We complement this research by addressing the question of how entrepreneurial ventures can be resilient in the face of adversity in Times of Crisis. First, we conducted a comprehensive web search to find women's entrepreneurial ventures. Based on web search results, we conducted Online interviews with 90 women entrepreneurs working in many types of ventures. Second, we surveyed innovative actions that help women's entrepreneurial ventures resilience. Building on these insights, we identified a variety of innovative actions to help women's entrepreneurial ventures resilience in times of crisis. We identify five specific types of innovative actions to address venture resilience: Preventive and Supportive, Analytical, Financial risk management, Collaborative competition, and Effectual entrepreneurship. We aim to further nuance our understanding of the COVID-19...
crisis results as a challenge for women's entrepreneurial ventures. We suggest key insights on ventures resilience for entrepreneurship Policymakers.

KEY WORDS: women entrepreneurship, entrepreneurial ventures, resilience, COVID-19 crisis

Introduction

Today, we are facing a situation in the world that is undoubtedly unprecedented since World War II (Huang et al., 2020). COVID-19 is a crisis with profound implications for society and the economy, including for its entrepreneurs (Brown & Rocha, 2020; Giones et al., 2020; Scheidgen et al., 2021; Zahra, 2021). While COVID-19 may not have been entirely unanticipated in the epidemiological community (Prah & Sibiri, 2020; Subbaraman, 2020), no one in the business community appears to have anticipated it (Foss, 2020). Given the unparalleled shock triggered by COVID-19, hard to predict as a 'black swan event' (Yarovaya et al., 2020). There is a need for a better understanding of factors to help ventures women managers better identify looming challenges and make sense of their environments and make quality decisions. Consequently, businesses must strive to overcome the current situation with fewer challenges and become resilient (Han et al., 2020).

Resilience is an essential concept in entrepreneurial crisis management that describes an organization's ability to continue functioning throughout a disruptive event (Dahles & Susilowati, 2015; Kuckertz et al., 2020). Resilience in the organizational sense means the ability to withstand crises and risk factors (Alberti et al., 2018). Business resilience is the structural and systemic capabilities that enable companies to have the capacity to deal with crises (Sullivan-Taylor & Branicki, 2011). Also, it creates opportunities for entrepreneurial ventures to survive despite adverse conditions and return to growth (Ortiz-de-Mandojana & Bansal, 2016). While this crisis will change the expectations, priorities, and lifestyles of people in society, entrepreneurial ventures that act with foresight adapted to lifestyle changes and community attitudes will be more successful (Haase & Eberl, 2019).

While the Resilience strategy view offers a unique insight into decision making in times of crisis, few ventures can demonstrate resilience by sustaining high performance during a crisis time (Ketchen Jr & Craighead,
As the ground rules shifted like never before, some ventures failed, and many struggled to survive (Ketchen Jr and Craighead, 2020). We aim to further nuance our understanding of the COVID-19 crisis results as a challenge for women's entrepreneurial ventures and address the question: How women's entrepreneurial ventures can be resilient in the face of adversity in Times of Crisis? More precisely, we focus on how women's ventures overcome the disruptive consequences of crises and COVID-19 in particular.

**Crisis, Entrepreneurial Ventures and Resilience**

Crises affect entrepreneurial ventures by leading to resource constraints, business contraction, or even closure (Thorgren & Williams, 2020). At the same time, entrepreneurial ventures engage with crises, for instance, by establishing stronger links to local communities (Wry & Haugh, 2018). We analyzed how women's entrepreneurial ventures reacted to the pandemic offers a unique opportunity to build knowledge. As many researchers (Haase & Eberl, 2019; Muñoz et al., 2020; Nummela et al., 2020; Patel & Rietveld, 2020; Scheidgen et al., 2021) highlight in their review, the majority of previous studies focused on how crises challenged entrepreneurship. We examine how crises also offer opportunities for entrepreneurial ventures to resilience.

**Resilience in Times of Crisis**

The COVID-19 pandemic has had an uncertain impact on entrepreneurial ventures that have suffered significant consequences. However, resilience has emerged as an entrepreneurial skill that allows ventures to adapt and grow stronger in the face of challenges (Vatansever & Arun, 2016). Resilience is a relatively entrepreneurial topic in entrepreneurship and has been discussed concerning entrepreneurial ventures, small businesses, and in the contexts of disruptive business model innovations, economic recessions, and other external shocks (Blatt, 2009; Saridakis, 2012; Smallbone et al., 2012; Williams & Vorley, 2014). Resilience is hastening the speed of recovery from a crisis. This refers to the efficient utilization of resources for repair and reconstruction (Rose & Krausmann, 2013). Entrepreneurial ventures are generally regarded as less resilient than old and large businesses because they have fewer resources,
less bargaining power, and are less able to spread risk over a larger customer base or product line (Smallbone et al., 2012).

**Women’s Entrepreneurial Ventures Resilience in Times of Crisis**

COVID-19 is unique in the severity of its impact as it is a humanitarian disaster that has caused both a supply and a demand shock to the global economic system. It has disproportionately affected women, entrepreneurs, as their firms are younger and smaller (Manolova et al., 2020). Women's entrepreneurial ventures need to pay attention to various innovative actions in a time of global crisis (Ghosh et al., 2018). It is important to understand how women entrepreneurs survive during uncertainty and what drives entrepreneurship during challenging times (Ligthelm, 2011). Decision-making by women entrepreneurs often comes with errors and misjudgments because the information available is either ambiguous or incomplete. Women entrepreneurs have to continually keep up with changing contingencies by adjusting their goals and actions (Fatoki, 2018). Therefore, we examine the resilience actions for Iranian women's entrepreneurial ventures in times of a crisis.

**Material and Methods**

To explore how women's entrepreneurial ventures can be resilient in the face of adversity in Times of Crisis, we chose a qualitative approach investigating such entrepreneurial activities in Iran.

**Field Study**

Since early 2020, many countries around the world have implemented infection control measures to mitigate the spread of COVID-19. As the first country in Asia to do so, Iran declared a national lockdown on April 8th. On May 15th, Iran closed many of its borders. One day later, schools and kindergartens had closed. Restaurants and coffee shops, hotels, shops, and businesses had all closed. Many women entrepreneurs became active in recognition resilience Actions to tackle the consequences of this crisis.
Data Collection and Analysis

Our data collection and analysis proceeded in three phases, as Fig. 1 illustrates. First, we conducted a comprehensive web search to find women's entrepreneurial ventures established three years ago in Iran. Based on web search results, we identified 1412 women's entrepreneurial ventures (please contact the authors for an overview). Altogether, we conducted Online (by Skype) interviews with 90 women entrepreneurs working in four types of ventures: IT Services, Health, Handicraft, and Food products. Interviews began broadly and then converged on specific issues, as noted in the literature on this research method (Sridharan et al., 2014).

We applied Corbin and Strauss (2014) data analysis approach, including data analysis for concepts, data analysis for context, incorporating the process into analysis, and combining classes around the central variables. We used the Grounded Theory method to analyze the interviews to provide an in-depth understanding of the main actions that help women's entrepreneurial venture's resilience (Fig. 2) (Ganglmair-Wooliscroft & Wooliscroft, 2017).
Data collection:
Identifying 1412 women's entrepreneurial ventures via web search.

Sampling criteria:
Women's ventures have been established since 3 years ago.
1412 women's entrepreneurial ventures were classified into four types of activities.
90 women Entrepreneurs from four types of ventures (IT services, Health, Handicraft, and Food products).

Data analysis:
We applied Corbin and Strauss (2008) data analysis approach

Expletory coding:
Identify different actions related to entrepreneurial ventures' resiliency.

Developing first-order categories:
e.g. sorting some socio-economic Actions that help women's entrepreneurial ventures resilience

Developing second-order themes:
e.g. identify strategies that help women's entrepreneurial ventures resilience.

Primary insights:
e.g. Five types of Actions:
Preventive and supportive actions, Innovative actions, Financial risk management, Collaborative competition, and Effectual Entrepreneurship help to women's entrepreneurial ventures resilience.

Source: Authors' compilation
Figure 2: Themes Tree

Source: Authors' compilation
Results: Empirical Insights

Preventive Actions

Our findings reveal that Preventive and supportive actions play an important role in women's entrepreneurial venture's resilience in Iran. Interviewee -111 has highlighted the point. She said: "…One of the tasks for venture’s managers in the face of a crisis is to create a safe and healthy work environment and to act in a way that employees continue to feel valued by the organization…." They believed Manpower is a technical and communication source of Competencies. Employee support in these situations has a positive effect on employees' long-term commitment. In our Data, ventures encouraged employees to initiatives and their active participation to mitigate the consequences of the crisis. The interviewees' views on human capital strategy initiatives show that health and wellness in the workplace have a higher rating. Issues related to succession planning and performance in the workplace, such as the formation of teams, are highly important.

Marketing Actions

Interviewee -22 says that "…Entrepreneurial venture executives need to be seen more than ever in innovative ways in the community and show how your business is changing the community…." Also, Interviewee -3 States that "…In times of crisis, such as COVID-19, the resilient of a venture depends not on improving its performance but on the company’s ability to define innovative actions and develop capabilities to take advantage of opportunities for innovation…." As the COVID-19 outbreak progressed, we indicated ventures that sought innovative and creative opportunities to curb crisis damage and create entrepreneurial opportunities to monetize and meet the needs of society.

Interviewee -49 said: "…With the onset of the Covid-19 crisis, our venture has suffered psychologically and economically, […] Our Customers to adapt to the crisis have changed their buying habits and behavior, […] our venture in this period to adapt to market changes and adapt to entrepreneurial consumer behaviors has taken appropriate measures…." Interestingly, 98% of the customers of the ventures we studied during the covid-19 crisis stopped or postponed their purchases. Therefore, women’s ventures should pay attention to marketing actions that are directly related to
competitive advantage and can directly help increase liquidity in times of crisis. Also, these ventures must intelligently apply innovative actions to the venture's marketing mix (location, product, price, and promotion). Interviewee -85, for instance, said: "...To understand the impact of COVID-19 on our venture, First, we examined the impact of COVID-19 crisis on the value chain of our venture...".

In our Data, many Interviewees believed the impact of the COVID-19 crisis on the downstream value chain was enormous. Because customers have stopped buying, they buy less or else go shopping channels. The shift from offline shopping to online shopping is a good example that most venture executives are looking for these days. In this regard, Interviewee -64 says: "...Customer-centric creativity is the key to creating entrepreneurial innovations, and my venture needs to be creative in presenting entrepreneurial actions and solving entrepreneurial problems to be aware of changing customer needs and behaviors...". Therefore, entrepreneurial ventures can respond to changing and emerging customer needs through innovative Actions and identifying entrepreneurial opportunities with creative destruction and creative accumulation techniques.

Cash Management Actions

In our sample, the Covid-19 crisis, it was hindering the cash flow of entrepreneurial ventures and necessitated a focus on financial resource management and financial discipline. Interviewee -78, for instance, said: "...The corona crisis has reduced demand and consequently reduced our venture sales. In times of crisis, smart financial management ensures ventures resilience..." Many interviewees believed reducing unnecessary costs, increasing the time to repay debts and accounts payable, assessing liabilities, and maintaining liquidity are high priorities for an entrepreneurial venture's resilience.

Collaborative Actions

We have identified many ventures that entered the collaborative competition relationship and provided entrepreneurial value through cooperation. Interviewee -90 who works in the IT business, says: "...I have achieved higher levels of joint R&D resources, joint procurement Specialized knowledge and advanced technology, joint marketing and
branding, and entrepreneurial product development through collaborative competition...". Interestingly, 58% of ventures that have worked in the service industry, developed a collaborative competition strategy and took advantage of entrepreneurial opportunities by sharing and collectively using their resources and capabilities for their venture's resilience. Our study found that collaborative competition, when it lasted from two to three years, had more chance of mutually reducing venture costs. Interviewee-80 says: "…Entrepreneurial ventures tend to face similar markets and use similar resources and technologies. Entrepreneurial ventures typically have to deal with similar challenges at large. Thus, with rising costs of R&D and competition, it often makes sense to collaborate with competitors on entrepreneurial opportunities development and innovation...". While Interviewee-10 says: "…The risks of collaborating with competitors might seem daunting...".

**Effectual Logic Actions**

In this study, we identified that entrepreneurs' effectual logic and making decisions is dramatically different from typical enterprise managers. "…In our venture, we emphasize the creation of innovative actions using existing resources. We are planning on available resources...", said Interviewee-111. Effectual Entrepreneurship places great emphasis on innovative learning method for encouraging sustainable entrepreneurship, and it stresses the leveraging of contingencies. Interviewee-12 says: "…When I started my business' […] I knew what my risk was at each step...". In our data, 78% of ventures routinely created innovative actions to address sudden needs. We indicated that women’s ventures often constitute sources of innovation despite their newness and smallness. Such ventures are rarely able to invest informal processes, following alternative pathways to develop innovation instead.

**Discussion: Implications and Research Outlook**

We illustrate how entrepreneurial women create innovative actions for their ventures to resilience in times of crisis. Also, we identify innovative actions for venture's resilience that are shaped by a thorough emphasis on innovative learning methods in goal setting, risk-taking, resource selection, and gathering, dealing with setbacks, building networks, and management control (Deligianni et al., 2020; Jin et al., 2018).
Figure 3. Innovative Actions Model

INNOVATIVE ACTIONS FOR WOMEN’S ENTREPRENEURIAL VENTURES RESILIENCE

Preventive-supportive

Marketing

Anxiety in Staff motivation - Changing customers’ buying behavior - Reduced Demand and Sales - Increased Costs...

OUTBREAK OF COVID-19 CRISIS: Results for Women’s Ventures

Source: Authors’ compilation

Our findings thus contribute to women entrepreneurship and crisis research and relate to concerns around venture resilience in times of crisis, by the negative consequences of crises (Lee & Wang, 2017; Prah & Sibiri, 2020), as summarized in our framework presented in Fig. 3. In the following, we briefly outline the implications of our findings as well as directions for future research.

Our study indicates that Preventive and supportive actions play an important role in women's entrepreneurial venture's resilience in Iran. In the face of a COVID-19 crisis, entrepreneurial women's task is to create a safe and healthy work environment and act in a way that employees continue to feel valued by the organization (Foss, 2020; Ortiz-de-Mandojana & Bansal, 2016). In times of the COVID-19 crisis, a venture’s survival depends on the
company's ability to define Actions and develop capabilities to take advantage of entrepreneurial opportunities for innovation. We found that entrepreneurial ventures sought innovative and creative opportunities to curb crisis damage and create entrepreneurial opportunities to monetize and meet the needs of society (Thorgren & Williams, 2020). With the onset of the Covid-19 crisis, Customers to adapt to the crisis have changed their buying habits and behavior. Therefore, entrepreneurial ventures to adapt to market changes and entrepreneurial consumer behaviors must take appropriate actions (Giones et al., 2020; Ratten, 2020).

We also contribute to the issue of competitive advantage in addressing venture resilience through paying attention to innovative actions. This implies that entrepreneurial ventures must intelligently apply adventure marketing (Bachmann et al., 2021; Cai et al., 2017; Erikson, 2002; Lechner et al., 2016). While some innovation actions may be restricted in relevance to the crisis and thus ephemeral, others may create value in the downstream value chain in the long run, and thus have an enduring impact (Scheidgen et al., 2021). In times of crisis, Customer-centric creativity is the key to creating entrepreneurial innovations, and entrepreneurial ventures need to be creative in presenting entrepreneurial actions and solving entrepreneurial problems to be aware of changing customer needs and behaviors (Inversini et al., 2020; Selden and MacMillan, 2006).

We find that negative results of the Covid-19 crisis may be buffered by shifts in women entrepreneurs' strategic orientation (Grimes, 2018). While the entrepreneurial ventures have achieved higher levels of joint R&D resources, joint procurement of Specialized knowledge and advanced technology, joint marketing and branding, and entrepreneurial product development through collaborative competition (Prasad & Tanase, 2021; Sekhavat, 2020). Also, our findings indicate that entrepreneurial ventures which started with predominantly commercial motives may engage in collaborative competition in the face of external pressures, such as COVID-19 (López-Torres et al., 2021). As these ventures may thus become hybrids businesses, this shift also has key implications in terms of antecedent processes of hybrid entrepreneurship (Pollack et al., 2019). Hence, we see a link between research on women's entrepreneurial ventures and crisis and research on hybrid entrepreneurship.
Implications for PolicyMakers

Our findings have implications for practitioners and policymakers. First, they suggest that women entrepreneurs need to invest continually in innovation resources to prepare for the unexpected, not just in the aftermath of a crisis. These innovation resources can buffer against the loss and stress that may follow crises and help them acquire entrepreneurial capabilities. Our findings encourage women entrepreneurs to ask policymakers for help and draw on the support provided, and importantly, to move on quickly to minimize stress and other losses to the venture. This implies that Policymakers need to act promptly to support entrepreneurial ventures affected by a crisis, particularly Covid-19 crisis with significant social and economic repercussions- providing financial assistance, advice, and emotional support.

Conclusions

Our study makes contributions to our understanding of resilience in entrepreneurship. First, it identifies different kinds of actions that entrepreneurial ventures adopt following a crisis, the resources these actions serve to protect or build, and the role they play in making ventures resilient. The COVID-19 Crisis changed the venture's strategic orientation, which results in entrepreneurial new opportunities and innovative actions- with important implications for women's entrepreneurial ventures. We are hopeful that our work offers insights that further advance understanding of the key issues at the intersection of entrepreneurship, crisis, women entrepreneurs, and entrepreneurial ventures and inspires scholars to deliver more deeply into crisis research from an entrepreneurial opportunity and entrepreneurial ventures resilience.

References


Rapid establishment of a COVID-19 biobank in NHRI by National Biobank Consortium of Taiwan. *Biomedical journal.*


[44] **Subbaraman, N.,** 2020. Mission to trace. NATURE PUBLISHING GROUP MACMILLAN BUILDING, 4 CRINAN ST, LONDON N1 9XW, ENGLAND.


### APPENDIX. Participants

**Table 1: Participants**

<table>
<thead>
<tr>
<th>Business Groups</th>
<th>Interviewees number</th>
<th>Products/Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Services</td>
<td>4</td>
<td>Job search, online resume maker, job search, advertisement</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Online or offline advertising service, site design, online education</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Smart Investment Network, Iran Stock Exchange Information, An Integrated Environment for Sharing Ideas</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Find Jobs, Create CV, Find the Best Employers, opportunities for students and fresh graduates to gain business exposure.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>Behdokht is a website for young Iranian girls and women</td>
</tr>
<tr>
<td>Handicraft</td>
<td>3</td>
<td>Introducing and selling original Iranian handicrafts</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Rural products development and sales platform</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Specialized store selling carpets and home decoration items</td>
</tr>
<tr>
<td>Health</td>
<td>8</td>
<td>Medical consultation, Trip planning, VIP hospital services, medical and beauty services</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Providing online medical and health services, Improving people's awareness of health</td>
</tr>
<tr>
<td>Food products</td>
<td>9</td>
<td>Manufacturer and distributor of cakes and pastries, including cakes, crumbles, brownies and bases</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Homemade food ordering site, finger food, house food and corporate food</td>
</tr>
</tbody>
</table>

*All Businesses from the business groups are anonymized.*

**Article history:**

Received: November 1\(^{st}\), 2021

Accepted: April 10\(^{th}\), 2022