

Short-Term Crisis Management of Solo Entrepreneurs during the COVID-19 Pandemic

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Abstract

This multiple case study investigates short-term crisis management among solo entrepreneurs during the COVID-19 crisis. The study focuses on the immediate business impacts and entrepreneurs' strategic management responses within a short-term period at the beginning of the global pandemic. The data consist of repeated thematic interviews with nine Finnish solo entrepreneurs. A model of strategic responses to the crisis was used to analyze the retrenchment, perseverance, and innovation actions. This study introduces a novel, adjusted version of the model with a focus on solo entrepreneurs' short-term managerial responses to crises. Cutting down costs and temporary closure of businesses were typically adopted as immediate retrenchment actions. Persevering actions involved the use of personal savings, applying for grants, and manufacturing products for future needs. As for innovation actions, entrepreneurs focused on the renewal of marketing strategies and business models.

Keywords:

crisis management, solo entrepreneurs, entrepreneurship, managership, COVID-19 pandemic, retrenchment, perseverance, innovation actions

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1 Introduction

In crisis periods, entrepreneurs take important roles in improving products and services and evolving new technologies (Ratten, 2021). A crisis is an umbrella term referring to any kind of disasters, business interruptions, catastrophes, emergencies, or contingencies (Herbane, 2010). One of the most used definitions is Pearson and Clair's (1998) who defined a crisis as "a low-probability, high-impact situation that is perceived by critical stakeholders to threaten the viability of the organization" (p.66). In this paper, the concept of crisis management refers to how entrepreneurs act to diminish the consequences of a crisis (Spillan and Hough, 2003). Entrepreneurial individuals' ability to have a flexible response to external changes guarantees the survival of business (Frangieh & Rusu, 2021).

The scale of business is likely a major factor affecting the proportions of losses, as bigger companies are more probable to have added resources and a more resistant business structure, whereas the smaller the company, the smaller its resources are, making it sensitive to any kinds of disturbances (Farlie, 2020, p.738). Crises in general create resource availability and liquidity problems for small- and medium-sized enterprises (SMEs), as customers cut down on purchases and financiers become more cautious (Eggers, 2020). Lack of finance is one of the most obvious consequences of crises for SMEs, whereas opportunity-based management, entrepreneurial orientation, and entrepreneurial expertise are factors promoting business survival (Eggers, 2020). Doern, Williams, and Voreley (2019) conducted a literature review on entrepreneurship and crises showing that whether and how entrepreneurs respond to a crisis may be contingent on various reasons, including experience, stage of business development, the type or stage of the crisis impacting on the business, and resources, both in terms of how resources are utilized as well as the suitability of resources. All in all, this study attempts to respond to a need to examine in depth the factors behind managerial responses to the situational circumstances of a crisis (Wenzel, Stanzke & Lieberman, 2020). By analysing the case data of nine solo entrepreneurs' business impacts and managerial actions during the first months of the COVID-19 crisis, we provide new empirical insights on the practices of crisis management and provide an adjusted framework on short-term crisis managerial actions building on the literature overview by Wenzel, Stanzke, and Lieberman (2020, p.8) and empirical analyses among European family businesses by Kraus, Clauss, Breier, Gast, Zardini and Tiberius (2020). As little is known about the temporal dynamics involved in strategic responses to crises, we focus in this study on the crisis management phase following the actual crisis incident, which can also be called a reactive or responsive crisis management strategy (Alonso-Almeida et al. 2015).

1.1 The COVID-19 pandemic and businesses

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic, and authorities globally followed by setting national shutdowns. The Finnish Government declared The Emergency Power Act, granting additional powers to authorities on March 16, 2020. The act was exercised until June 15, 2020 which also sets the timeframe for the present study.

The crisis hit unexpectedly with massive disruptions to business markets, and it pushed all kinds of businesses to adapt their operations in resilient ways (Verma & Gustafsson, 2020). Investigation of a company's ability to act in response to a crisis is significantly pertinent in the COVID pandemic (Margherita & Heikkilä, 2021). Only a few small companies had created a crisis plan beforehand, and far from all of them found their existing crisis plans to be useful in dealing with the COVID-19 situation (Fasth, Elliot, & Styhre, 2021). The crisis necessitated the renewal of business management strategies to keep businesses agile and productive. Even in the

world's leading business corporations, the COVID-19 emergency urged new ways to face supply chain interruptions, shifts in customer demands, and risks to workforce health (Margherita & Heikkilä, 2021).

There already is a rapidly growing body of published studies on the overall influence of COVID-19 on businesses (Verma & Gustafsson, 2020), as well as on the challenges and opportunities the crisis provided for SMEs (see Eggers, 2020). Analyses of the impacts of COVID-19 revealed that companies and their supply chains may lack flexibility, diversity, and slack, which are essential to resilience against crises (Zhu et al., 2020). During the present crisis, businesses tried to sustain their cash flows by cutting non-essential costs and modifying their business models to maintain or grow revenue (Ratten, 2021). Generally, the most pressing concern for businesses enduring the COVID-19 crisis was surviving an event that had a scale of a structural break and that challenged all traditional business models (Kahveci, 2021). Small businesses are a fundamental instrument for economic growth and, it is, therefore, useful to focus on how small businesses dealt with the crisis (Ratten, 2021; Kahveci, 2021).

There is also a rapidly expanding body of literature analyzing the impacts of the COVID-19 pandemic on solo entrepreneurs. This is not surprising, as the pandemic hit hard to self-employed (Graeber, Kritikos & Seebauer, 2021; Kalenkoski & Wulff, 2021). They seem to have suffered more strongly than other parts of the working population (Block et al., 2020). Blundell and Machin (2020) revealed that approximately 75 percent of the self-employed reported a reduction of work in April 2020. Beland, Fakorede & Mikola (2020) reported an unambiguous, over 10 percent, decrease in self-employed businesses in Canada during the first months of the pandemic, with the largest decrease in the business sector of art, culture, and recreation. Yue and Cowling (2021) noticed that the large reductions in income clearly caused a worsening of self-reported well-being among self-employed compared to waged employees during the pandemic. Moreover, some studies have pointed out that among the self-employed, women were more likely to experience income losses, as they tend to work in service industries that were more severely affected by the COVID-19 pandemic (Kalenkoski & Wulff, 2021; Graeber et al., 2021).

1.2 Solo entrepreneurs and crisis management

Microenterprises with less than ten employees comprise most of all businesses globally. The specific focus on solo entrepreneurs is reasoned by the increasing role of self-employment and entrepreneurship in modern economies (Graeber, Kritikos & Seebauer, 2021). More and more individuals employ themselves through businesses of their own; in Finland, the number of solo entrepreneurs increased by 50% during the 2000s. In a dictionary, self-employment is defined as “the situation of working for yourself and not being employed by a company” (Oxford Learner’s Dictionaries, 2020). Self-employment is something referred to as “the simplest kind of entrepreneurship” (Blanchflower & Oswald, 1998), and they are sometimes accused of low productivity (Acs, 2006). However, solo entrepreneurs contribute greatly to modern national economies as they enable client firms and network partners to operate in a more agile and cost-effective manner, while also introducing innovations to their clients (Burke, 2011; Burke & Cowling, 2015). As stated in topical academic discussion, micro-enterprises without immediate growth intentions are strongly underrepresented in the small business management literature (Rasthollo-Horrillo, 2021) although they need management strategies and practices equally to any other company (Lieberman-Yaconi, Hooper & Hutchings, 2010). The focus of this paper is on solo entrepreneurs, who represent a large proportion of businesses, albeit with the smallest

amount of available resources, but who, on the other hand, can be flexible and quick to adapt their operations in times of change. The term solo entrepreneur is used to refer to individuals who are business owners without employees (e.g., Wennekers & Thurik, 1999).

Small businesses might be distinctly exposed to crises due to size-related characteristics (Battisti & Deakins, 2017; Vargo & Seville, 2011), although small businesses on the other hand have a strategic advantage in their flexibility and adaptability, which grants them the ability to react swiftly to changing environments (Vargo & Seville, 2011). Given the economic significance and vulnerability of small businesses, we need to gain an understanding of how their owners think and act in relation to crisis management efforts in business disturbances (Herbane, 2010). Only a few studies have examined crises among small enterprises (Doern, Williams & Vorley, 2019; Herbane, 2010; Kahveci, 2021), and hardly any of them have focused on businesses run by solo entrepreneurs. Moreover, a review by Korber and McNaughton (2017) revealed that research on this topic tends to focus on the pre-crisis stage and the capabilities or resources possessed by entrepreneurs to help in withstanding crisis events.

It is important to describe the strategic actions of crisis management and to consider how business managers deal with crises in practice to complement the interpretation of the impact of the COVID-19 crisis, and to comprehend the managerial measures taken shortly after the crisis began (Fasth, Elliot, & Styhre, 2021). All companies aim toward survival, but each of them proceeds from their individual starting points, and the processes to accomplish this goal are unique to each company (Kahveci, 2021). The novelty of this paper is that it details the moment-to-moment experiences of solo entrepreneurs and their crisis management strategies during the global and unexpected COVID-19 crisis. This study aims to stimulate more nuanced insights into how solo entrepreneurs can adapt their management strategies to external crises. The data are based on follow-up interviews to reveal the impacts of the COVID-19 crisis on solo entrepreneurs' businesses, and what managerial strategies the entrepreneurs applied to overcome the crisis. By integrating the on-time experiences of solo entrepreneurs during the first months of the pandemic, we pursue to foster a richer understanding of crisis management strategies.

The present study contributes to the existing research knowledge in three ways. Firstly, it brings to focus crisis management in a common yet vaguely studied group of small business owners – solo entrepreneurs. Secondly, it adds to the current literature more insights on the short-term business impacts of the unexpected global pandemic through nine real-life cases through a follow-up study design. Thirdly, it adjusts the framework by Wenzel, Stanske, and Lieberman (2020) on crisis management strategies in a new empirical setting.

1.3 Framework for strategic responses to crisis

In their literature review, Wenzel, Stanske, and Lieberman (2020, p.8) found four main types of strategic responses to crisis: 1) retrenchment, 2) persevering, 3) innovating, and 4) exit. Wenzel et al. (2020, p.13) pointed out that retrenchment may help firms endure crises in the short run, whereas persevering can be an applicable strategic option in the medium-time perspective. Innovating, on the other hand, is seen as “an important, if not unavoidable” strategy in the long run. Finally, exit is not necessarily considered to be a failure or last resort, but it can free up resources for other (for example crisis-induced) business opportunities at any time. In the present study, exit as a crisis management strategy is not covered, as the empirical data consist of solo entrepreneurs who continued their businesses over the first months of the COVID-19 crisis.

Further, Kraus et al. (2020) tested and applied the model of strategic responses to the COVID-19 crisis in the context of family-owned businesses. The updated model combines response strategies with temporal perspectives. The model consists of specific managerial measures to three response strategies – retrenchment, persevering, and innovation – either as short-term ad hoc or long-term strategic interventions. In the context of the present study, only the short-term perspective is relevant and adopted as our analysis framework (see Figure 1). In the present study, the framework was used as a standing point for the qualitative content analysis to categorize managerial responses into retrenchment, persevering, and innovating actions. Descriptions of these three response categories are introduced below.

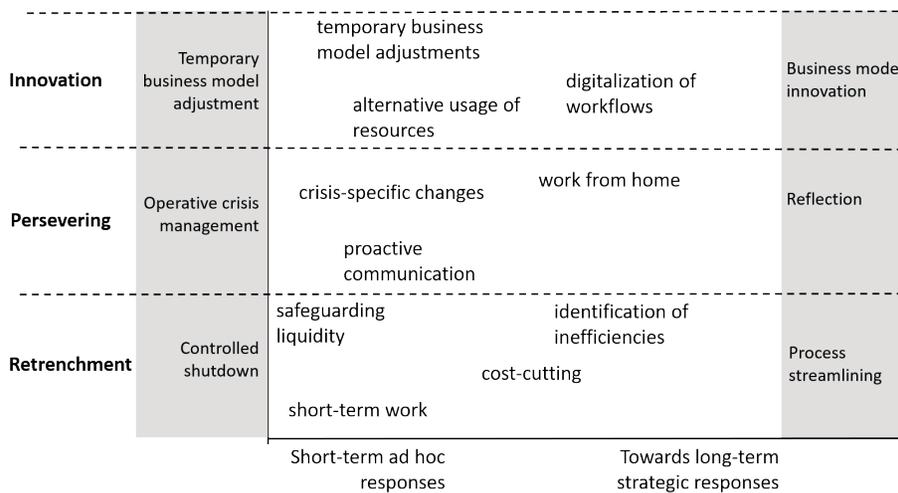


FIGURE 1. Analysis framework for strategic responses to a crisis. Adapted based on the models by Wenzel et al., 2020 and Kraus et al., 2020.

1.3.1 Retrenchment

Retrenchment implies reductions in costs, assets, products, and business operations restricting the range of a firm’s business activities (Wenzel et al., 2020). Generally, retrenchment or cost-cutting is often the main strategy that entrepreneurs choose in crises (Bruton, Ahlstrom, & Wan, 2003; Köksal & Özgül, 2007). Besides downsizing, there are many other strategies to lower costs, including government subsidies, bank and debt financial restructuring, organizational restructuring, mergers and acquisitions, alliances, or business process restructuring (Kahveci, 2021). Retrenchment promotes long-term strategic renewal, as it soothes performance declines (Pearce & Robbins, 1994; Robbins & Pearce, 1992) and sets attention on existing activities (Benner & Zenger, 2016). In the current analysis framework, a major retrenchment strategy is the controlled shutdown referred to as cost-cutting, and safe-guarding liquidity through, for example, shortened work hours (Kraus et al., 2020). The identification of inefficiencies can be launched rather early in the crisis as the first step towards process streamlining, which continues further as a long-term strategy.

1.3.2 Persevering

Persevering means actions targeted at maintaining existing business activities in response to crises. The strategy aims to preserve the status quo and moderate negative impacts (Wenzel et

al. 2020; Wenzel, 2015) particularly through leveraging firm-specific core competencies (De Carolis et al., 2009). In the current framework, the most significant persevering strategy is operative crisis management, whereby the short-term measures taken are proactive communication and crisis-specific changes, but also adjustments to practical ways of working, such as working from home. Working from home was particularly relevant during the COVID-19 pandemic, as distance work was rapidly adopted and even obligated through authorities. As a long-term strategy, companies can use reflection (Kraus et al., 2020).

1.3.3 Innovating

Crises can also provide a chance for strategic renewal, and innovation in this perspective refers to the realization of strategic renewal as a reaction to a crisis (Wenzel *et al.*, 2020). In the framework, the short-term innovation strategy refers to temporary business model adjustments when entrepreneurs recognize opportunities based on the altered setting a crisis has created; they thus alter or adapt their business model for some time to take advantage of these prospects (Kraus et al., 2020). As practical actions, short-term innovation refers to alternative usage of resources and temporary business model modifications. In the COVID-19 crisis, the digitalization of workflows became a predominant strategy for many businesses.

2 Aims and research questions

The purpose of this study is to investigate how solo entrepreneurs respond to an acute external crisis using a short-term temporal perspective. The temporal context includes the first three months of the COVID-19 crisis (March to June, 2020), and the more specific research questions are:

RQ1: What were the immediate and short-term impacts of the COVID-19 crisis on solo entrepreneurs' businesses?

RQ2: How did solo entrepreneurs respond to the COVID-19 pandemic with regards to retrenchment, persevering, and innovation?

3 Research process

3.1 Longitudinal data collection

The timeline in Figure 2 illustrates the monthly progression of critical events, including the most significant political decisions and legislative changes which evolved in Finland during the spring of 2020. The emergency act was officially activated on March 16th, and it lasted until June 16th, 2020. On March 31st, the operations of restaurants throughout the country were restricted, and all restaurants were mandated to be closed starting from April 4th. In addition, the act initiated various funding opportunities for solo entrepreneurs as represented in Figure 2.

COVID-19 TIMELINE IN FINLAND



FIGURE 2. COVID-19 timeline in Finland.

This study design is a longitudinal multiple case study. Case studies are suitable for portraying the temporal, emerging nature of crises (Doern, Williams, & Vorley, 2019). The informants are solo entrepreneurs who were willing to attend follow-up interviews and contact. Case selection was based on purposive sampling (Guest et al., 2006; Morse et al., 2002); entrepreneurs from a variety of industries were included to get a varied overall description of the impact and actions related to the COVID-19 crisis. The represented branches include video production, event production, graphic design, music production, jewelry, manufacturing, digital services, food retail, and second-hand sales.

The data consist of repeated thematic follow-up interviews with entrepreneurs repeated weekly or every two weeks. The same theme set was used as the basis for all entrepreneurs including a) business impacts of COVID-19, b) managerial actions, c) current business prospects and economic buffers, d) application of business support and development funding, e) access to business counseling, and f) personal mood and well-being. The communication channel was chosen based on the preference and convenience of each informant: WhatsApp messages, written diary memos, phone discussions, Facebook Messenger, e-mail, and face-to-face discussions. The data collection was carried out from mid-March until mid-June 2020. The start and end date of data collection as well as the total number of contacts with each informant are shown in Table 1.

Table 1. Data collection.

CASE	COMMUNICATION CHANNELS	FOLLOW-UP PERIOD	NUMBER OF CONTACTS
A	Facebook Messenger, telephone	March 20 th to May 14 th	14
B	written diary, telephone	March 23 rd to June 21 st	6
C	email	March 30 th to June 30 th	6
D	email	March 25 th to June 30 th	9
E	telephone	March 27 th to June 18 th	6
F	telephone	March 27 th to June 18 th	6
G	telephone	March 31 st to June 15 th	8
H	telephone, Facebook Messenger	March 31 st to June 8 th	5
I	telephone, face-to-face, Whatsapp	March 26 th to June 5 th	5

3.2 Qualitative content analysis

Qualitative content analysis (Neergaard & Ulhøi, 2007) is presented herein on the managerial actions and managerial actions of entrepreneurs to survive and overcome the crisis. We adopted the strategic response framework based on the works by Wenzel et al. (2020) and Kraus et al. (2020) as a theoretical lens through which we explored the interview data. The interview transcripts were analyzed using NVivo 12 software as an analysis tool and codified into two primary categories: a) the immediate impact of the COVID-19 crisis on business and b) managerial actions and implications the entrepreneurs took to survive and overcome the crisis. As the interviews were conducted repeatedly over the follow-up time, the entrepreneurs always reported their current situation. In the analysis phase, the authors categorized these business impacts as immediate (approximately 1–3 weeks) and short-term (appr. 1–3 months). Likewise, the managerial responses to these impacts were placed on a continuum as immediate, short-term, or long-term responses depending on when the entrepreneurs reported these actions to occur. Finally, the managerial responses were categorized as retrenchment, innovation, or persevering actions inspired by Kraus et al. (2020) and Wenzel et al. (2020).

4 Findings

4.1 COVID-19 impact on business

Each entrepreneur described the current situation in follow-up interviews. The summaries of case-by-case stories are presented below.

4.1.1 Case A: Increased demand for online streaming

Case A produces online event streaming services. As an immediate impact of the crisis, most of the pre-bookings were cancelled because live meetings were not allowed. In a few weeks, new orders re-filled the schedule as novel demand for online streaming services, such as webinars, occurred particularly among public sector officials and authorities who had an urgent need for providing crisis-related information and other services online. In March, travel restrictions and the closing of the borders to the capital region caused trouble, as the entrepreneur would have needed to attend events physically to stream them. In early April, the entrepreneur applied for economic support from the municipality and requested a temporary pause for rental payments. The bank offered a one-year break on loan payments, but the entrepreneur believed in a quick recovery and did not take advantage of it. Finally, April month exceeded the sales

of the same month in the previous year. New websites attracted new customers, but still, in early May, the entrepreneur had worries about whether any physical events could be organized in the summer. Moreover, the recruiting of the entrepreneur's first employee was postponed because of uncertainty.

4.1.2 Case B: Transferring matchmaking events online

Case B organizes business matchmaking events. Immediately after the crisis started, most pre-booked events were cancelled with a short warning. Spring being the peak season was planned to serve as an economic buffer prior to a quiet summer. The entrepreneur quickly offered new online lectures and webinars, which led to new orders within a few weeks. In early April, schools were closed, and the entrepreneur worked at home with two young children who needed constant care. A few weeks later, the entrepreneur received two development funding grants for a new technical solution. An external technical consultant was hired, and three other entrepreneurs tested the new product. In May, the focus was on marketing the new product, which led to the first orders. By the end of June, the situation seemed reasonably satisfying and there were bookings for the upcoming fall with online and hybrid events.

4.1.3 Case C: Shutdown for performing artist

Case C is a music producer whose main business is performing musical gigs and selling related promotional material. The crisis cancelled all music shows and practically shut down the business. Moreover, the entrepreneurs' children stayed at home because schools were closed, which made working almost impossible. In April, the entrepreneur started musical pedagogical coaching online, and she considered offering services to international customers through a new online course – but the plans were not implemented in the follow-up period. During the crisis, the entrepreneur was inspired to apply for musical theatre studies, which kept her occupied from developing new online-based services such as online coaching until later in June.

4.1.4 Case D: Minor impact on graphic design business

Case D is graphic designer for whom the COVID-19 crisis did not cause cancellations of pre-booked orders, but it halted new orders for several weeks. The entrepreneur had an economic buffer for about two months, and the prolonged crisis would thus disturb business later in the fall. The local public business advisory service provided information through WhatsApp: the Association of Visual Communication Designers in Finland created grants open for application, but after a few weeks of waiting her application was rejected. Moreover, her business did not fulfill the criteria for solo entrepreneurs' COVID-19 funding, as she could not demonstrate the immediate effects of the pandemic on sales. In May, the entrepreneur did not want to apply for a one-time grant from the municipality because she interpreted it as a loan. Instead, she considered applying for investment funding from the local LEADER program later, although she was unfamiliar with the application process. A minor positive signal for business upturn was an opportunity to organize an online course later after the summer. Finally, in late June, the entrepreneur concluded that the overall impact of COVID-19 remained minor for her business.

4.1.5 Case E: Shortened opening hours as a reaction to customer drop

Case E is a jewelry street-level shop with retail sales and product manufacturing, while also offering jeweler services, including repair and engraving. In March, customer flows in the

shop dropped dramatically. People cancelled and postponed all family celebrations, which dramatically decreased the need for gift items. The immediate solution was to cut down all non-necessary running costs and purchases. The entrepreneur's economic buffer was set to last a maximum of a couple of months. New products were manufactured while the shop remained closed. In April, customer flows were lower still, and the shop was closed on Saturdays. In early May, sales dropped again – yet not enough to apply for solo entrepreneur funding with the pre-requisite of a sales drop of 30 percent or more. The entrepreneur's personal economic situation remained bearable. In mid-May, Saturday openings were introduced again, and the national Mother's Day cheered up the sales temporarily. By mid-June, the summer season turned out to be significantly lower than expected.

4.1.6 Case F: Material supply problems and capital bound to product stocks

Case F is a manufacturing company processing side-stream material for the wood industry. In March, the first decision was to negotiate with the bank to postpone regular loan payments. The immediate business impact was minimal, but the entrepreneur was worried about the possible impact on upcoming seasons. In April, changes in consumer behavior and leisure time activities led to decreased sales. The entrepreneur was worried about whether the situation would cause problems in material logistics, and he took the opportunity to fill up on product stocks, although large stocks meant more bound capital. In May, the manufacturing hall property owner halved the monthly rent for three months. The entrepreneur applied for development funding through the Centre for Economic Development, Transport and the Environment. In June, risks for domestic material shortage were real. The running costs were covered only by using existing financial capital.

4.1.7 Case G: Through temporary liquidity problems to record-high sales

Case G is a mobile application developer. During the first month, the crisis did not cause a notable impact on business, and the order backlog was set to last over the summer. During the first month, the entrepreneur had already received public funding for changing the business model. The existing orders were been cancelled, but one client did not give a pre-payment. Running costs were cut down due to the business loan as well, as well as an on-hold personal house loan. Additionally, the entrepreneur's property owner agreed on a rental discount. By the end of April, minor liquidity problems caused one or two invoices to pass the due date. The general growing interest in software services and mobile applications along with the global digitalization boom, however, hoisted up the business in May. Potential customers were other companies who paid for software development with their own R&D funding grants, but long handling times and strict criteria for applicants postponed the first real deals until the end of May. The entrepreneur received one-time funding for solo entrepreneurs from the municipality, and by the end of June, the order backlog stretched to late fall and exceeded the situation of the year before.

4.1.8 Case H: Rapid shutdown and re-thinking personal goals

Case H is a part-time entrepreneur operating in a secondhand store that was closed already in mid-March. In April, the entrepreneur went through personal consideration to consider whether there is still a personal boost for entrepreneurship. In mid-May, general travel and social distancing restrictions were relieved, and the entrepreneur found a new eagerness to re-adjust the business towards something new. In May, the entrepreneur received COVID sup-

port vouchers from the municipality to hire two young people for the summer. Overall, the crisis made the entrepreneur to stop and re-think their own personal values, and how those values could be integrated into a more socially responsible business model.

4.1.9 Case I: Unprepared for total business shutdown

Case I is a retail company focused on importing selected Italian food products to restaurants. The COVID-19 crisis interrupted business immediately as restaurants were shut down. At the pandemic's most acute phase, the bank was the only alternative for providing funding. In April, the entrepreneur was worried about a sustained shutdown. In May, some restaurants were re-opened, but the situation for the case company did not seem any better. It was also probable that the prices of imported food products would need to be lowered to get them sold. The entrepreneur was offered a job as a hired salesperson in another company, but he preferred keeping up with his own business. He had made a pre-payment for a truck load of food products, which could not be transported to Finland. Some of the food products in the stock were about to expire soon if the restaurant business would not be opened soon. In early June, the entrepreneur applied for a temporary unemployment benefit uniquely offered for entrepreneurs, but he looked forward to continuing business as soon as the sales and product transportations would be running again.

Table 2 shows the case descriptions as well as the immediate (1-3 weeks) and short-term (1-3 months) impacts of the COVID-19 on their businesses, respectively.

Table 2. Case descriptions and business impact.

CASE	CORE BUSINESS	COMPANY AGE (YEARS)	IMMEDIATE IMPACT (1-3 WEEKS)	SHORT-TERM IMPACT (1-3 MONTHS)
A	Streaming live videos online; video production	7	cancellation of all pre-booked events; travel restrictions prevented business trips	increased demand for online streaming services; total sales exceeded the year before; hiring an employee postponed
B	Producing online and hybrid matchmaking events	6	cancellation of pre-booked events	development funding for a new technical solution; new online service was well received by customers
C	Composer, lyricist, producer	12	all music shows cancelled and business was shut down	offering new musical pedagogical coaching online; development of service portfolio and re-thinking customer segment strategy
D	Graphic design; illustrations	10	no immediate impact on pre-booked orders but new sales were stopped	no success in grant funding; in total, only minor impact on business
E	Jewelry shop	30	a dramatic drop in in-store customer flow and demand for present items	limited opening hours; still few in-store customers; generally negative impact on business and motivation
F	Wood product manufacturing	9	changes in customers' leisure time activities decreased sales	building product stocks for future demand bound financial capital and increased economic risks; problems in domestic material supply; personal capital used to survive
G	Digital applications; mobile applications	8	no immediate impact: company survived with a development funding grant received before the crisis	one client did not make a pre-payment; minor cash liquidity problems in April; new orders in May and the June result exceeded the year before
H	Sales of secondhand products	22	the shop closed immediately, scaling down the stock and increasing online sales	focus on re-adjusting the business model and re-thinking personal motivations for entrepreneurship
I	Wholesale of food products	5	sales stopped when restaurants were shut down; buying trips and transportation of products postponed	application for unemployment benefits until the business could be re-launched

4.2 Short-term managerial actions in the COVID-19 crisis

Managerial actions were categorized into three strategic responses: retrenchment, persevering, and innovation. The cases with different responses are presented in Table 3, and actions on each response strategy are described below.

Table 3. Short-term strategic managerial responses to COVID-19 crisis.

STRATEGIC RESPONSE	CASES	MANAGERIAL ACTIONS
Innovation	BDG	Re-design and development of marketing (e.g., website)
	BGH	Re-thinking business model, cost structure or pricing
	ABG	Developing entrepreneurial competence and skills
	CD	Development of new products or services
	H	Increasing online-based services and online sales
	B	Using entrepreneurial networks for new business opportunities
	FG	Looking for an employee
Persevering	BDFG	Applying for development and investment funding
	ADI	Applying for COVID support grants or unemployment benefit
	CF	Building material / product stocks
	DF	Use of personal economic capital ("slack resources")
	HI	Selling out stock products
	E	Manufacturing products for the future need
	A	Work from home ("digitalization leap")
Retrenchment	AFGH	Rental payment arrangement with the property owner
	EHI	Shortening opening hours or temporarily pausing the business
	FG	Loan arrangements with banks
	DE	Focusing on personal recovery and family time
	DE	Cutting down personal expenses
	EH	Postpone investments and purchases
	G	Rearranging invoice payment terms or paying invoices past the due date

4.2.1 Retrenchment actions

Managerial actions with regard to retrenchment were applied by all except one case (B). The most common short-term retrenchment actions were negotiating lower rental costs for a temporary period (cases A, F, G, and H), as well as shortening opening hours or even pausing the business (C, E, H, I). From the financial perspective, entrepreneurs reported also making loan arrangements with banks (C, D, E), cutting down on personal expenses (D, E), and postponing investments or purchases (E, H). One entrepreneur reported actual cash liquidity problems which led to the late-paying of invoices (G). The COVID-19 crisis necessitated general social distancing and other restrictions, which gave entrepreneurs time to focus on personal recovery and family time (C, D, E). The forced pause from day-to-day business activities was not experienced as merely negative, but many entrepreneurs described it as a welcome break that allowed time for making plans for other strategic responses; i.e., persevering and innovation.

4.2.2 Persevering actions

Managerial actions with regard to persevering were identified in the interviews of eight entrepreneurs. The most common persevering actions were applying for development and investment funding (cases B, D, F, and G), or for more specific COVID support grants or unemployment benefits that were uniquely available for entrepreneurs with certain criteria for a set period (A, D, I). Unfamiliarity with funding applications and a lack of information on suitable funding instruments proved a barrier to applying for external funding (C, E). Moreover, some entrepre-

neurs had to use personal savings (i.e., “slack resources”) or their spouse’s income to survive (C, D, F). When business operations were shut down temporarily, entrepreneurs were able to use the time for preparing new products or other materials for future needs (C, F), although there were troubles in material supply chains. Some tried to sell out their stock products to get some turnover (H). One entrepreneur in the food business had trouble with pre-paid products that were stuck abroad and could not be transported because of travel restrictions (I). Case E did not report persevering actions.

4.2.3 Innovation actions

We identified managerial actions with regard to innovation among seven case companies. Entrepreneurs re-designed and developed their marketing, mainly through updating their websites or making updated analyses on their current customer segments (B, D). One entrepreneur was lucky to win a free radio campaign and a business coaching session to strengthen entrepreneurial competencies (G). Re-thinking business models, cost structure, or pricing could mean, for instance, introducing a servitization-based business model with monthly fees from customers (G), or a plan to start a new company with another online-based business model better fitting the personal goals of the entrepreneur (H). Also, the development of new products or services (C, D) was reported in more than one company. Three entrepreneurs told they used the crisis time to develop their personal entrepreneurial competencies and skills (A, B, G). Two entrepreneurs were even looking for or even hiring a new employee for the summer (F, G). Two cases (E, I) did not report any innovative actions, and Case I expressed having been totally unprepared for the situation and disappointed in the state for precluding private business making.

5 Discussion

This study contributes to the academic literature on crisis management and entrepreneurship by identifying the immediate and short-term impacts of the COVID-19 crisis on solo entrepreneurs’ businesses (RQ1) and integrating the strategic responses into a reference framework based on a robust literature review by Wenzel *et al.* (2020) and an empirical study among family businesses by Krause *et al.* (2020) (RQ2).

5.1 Business impacts

Most of the case businesses were hit dramatically by the crisis. A couple of them survived with minor damage, and some of them even reached record-high sales exceeding the previous year towards the end of the follow-up period. Those who increased their sales were able to offer online-based services or software design quickly. Crises in general create resource availability and liquidity problems, mainly because customers cut down on purchases and financiers become more cautious (Eggers, 2020). During the COVID-19 crisis, shutting down restaurants, cancelling live meetings, and prohibiting live performances of artists led to a drop in business for some entrepreneurs, whereas this led to increasing demand for online streaming services, online matchmaking, or new software development. Particularly the latter case received new orders from companies that had received COVID-recovery funding to promote their digitalization. An earlier study on the COVID-19 business impact showed that supply chains often lack essential flexibility and diversity (Zhu *et al.*, 2020). One of the case businesses suffered from delivery problems of domestic material to manufacture new products, and another entrepreneur had a pre-paid truckload stuck abroad because of travel restrictions. None of the cases were

permanently shut down, but the crisis also forced entrepreneurs to take some time for themselves. Additional leisure time was sometimes warmly welcome and provided a well-deserved chance for re-thinking the business model or even personal goals as entrepreneurs.

5.2 Managerial responses to the crisis

Based on the analysis, we adjusted the existing models in the context of solo entrepreneurs (Figure 3).

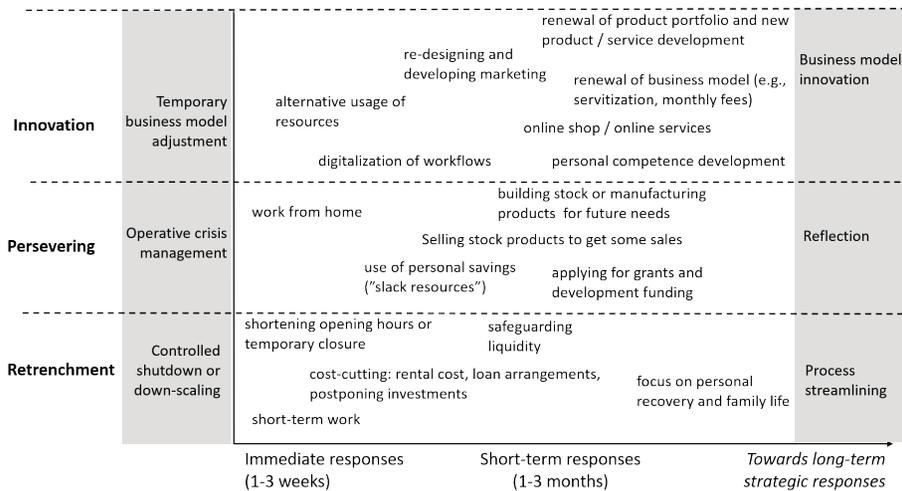


FIGURE 3. Adjusted framework for solo entrepreneurs' responses to the COVID-19 crisis

Wenzel *et al.* (2020) used the term retrenchment to refer mainly to cost-cutting, which is known to be the most common managerial response to crises. Besides downsizing, there are many strategies to lower costs, including the use of public administration subventions, financial or organization restructuring, or business process restructuring, among others (Kahveci, 2021). During the COVID-19 crisis, businesses cut down on non-essential expenses and modified existing business models to sustain revenue (Ratten, 2021). In the present study, retrenchment actions included cost-cutting mainly through temporary arrangements for rental and loan payments and the temporary closure of business.

Entrepreneurs in the present study reported persevering actions related to distance work completed from home, the use of personal savings to survive, and the manufacturing of new products or large stock purchases for future needs. Further, many financial instruments were introduced to help companies overcome the crisis. Within a few weeks or months, solo entrepreneurs looked for potential funding grants, although many of them felt confused and unsure as to where and how they could apply, or whether their businesses met the application criteria. In the short run, retrenchment can be a vital or inescapable ad-hoc response, but in a prolonged crisis, attention should be drawn to alternative strategic responses to ensure firm recovery (Wenzel *et al.*, 2020). Trouble in choosing a persevering strategy is that this response is fundamentally bound to the accessibility to slack resources, and in small businesses, economic buffers are typically low. For instance, in a 2020 study in the UK, only four SMEs in ten

had saved money for a possible crisis, and 1 one in 12 had no cash holdings whatsoever facing COVID-19 (Cowling, Brown, & Rocha, 2020, p.8); in a similar study, a typical small business in the USA was shown to have less than one month's worth of buffer in hand (Bartik et al., 2020). The business prospects of case companies in this study varied, particularly in the ambiguous situation where firms were faced with altered conditions on a day-to-day basis. In such a situation, persevering firms may surpass rivals that conduct strategic renewal (Wenzel et al., 2020). However, because of the need for slack resources, persevering will be a difficult, if not impossible, response in a prolonged crisis.

As seen in the present study, many solo entrepreneurs chose to start the development of new products or services. Like in large companies, solo entrepreneurs were also struck by rapidly declining sales, and they were forced to adapt their business models to meet the switching customer needs and demands. An external crisis often prompts temporary business model innovations also in small companies (Clauss, Breier, Kraus, Durst & Mahto, 2021). A characteristic of the COVID-19 pandemic was the dramatically increased demand for online shopping and services, which offered rapid business recovery opportunities for solo entrepreneurs who had the agility to renew their sales and marketing channels, or even business models with new forms of online-based services. Some other strategies applied by global businesses may not be directly converted to solo entrepreneurs' businesses. For instance, large companies have financial and technical assets to ensure operations during a crisis state. Moreover, it is necessary for large organizations to adopt effective business analytics methods to support data-driven leadership, whereas among solo entrepreneurs the intra-organizational information flow is very straightforward. Innovating is essential to sustain firm survival if the crisis is long-lasting and requires the exploration of complementary sources of income (Wenzel et al., 2020). The time frame for strategic renewal may be over if the entrepreneur holds back too long and use up the slack resources through persevering or retrenchment actions. While the temporary business model adjustment is essentially only new to firms and not to the industry, long-term business model innovation can be more complex (Foss & Saebi, 2017). Margherita and Heikkilä (2021) have investigated company responses to COVID-19 among the world-leading corporations. They drew recommendations for managers considering developing their response strategies for the future. Among these recommendations, they highlight a need for agile business processes, recommending the redesigning and adapting of existing business activities. In the adjusted model, there are actions both on the company and individual levels, as in solo entrepreneur businesses both levels are closely intertwined.

In his investigation on crisis management among small business owners, Herbane (2010) found that there is typically very little pre-crisis planning, and there is thus more focus on the trans- and post-crisis phases. Our follow-up period lasted for three months, and so long-term strategic responses cannot be reported here. However, identified actions related to persevering and, more importantly, innovation show preparedness for long-term responses such as process streamlining, reflection, and business model innovation. Relatively rapid actions on the renewal of marketing strategies, the introduction of online-based services and sales channels, as well as plans for the servitization of business models indicate that more permanent changes in solo entrepreneurs' businesses have been initiated by the unforeseen COVID-19 crisis.

6 Conclusions and implications

We contributed to the literature with an analysis of actual on-time responses by solo entrepreneurs to face the COVID-19 pandemic. The main outcome of this analysis is an adjusted model

for solo entrepreneurs' short-term crisis management. In addition, the identified responses are placed into the framework on a chronological continuum from immediate responses to short-term responses. Compared to the original framework from the literature review of Wenzel et al. (2020) and the family business context by Kraus et al. (2020), we added focus on personal recovery and family time as a retrenchment response, working from home was applied immediately in accordance with the crisis start, and solo entrepreneurs applied more diverse persevering responses compared to other contexts (e.g. use of personal savings, applying for grants and development funding, selling stock products to get some sales, and manufacturing products for future sales). Regarding innovation responses, solo entrepreneurs were quick to adopt digitalization of workflows, whereas renewal of business models and renewal of portfolio typically occurred only after the immediate shock was over. Focus on personal competence development is also one addition to the framework compared to the previous versions. The main contribution of this study to the crisis management literature is that it provides a more nuanced understanding of the temporal process of strategic managerial actions that solo entrepreneurs apply in an acute external crisis. The retrenchment actions tend to be applied very soon when the crisis occurs, whereas over the first months the actions focused on persevering and increasingly on innovation become more relevant. These findings confirm the framework based on the works by Kraus et al. (2020) and Wenzel et al. (2020) but also provide with more elaborated description of the strategic crisis management process in the context of solo entrepreneurs.

Previous studies have shown that companies introducing any kind of innovation had a higher likelihood of surviving the crisis than non-innovators (Cefis et al., 2020). As the study by Herbane (2010) showed, small business owners characterize crises by a lack of control or cash and compressed time to respond. In the COVID-19 crisis, the situation itself was surprising, and barely anyone foresaw the extent of its impact on society. The crisis management of SMEs during the COVID-19 crisis can generally be described as reactive and informal; it thus is necessary to move towards improved systematization to balance structure and flexibility (Fasth, Elliot, & Styhre, 2021). However, it has also been recognized that micro-sized enterprises, including solo entrepreneurs, tend to be more customer-oriented and they adapt easily to changes thanks to their agile organization and flexible business models as well as their capacity to learn quickly (Rastrollo-Horrillo et al., 2021). Solo entrepreneurs' responses to the COVID-19 crisis showed, that solo entrepreneurs could quickly innovate novel online-based services and adaptations to their business models. These advantages can at least partly compensate for their less developed strategic preparation for crises, as strategic flexibility in business model innovation during COVID-19 may lead to better potential to tackle future crises (Clauss et al., 2021). Thus, the managerial implication of this study is that companies of any size, also solo entrepreneurs, should seek long-term strategic innovation actions proactively before the crisis hits. Those entrepreneurs that have alternative means to provide their services, particularly through digital platforms, have an advantageous position in pandemic situations when physical contact with customers are restricted. Also, entrepreneurs' personal competence development is a strategic investment that boosts the capability to successfully meet external crises.

The strategic choice for the data collection of this study was a rapid implementation when the wide-scale pandemic restrictions were implemented in Finland. While the quick response and on-time follow-up of the case companies is a strength of this study setting, a larger number of participating companies might have revealed other strategic responses and made the adjusted framework more comprehensive. The data collection was based on thematic, open-

ended interviews that allowed each participant to focus on those issues they felt most relevant at the present time point. Following a more systematic interview protocol might have allowed a more comprehensive analysis of each interview theme, while it could have added more stress on the participants and increased risks for dropouts at a time that was highly stressful for the target group.

A crisis can be examined from the perspective of the crisis event sequence (Turner, 1976), starting from pre-crisis planning through several phases all the way to the implementation of crisis inquiry recommendations (Doern, Williams, & Vorley, 2019). As a suggestion for future research, our understanding of crisis management among solo entrepreneurs would be boosted by observing the whole crisis sequence as a process through longitudinal research designs and an emphasis on the periods prior to, during, and after the crisis (Buchanan & Denyer, 2013; Doern, Williams, & Vorley, 2019).

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