based, and innovative. As shown in Table 3, these three types of organizing and their complexity strategies of simplification and complexification strengthened, enabled, and/or limited business operations. The entrepreneurs reacted to the change in the operating environment with the help of pre-existing possibilities of operational decisions, emerging information on the COVID-19 situation, newly launched forms of public support, and suitable development ideas and innovations. They had to innovate quickly in the stopped market situation, especially so that they could receive public financial support.

Table 3. Entrepreneurs’ means of organizing during the COVID-19 pandemic and their effects on business operations

<table>
<thead>
<tr>
<th>Means of organizing used by entrepreneurs during the first wave of the COVID-19 pandemic and their effects on business operations with strengthening, enabling, and limiting complexity strategy</th>
<th>Magnitude codes</th>
<th>Magnitude codes</th>
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<tbody>
<tr>
<td>Strengthening complexity strategy</td>
<td>Enabling complexity strategy</td>
<td>Limiting complexity strategy</td>
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<tr>
<td>Enabling complexity strategy</td>
<td>Codes</td>
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<tr>
<td>Limiting complexity strategy</td>
<td>Codes</td>
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Themes

Categories

Codes
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<tr>
<th>Means of organizing used by entrepreneurs during the first wave of the COVID-19 pandemic and their effects on business operations with strengthening, enabling, and limiting complexity strategy</th>
<th>Means of organizing used by entrepreneurs during the first wave of the COVID-19 pandemic and their effects on business operations with strengthening, enabling, and limiting complexity strategy</th>
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<tbody>
<tr>
<td>Economic organizing</td>
<td>Varieties of operational decisions</td>
</tr>
<tr>
<td>Means of organizing used by entrepreneurs during the first wave of the COVID-19 pandemic and their effects on business operations with strengthening, enabling, and limiting complexity strategy</td>
<td>Magnitude codes</td>
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<tr>
<td>Economic organizing</td>
<td>Variety of operational decisions</td>
</tr>
<tr>
<td>Use of public subsidies</td>
<td>Applying for temporary labour market support regardless of the size of the enterprise Satisfaction with the continuation of temporary labour market support for entrepreneurs Satisfaction with the amount of state development support Variability of earnings for publicly subsidized transport services</td>
</tr>
<tr>
<td>Low applying for social benefits Fast processing speed of late-stage municipal subsidies Short-term impact of state development support on operations Efforts by entrepreneurs to obtain publicly subsidized transport services</td>
<td></td>
</tr>
<tr>
<td>Low adjustment of fixed costs Significant increase in service implementation time</td>
<td></td>
</tr>
<tr>
<td>Knowledge-based organizing</td>
<td>Multiple sources of information</td>
</tr>
<tr>
<td>Use of public subsidies</td>
<td>Applying for temporary labour market support regardless of the size of the enterprise Satisfaction with the continuation of temporary labour market support for entrepreneurs Satisfaction with the amount of state development support Variability of earnings for publicly subsidized transport services</td>
</tr>
<tr>
<td>Low applying for social benefits Fast processing speed of late-stage municipal subsidies Short-term impact of state development support on operations Efforts by entrepreneurs to obtain publicly subsidized transport services</td>
<td></td>
</tr>
<tr>
<td>Inappropriate allocation of state development support</td>
<td>Insufficient temporary labour market support for entrepreneurs Insufficient municipal support for sole entrepreneurs Need for external assistance when applying for state development support Inappropriate allocation of state development support</td>
</tr>
<tr>
<td>Means of organizing used by entrepreneurs during the first wave of the COVID-19 pandemic and their effects on business operations with strengthening, enabling, and limiting complexity strategy</td>
<td>Magnitude codes</td>
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<tr>
<td>Difficulty reconciling information</td>
<td>Know-how management</td>
</tr>
<tr>
<td>Innovative organizing</td>
<td>Difficulty generating development ideas</td>
</tr>
<tr>
<td>Low impact of innovations</td>
<td>Experimental nature of innovations</td>
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**Economic Organizing**

The participants leveraged a variety of operational decisions and forms of public support to cope with the situation caused by COVID-19-related restrictions. These possible choices in business operations were known to the entrepreneurs before the pandemic and described as a strategy of simplification. In addition to decisions regarding the continued existence of the enterprise, the operational decisions involved various employee considerations, such as permanent employee retention, lay-offs, the drivers’ decisions to work, and cessation of the use of temporary agency workers. The present study’s findings on this topic were in line with those of previous studies on the COVID-19 pandemic, which indicated that employee arrangements were primarily driven by falling demand in micro- and small enterprises (Bressan et al., 2021; Siuta-Tokarska, 2021; Thorgren & Williams, 2020).
Entrepreneurship is closely linked to the working and personal lives of entrepreneurs. Vinberg and Danielsson (2021) found that a manager’s changed role in the company can be reflected in changes in work, private life, and well-being. In the present study, the participants said that they used their personal savings to cover enterprise expenses. Similarly, Bressan et al. (2021) found that entrepreneurs use their savings to help their businesses survive. Due to a low level of business income, the savings of the enterprise and/or the entrepreneur had a limited effect on the situation created by COVID-19-related restrictions. One participant described this situation as follows: ‘Well, let’s say that it [the enterprise] will survive as such, but my own old savings are now being used […] if there were no savings [or] buffer money, but there would be no savings left now, either’. (H19)

The entrepreneurs’ personal lives were also affected by changes in how they used their time during the working day. Most participants significantly increased the number of hours they worked in an attempt to generate business income so that they could cover enterprise expenses. They also tested different work schedules, including working at different times of the day, and experienced the difficulty and unpredictability of determining the optimal time for taxi services. The participants were often the only ones working in their enterprises, and they often worked weeks of long hours for virtually no money. However, as one participant shared—and Zheng et al. (2021) also found—it was not enough to compensate for the loss of customer groups due to public movement restrictions:

There was not much to do with it other than just start to stretch the day […] The worst time [was] at the end of March and April. [On] those days in Helsinki [there were situations] where the taxi entrepreneur worked 10 [or] 12 hours […] During that time, I got 4 customers. [Each ride was] 9 euros or [approximately] 40 euros in total. [In other words, I was] practically unemployed. (H8)

To reduce enterprise expenses, entrepreneurs negotiated with insurance companies, tax authorities, and car dealers to adjust payment arrangements related to insurance premiums, taxes, and car loans, respectively. As a result, the entrepreneurs were able to postpone payments by one or three months. The entrepreneurs voluntarily and actively followed up on these arrangements, demonstrating their adaptability in terms of implementing the strategy of complexification. Other countries also introduced flexible tax and premium arrangements, which had a timely, strengthening effect on businesses (Tchinda & Dejardin, 2021).

Due to the weakening of the taxi services market caused by COVID-19-related restrictions, entrepreneurs applied for support from the municipality, the ELY Centre, or Business Finland. Municipal support was the only form of support suitable for sole entrepreneurs in 2020. However, this one-off subsidy of EUR 2,000 was considered insufficient by the participants. Nonetheless, this momentary assistance was ‘enough to pay two months [of a] self-employed person’s pension’ (H14). One positive aspect of the support was the speed of processing, even though the municipal subsidy became available late after the Business Finland and ELY Centre subsidies in April.

The state development subsidies and the actions taken by the entrepreneurs to obtain them indicated the use of a strategy of complexification, which is why the entrepreneurs’ satisfaction with these subsidies can be described as contradictory. The recipients of support from the ELY Centre and Business Finland were mainly satisfied with the amount of funding; however, they highlighted that it only enabled enterprise operations for a short time. In addition, there were several shortcomings in the allocation of the subsidies as well as in the application processes. For example, instead of covering necessary costs, the subsidies provided by the ELY Centre and Business Finland aimed to cover development costs, such as purchasing services from other companies. The entrepreneurs did not see the pandemic crisis as the most opportune time to develop their businesses. Rather, when faced with unexpected events, such as black swans, enterprises tend to take quick actions, such as postponing investments and reducing operating and personnel costs (Thorgren & Williams, 2020).

The participants had no previous experience applying for a development subsidy. Therefore, they relied on the assistance of consultants or accountants, which reduced the funds they had for their enterprises. One participant described the situation as follows:
You have to pay a consulting company or a computer company or do something new, for example, as [an] e-commerce [innovation] or something else. That’s where the money has to go. It [ELY Centre or Business Finland], in those terms and conditions, specifically states that it [the subsidy] must not go to fixed costs or something like that. [The terms and conditions also state] that, unfortunately, it [the subsidy] is not the same thing as cost support, that it can be used for wages. But, of course, also in the fact that they are then required there, that wages must be […] in some way connected with this development […]. But whether it’s kind of doing the right thing has puzzled me a bit. (H16)

All of the participants also had the opportunity to apply for the Social Insurance Institution of Finland’s (Kela) temporary labor market support (gross EUR 673.20 and net EUR 538.56) if their income had decreased or if they had to stop working due to the COVID-19 pandemic (Finnish Government, 2022). The entrepreneurs were satisfied with the availability of labor market support but felt that it was insufficient. In addition, the entrepreneurs were able to apply for social benefits, such as housing allowances, based on their personal financial situations; however, the use of those benefits was limited. Dependence on Kela’s subsidies indicated the use of a strategy of simplification, although temporary labor market support was exceptional because it was given to individuals still working as entrepreneurs. In other words, it did not require unemployment, for which labor market support was actually intended.

Another type of support was indirect transport services paid for by the state. The relevant aspect of this support for the present study was airport transport. Customers arriving from abroad were transported from Helsinki-Vantaa Airport to their homes or quarantine locations around Finland or to their connections, such as passenger ships. For some entrepreneurs, these airport trips had a significant impact on their ability to cover their enterprise expenses, which is why they were seen as factors that strengthened their businesses. However, these trips had downsides. The ride distances ranged from a few kilometers to several hundred kilometers. The waiting period for the airport rides could be more than half a day, and the drive itself took time, making these trips health burdens. Some entrepreneurs invested in exceptional ways of working, such as using their creativity and perseverance to get airport rides. The airport rides indicated the use of a strategy of complexification in which work was adapted to the altered working conditions. One participant shared the following experience:

I slept three nights at the airport. I’ve never spent it [my time] like that before, having a sleeping bag and systems, [including] a bench [that was] overturned. Well, [others also sought such] new forms of work, [so] there were dozens of taxis. Minibuses and station wagons are a bit easier to sleep […]. The only salvation for me was that I drove the repatriation flights from Helsinki-Vantaa airport, so I was there for a month […]. Luckily, I hit those long rides. (H27)

Knowledge-Based Organizing

Knowledge-based organizing affects economic and innovative organizing because information benefits both of these ways of organizing. This can be seen as a strategy of complexification, in which the entrepreneur organized activities based on information obtained from different actors. In the present study context, information about the spread of COVID-19 and government restrictions affected business operations and plans. Moreover, the constantly changing nature of this information was reflected in the continuous preparedness efforts of the entrepreneurs and their reactions to changes in business operations and services.

Information about the COVID-19 pandemic could be obtained from multiple sources, including the authorities, the media, social media channels, family members, and enterprise stakeholders. The availability of information strengthened the participants’ organizing of work for their business operations. Their key information sources were colleagues—that is, peer communication—organizations such as the Finnish Taxi Association and local taxi associations, taxi dispatch companies, and accountants. However, it was difficult to reconcile information with business operations due to the incomplete or contradictory nature of some information as well as the uncertainty of the situation. Moreover, the sheer amount of information available from various sources made it difficult to find relevant information. One participant described this challenge as follows: ‘I guess it’s because it [information on COVID-19] comes from every news item, but what affects
me as a taxi entrepreneur is probably something I’ve overlooked and missed'. (H17)

Reconciling information required know-how, which was influenced by past experiences during weak economic situations, lessons learned from the COVID-19 pandemic, and available information. Etemad (2020) found that entrepreneurs made decisions using the knowledge base they developed through interactions or lack thereof between the time and availability of information. Donaldson (2015) showed that uncertainty, which stems from a lack of information, is complicated by unpredictable changes in information. This was simultaneously reflected in the reconciliation of information on COVID-19 and the social restrictions.

**Innovative Organizing**

Innovative organizing involves innovations and creative modes of action or processes (Weihrich et al., 2020). In this type of organizing, the strategy of complexification is used to develop new relationships with actors, such as authorities, consultants, innovation partners, and other entrepreneurs. However, in the present study context, development ideas were limited by the entrepreneurs’ attachment to the basic mission of the taxi industry, that is, the use of taxis as a means of transport for people. Furthermore, it was difficult for the entrepreneurs to develop ideas and innovations for passenger transport services because their efforts were limited by regulations, guidelines, and recommendations. Nonetheless, the entrepreneurs had to develop new ideas, especially if they applied for support from the ELY Centre or Business Finland.

Since their traditional customer groups no longer used taxis for transport, the entrepreneurs aimed to enable the continuation of their business operations by offering innovative transport services to sectors outside the taxi industry. However, the entrepreneurs faced challenges in developing such connections because other companies already offered services for transporting groceries, meals, and other goods. One participant shared the following thoughts on this topic:

In this industry, it has never been possible to quickly build anything like this [type of replacement service . . .]. You can’t invent a new wheel, that is, you can’t invent a new taxi [. . .]. So look, you can’t create new service like that all of a sudden in the taxi industry when a taxi is a taxi, and a person takes it from A to B. (H9)

Despite these difficulties, the entrepreneurs came up with ideas and developed their services. Furthermore, public financial support enabled the development of business operations in this case. The innovations as new forms of work tasks included transporting people to shops and pharmacies, delivering meals, providing discounts, and offering targeted excursions. The entrepreneurs developed these innovations with taxi dispatch centers and local entrepreneurs from various fields. The entrepreneurs also innovated in other ways, such as strengthening customer contacts (for example, calling regular customers and suggesting innovations) and offering personal protective equipment as a competitive factor.

Although the entrepreneurs developed various innovations, these measures remained mainly experimental and had only a minor economic impact. One participant described this situation as follows:

We have a new [set of service] product[s] like [...] pharmacy and shopping bag trips. They have been marketed. Maybe that’s why there was some demand for them, but they haven’t really taken off, because they have dropped quite significantly from our normal-order books. (H5)

In economic, knowledge-based, and innovative organizing, the factors included in Weihrich et al.’s (2020) definition of organizing show in research results some details about how entrepreneurs organized their and employees’ roles and purpose of work, objectives related to their contributions, adequate authority, necessary tools, and knowledge. The means of economic, knowledge-based, and innovative organizing in sole, micro-, and small entrepreneurs’ restricted operating environments can be further categorized as complexity strategies of simplification and complexification.

**Discussion**

Adaptation to changes in the external operating environment over time is affected by the speed of the changes (Siuta-Tokarska, 2021). The unprecedented restrictions during the first wave of COVID-19 prompted
entrepreneurs to quickly make decisions about the continued existence of their enterprises after market activities came to a standstill. Many studies related to the COVID-19 pandemic have described this situation using terms such as sudden stoppage (Etemad, 2020), sharp drop (Thorgren & Williams, 2020), sudden collapse (Tchinda & Dejardin, 2021), and sudden drop (Lei & Ozbay, 2021). Continuing business operations amid COVID-19-related restrictions proved challenging and can be described as operating in a continuous adaptive space (see Uhl-Bien & Arena, 2018). Entrepreneurs engaged in economic, knowledge-based, and innovative means of organizing, which had strengthening, enabling and/or limiting effects on their businesses.

These means of organizing had similarities in terms of the application of the structural and complexity theory perspectives of organizing. The means reflected attempts to solve problems through strategies of simplification (known means of organizing) and complexification (various new means of organizing). According to Joosse and Teisman (2021), the separate or simultaneous use of complexification and simplification strategies depends on the degree of complexity and controllability of a situation. The challenge of complexity was to survive in a stopped market situation. This was concretely reflected in the key objective of the participants in the present study, which was to cover enterprise costs, especially fixed costs. All means of organizing were aimed at this goal.

Etemad (2020) found that movement restrictions and procurement supply problems led some SMEs to suspend their activities to reduce unproductive fixed costs during the COVID-19 pandemic. Wenzel et al. (2020) identified that retrenchment—referring to cost-cutting measures—is a potential means of responding to crises, in addition to persevering, innovating, and exiting. In stopped market situations, it is difficult for enterprises to set other goals, since previously available financial and human resources are no longer accessible. Economic organizing is therefore a limited means of strengthening and overcoming environmental uncertainty, market stoppage, and enterprise-related financial difficulties.

A limited and uncertain operating environment is also affected by the content, availability, and management of information. Since entrepreneurs use information to make decisions within a short period of time, they must have up-to-date information (Etemad, 2020). The present study’s findings reveal that knowledge-based organizing had limiting as well as strengthening effects on economic and innovative organizing. The participants had to use the information they obtained regarding COVID-19-related restrictions in a new way to develop innovations. The use of new knowledge to obtain financial support and create innovations suggests a strategy of complexification. By contrast, the use of pre-existing knowledge and business arrangements indicates a strategy of simplification.

A key factor limiting the participants’ innovativeness was their attachment to the ultimate mission of taxi services. According to Joosse and Teisman (2021), simplification creates path dependency and reduces the ability to adapt and maneuver. Using known and limited means of organizing helps innovators create new opportunities. The entrepreneurs’ innovativeness was reflected in the extension of previous business ideas to other industries, the use of flexible working methods, the development of new transport services and operating methods, and the acquisition of information from partners and other actors. Compared to taxi services, the product and goods industries have been able to make better use of digitalization, even reaching global markets, during the pandemic (Bressan et al., 2021). Despite the financial difficulties faced by enterprises, the entrepreneurs’ innovativeness, ability to change, cooperation with new actors, and quick business decisions illustrated their adaptive capacity, which the strategy of complexification aims to increase (Joosse & Teisman, 2021).

Simplification strategies are useful for responding quickly and efficiently to radical changes through actionable means. In this study, a complexification strategy was especially necessary to address the altered operating environment through public subsidies and related innovations. According to Joosse and Teisman (2021), alternating between simplification and complexification is a characteristic of decision-making processes. The stopped market situation created a new kind of order for the taxi entrepreneurs, the management of which required several parallel, separate, and even extreme means of organizing. The strategy of simplification alone was not enough to continue business operations; however, it led to the creation of a new path in which, according to Joosse and Teisman (2021), complexity increased through a strategy of complexification.
Responding to the altered operating environment was challenging. As such, it was important to determine whether the entrepreneurs’ means of organizing were sufficiently diverse or radical. According to Cilliers (2016a, p. 64), ‘a proper model of a complex system would have to be as complex as the system itself’. Furthermore, Muller (2010) asserted that the design and implementation of strategies require organizations to have sufficient internal differences and diversity in complex and turbulent conditions. Regarding limiting the operating environment due to pandemic crises, it is necessary to examine public restriction measures and suitable means of organizing, as the entrepreneurs showed that they were able to quickly adopt the means of organizing and managing their enterprises, even in exceptional circumstances. This can be supported by further research on the combinations of complexity strategies of simplification and complexification that can be formed in the event of pandemic crises, as well as the setting of societal restrictions for the effective implementation of a range of means of organizing.

Conclusion

During the exceptional circumstances of the COVID-19 pandemic crisis, the movement restrictions imposed by the Finnish government were strongly reflected in taxi services and the implementation of related innovations. The taxi entrepreneurs experimented with and used various economic, knowledge-based, and innovative means of organizing and their related complexity strategies, which had strengthening, enabling, and limiting effects on their business operations. Even though the entrepreneurs engaged in various business arrangements, received public subsidies, and conducted innovation experiments, the financial situation of their enterprises—especially for the sole entrepreneurs from the perspective of public financial coronavirus support—remained weak until the end of the state of emergency. Nonetheless, the entrepreneurs who continued operating their businesses were able to adapt using familiar as well as new means of organizing and strategies of simplification and complexification, which allowed them to persist in a strictly restricted public environment and a stopped market.

Several factors can be considered limitations of the study. More research is needed on employees’ roles and on continuing to work during the different phases of the COVID-19 pandemic, because according to this study, micro- and small enterprises laid off or quit either all or part of their employees, and entrepreneurs remained the only employees in their enterprise. The health and economic consequences of entrepreneurs’ survival, both in their personal lives and in continuing their business operations, also require further study. Furthermore, more information is needed on these research topics on organizing and its complexity strategies of simplification and complexification from a wider range of research groups of sole, micro-, and small entrepreneurs from different industries. A challenge for the qualitative data analysis emerged due to the separation of theoretical preliminary understanding and the analysis; thus, the results were data-driven, were they not changed to theory-based through the researcher’s interpretation. This challenge could have been supported by drawing and verifying conclusions from at least two researchers.

Acknowledgments

I would like to thank all the participants who gave their time to participate in this study.

Declaration of Conflicting Interests

The author declares no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Ethics Statement

Informed consent was obtained verbally before participation from private entrepreneurs.

References


World Health Organization. (n.d.). *Coronavirus disease (COVID-19)*. https://www.who.int/europe/health-topics/coronavirus#tab=tab_1