

Resourcing actions that influenced business model adaptation during the COVID-19 crisis

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Purpose: Entrepreneurs constantly face crises and resource scarcity threatening their firms' survival. However, limited studies analyse how entrepreneurs influence business model adaptation to survive a crisis. The study uses the bricolage theory to explore how entrepreneurs' resourcing actions influenced business model adaptation during the COVID-19 crisis in a resource-constrained environment.

Design/methodology/approach: This narrative qualitative study was conducted on 12 Indian entrepreneurs in the KwaZulu-Natal province and validated by additional interviews with three Black African entrepreneurs in Gauteng province, South Africa. The themes were developed using narrative thematic analysis.

Findings/results: The study reveals the resourcing actions influencing Indian entrepreneurs' business model adaptation. These include sense-making of resource constraints, leveraging 'self-reliant' entrepreneurial bricolage behaviours and maximising 'joint' stakeholder resources. The study shows how some dimensions of effectuation influence the resourcing actions, suggesting that bricolage is not mutually exclusive from effectuation during business model adaptation because of the crisis.

Practical implications: The study offers entrepreneurs practical insights on resourcing actions for business model adaptation during a crisis. The findings will help entrepreneurship development groups establish suitable interventions for entrepreneurs, assisting in preparing and managing crises.

Originality/value: The study shows how the micro or individual and/or entrepreneur interacts with the macro business levels and stakeholders during business model adaptation. The study shows that entrepreneurs' actions are significant antecedents to business model adaptation.

Keywords: business model adaptation; bricolage; COVID-19 pandemic; crisis; emerging market; resourcing actions.

Introduction

Over the years, entrepreneurial business crises have received significant attention from researchers and business practitioners (Doern et al., 2019; Newman et al., 2022). Literature shows that entrepreneurs face various kinds of endogenous and exogenous crises. The endogenous crises are internal to the organisations because of business process failure (Williams et al., 2017). The exogenous crises arise from the external environment, such as global financial crises, pandemics, wars and natural disasters (Doern et al., 2019). In March 2020, an exogenous crisis, COVID-19 was declared a pandemic (World Health Organization, 2020), challenging business operations globally (Batat, 2021; Belitski et al., 2022). The national lockdown imposed by governments to minimise the spread of the virus had a significant impact on businesses, resulting in declining numbers of customers, increased supplier costs and constraints on financial and non-financial resources (Batat, 2021; Belitski et al., 2022; Kuckertz et al., 2020). Therefore, entrepreneurs' critical activity was ensuring their businesses survived the COVID-19 crisis.

Entrepreneurship research on crisis management has made significant progress in explaining how entrepreneurs cope with undesirable situations (Batat, 2021; Doern, 2016; Doern et al., 2019). Some crisis management strategies focused on business-level approaches, including business model pivots and digitalisation (Kuckertz et al., 2020; Manolova et al., 2020). Few studies explore the response strategies at multiple levels, namely, individuals, businesses and society

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(Belitski et al., 2022). In their multi-level study, Batat (2021) examined how individual factors influence social innovation to benefit communities. He explored how individual-level (bricolage, effectuation and causation) factors influence the business response strategy to survive, continue or grow but did not focus on the business model. Despite efforts to understand the response strategies, limited research shows the role of entrepreneurs' resourcing actions in influencing the business model adaptation during a crisis (Doern et al., 2019; Newman et al., 2022).

Newman et al. (2022) emphasised that research should focus on the entrepreneur when exploring how small businesses manage a crisis, especially an unexpected external crisis. Such research should explain how an entrepreneur's interpretation of the crisis leads to specific response strategies. Moreover, it must show the interplay between personal and business situations when managing a crisis. This study responds to the call by exploring the research question: How do entrepreneurs' resourcing actions influence business model adaptations during crises, especially in resource-constrained environments? The research question expands on the need for research to explore how key people in an entrepreneurial business examine the exogenous crisis as an activity that will affect the business and whether they need to act and how (Thorgren & Williams, 2020).

Multiple theoretical frameworks could explain entrepreneurs' resourcing decisions. These include the resilience theoretical frameworks predominantly used in entrepreneurial crisis management (Williams et al., 2017) or effectuation and causation (Sarasvathy, 2001). As the study's interest is entrepreneurs' resourcing actions in resource-constrained environments, bricolage theory (Baker & Nelson, 2005) was deemed suitable. The theory explains how to utilise existing resources effectively in a resource-constrained environment for the maximum benefit of stakeholders (Anwar & Clauß, 2021). According to the theory, an entrepreneur's response to a crisis is to use the resources at hand and recombine them for a new purpose (Kuckertz et al., 2020). However, using what is available to the entrepreneur could negatively impact the entrepreneurial venture's innovativeness and growth (Fisher, 2012; Kuckertz et al., 2020). Therefore, this study considers bricolage positively, contributing to the survival of small and medium-sized enterprises (SMEs) during a crisis.

Qualitative research was used to answer the study's research question. Narrative qualitative interviews were conducted with 15 Indian entrepreneurs owning SMEs who survived the COVID-19 crisis. The selected sample and context were based on the notion that SMEs positively contribute to the country's economy and employment in various sectors (Rajagopaul et al., 2020). Also, South African entrepreneurs face resource shortages because of inadequate framework conditions supporting entrepreneurship (Bowmaker-Falconer & Meyer, 2020).

The study contributes to calls to investigate entrepreneurship and crisis management in SMEs in resource-constrained environments (Doern et al., 2019; Herbane, 2010) and under unique exogenous crises (Thorgren & Williams, 2020). Moreover, the study shows the multi-level approach to the interaction between entrepreneurs' actions and the business model adaptation (Newman et al., 2022). Exploring the crisis factors is significant to establish mechanisms contributing to theory and building on entrepreneurial resourcefulness, which has yet to be fully explored (Williams et al., 2021). In addition, the study matters to entrepreneurship practice by providing the bricolage of strategic actions entrepreneurs can employ during and beyond a crisis. These actions could contribute to the sustainability and growth of SMEs in a resource-constrained environment, especially in emerging economies.

The following section presents the literature review and the research design and methodology. Thereafter, the qualitative findings and discussions against the literature are reported. The study concludes with limitations and suggestions for future research.

Literature review

Crisis in small- and medium-sized enterprises

A crisis is a highly unexpected or unpredictable event that may result in business closure, downscaling of business and loss of resources and requires an immediate response (Doern et al., 2019). Of the many crises, two main events impacted entrepreneurial businesses globally: the financial crisis in late 2007 and early 2008 (Kose & Ohnsorge, 2021) and the COVID-19 pandemic in 2020 (Kuckertz et al., 2020). Just like the global crisis affected employment and financial access by SMEs, COVID-19 was expected to have similar effects (Kuckertz et al., 2020; Rajagopaul et al., 2020). Therefore, reviewing global financial crisis literature is crucial, as it informs crisis management literature, the foundation from which the COVID-19 response strategies are derived.

Research on how entrepreneurs coped with the global crisis showed that many companies did not have formalised approaches to managing the crisis (Herbane, 2010; Wilson & Eilertsen, 2010). As per Herbane (2010), managers had significant aspirations but were unclear about their resourcing efforts to improve their businesses and achieve superior performance over their competitors. The managers' interest was to protect what they had, such as intellectual property. Similarly, Wilson and Eilertsen (2010) found that most managers in various United States organisations were unprepared for the crisis. These studies showed that some crisis management strategies were proactive, while others were more passive. Organisations proactively identified investment opportunities and defensive strategies to reduce costs to survive the crisis.

The insights from the global financial crisis showed that management of the COVID-19 crisis could require proactive

and reactive strategies. The COVID-19 crisis differed from the global financial crisis in the enforced national lockdown meant to minimise the movement of people and the restrictions on non-essential business operations to curb the spread of the virus. The business restrictions affected businesses differently, thus requiring different response strategies. These challenges brought on by the pandemic's regulations made entrepreneurs think differently about their businesses and how to derive strategies for survival (Kuckertz et al., 2020; Manolova et al., 2020). In South Africa, business survival is challenged by inadequate resources and ineffective entrepreneurial framework conditions that support entrepreneurial activities (Bowmaker-Falconer & Meyer, 2020). Therefore, this study provides insights into how entrepreneurs operating within a context with limited entrepreneurial resources survived the COVID-19 pandemic.

Theoretical underpinning

This study's research question concerns how entrepreneurs' resourcing actions influence their business model adaptation during a crisis, especially in resource-constrained environments. Among many crisis management approaches, such as contingency planning (Smith, 1990), crisis management as a practice (Fasth et al., 2022) and crisis management as sequential phases (Williams et al., 2017), this study focuses on theoretical framework suitable for entrepreneurial action under conditions of uncertainty and resource constraints. Therefore, this research study uses the bricolage theory (inspired by Lévi-Strauss, 1966) to explore entrepreneurs' resourcing actions during a crisis (Baker & Nelson, 2005).

Bricolage assumes that a resource-constrained entrepreneur's response is repurposing resources to solve new problems and opportunities (Baker & Nelson, 2005). The theory is based on three principles: making do, combining resources for new purposes and the resources at hand. Making do is taking action to solve problems with resources at hand (Baker & Nelson, 2005, p. 334). Combining resources for new purposes is about bringing together and reusing resources for a different application than their original use. Resources at hand are physical artefacts, skills and capabilities that may be helpful when there is resource scarcity. As crisis significantly constrains entrepreneurs' resources, the bricolage principles can help this study elucidate how entrepreneurs take resourcing actions to find new solutions that contribute to the business' sustainable survival during and after a crisis.

Business model adaptation

COVID-19 made entrepreneurial firms' business models the centre of their survival (Manolova et al., 2020). A business model shows the organisation's activities that create and deliver value to its customers (Denoo et al., 2022). The alignment of the business model as a response to the changing environment is called business model adaptation (Denoo et al., 2022). Research on business model adaptation to manage COVID-19 has focused on firm-level strategies without explicitly stating the entrepreneurs' role, thus

adopting a micro- or macro-level focus (Newman et al., 2022). The firm-level strategies focus on employees, new product offerings and value propositions, cost-cutting measures, marketing, revenue focus and innovation focus (Kuckertz et al., 2020; Manolova et al., 2020; Thorgren & Williams, 2020). Therefore, this study explores how entrepreneurs' resourcing actions influence their business model adaptation during crises.

Bricolage resourcing actions and business model adaptation in crisis

Making do

This principle assumes a biased action to solve a problem, using resources at hand rather than contemplating the resources' adequacy (Baker & Nelson, 2005). In the context of the COVID-19 crisis, the application of this principle implied that entrepreneurs refused to accept the spillover limitations caused by the lockdown restrictions by using their available resources for business survival. The entrepreneurs disregarded the constraints of the resources and looked for solutions, observed and dealt with the results (Baker & Nelson, 2005; Batat, 2021; Belitski et al., 2022). Therefore, entrepreneurs use available resources to kick-start the business model adaptation process.

Resources at hand

The entrepreneur's first response to a crisis is considering available resources, including knowledge, skills, ideas and capabilities (Baker & Nelson, 2005). At the beginning of adversity, bricoleurs will focus on internal resources; if inadequate, they will contact their networks for additional resources (Baker & Nelson, 2005). Small- and medium-sized enterprises' resource-constrained nature before the crisis was also demonstrated by a high dependency on external resources, such as customers and suppliers (Laskovaia et al., 2019). The argument that entrepreneurs need resources is clear, but there is a limited exploration of the kind of resourcing actions they take to survive a crisis (Doern et al., 2019). This study argues that entrepreneurs will focus on their bricolage skills and behaviours as the available resources to inform the business model adaptation.

Combination of existing resources for new purposes

Entrepreneurs refer to the recombination of activities as multiple applications of the same resource (Kuckertz et al., 2020) in a way that was not initially intended (Fisher, 2012). The resources available to the entrepreneur are no longer used for their original intent but are targeted for new functions (Baker & Nelson, 2005). A practical example is using physical infrastructure for numerous purposes, businesses or enabling employees to fulfil various functions within the company (Kwong et al., 2019). Such recombination of resources is significant in business model adaptation. Using the existing resources for new combinations and purposes may result in the loss of the original purpose that the resource previously fulfilled (Kuckertz et al., 2020). According to Baker and Nelson (2005), bricolage theory

suggests using resources not regarded as useful or valuable, thus not taking away this value. Therefore, it is important to see how entrepreneurs leveraged their resources to survive the crisis.

Research design and methodology

Research design

This narrative, qualitative research explored how entrepreneurs' resourcing actions influence business model adaptation during a crisis, especially in resource-constrained environments. The purpose of the design was to allow entrepreneurs to narrate their stories and construct the meaning of the resourcing actions during a crisis. The unit of analysis for this study was entrepreneurs' resourcing actions. The purposive sampling strategy was used to select 15 participants (see Table 1) against the set criteria. Of the 15 participants, 12 were the main units of data collection, while three were used for triangulation and validation of the findings. Saunders and Lewis (2018) argued that saturation starts to manifest around a sample of 12 participants. The sampling criteria of the participants were based on location, race, small business definition, business duration, industry and continuity during the crisis.

Location

The study occurred in South Africa, a context with entrepreneurial resource challenges for small businesses (Bowmaker-Falconer & Meyer, 2020). Twelve Indian entrepreneurs were based in KwaZulu-Natal and three validating Black African entrepreneurs were from Gauteng. These two provinces have buzzing entrepreneurial activities that positively contribute to job creation (Bowmaker-Falconer & Meyer, 2020). As one of the leading business hubs in South Africa, Gauteng has multiple established ecosystems that offer entrepreneurs better access to resources compared to KwaZulu-Natal. Around July 2021, while the country was dealing with COVID-19, these two provinces experienced several protests, leading to extensive

looting of businesses and the burning of infrastructure (Mhandu, 2022).

Race

This study centred on the Indian population, a black minority group in South Africa (CIA, 2021). The selected population has a good total early entrepreneurial activity, and the entrepreneurs aim to generate wealth (Bowmaker-Falconer & Meyer, 2020). As per the country's demographics, this population is considered previously disadvantaged and believed to have limited resources readily accessible (BDO, 2019). To validate the data, three selected entrepreneurs were black African entrepreneurs from Gauteng. The mixed race population was not included in the study, as they primarily operate in the Western Cape, where looting did not occur. This limitation can be explored in future studies.

Definition of small business

Small- and medium-sized enterprises employ 11–250 full-time employees. Moreover, they have a total annual turnover of less than ZAR220 million (Department of Small Business Development, 2019).

Business duration

This study considered established businesses operating for over three and a half years. Three and a half to 4 years is a reasonable time frame for a start-up business to be profitable (Bowmaker-Falconer & Meyer, 2020). Moreover, the assumption is that established businesses would have developed mechanisms to manage crises.

Business industries

Participants' business industries included consulting, coaching, marketing, public relations, information technology, telecommunications, events, beauty, transportation, manufacturing, logistics and wholesale. These businesses were categorised into three clusters for industry comparisons: retail, services and manufacturing.

TABLE 1: List of participants.

No.	Type of business	Race	Business age	Number of employees before the crisis	Approximate turnover before the crisis (ZAR)
1	Personal coaching and consulting	Indian participant	7	†	64 000
2	Information Technology	Indian participant	7	11	128 000
3	Public relations and marketing	Indian participant	15	18	2 400 000
4	Wedding planner	Indian participant	10	3	257 000
5	Professional consulting and cleaning	Black African participant	11	17	836 000
6	Media and advertising	Black African participant	12	14	270 000
7	Information technology	Indian participant	7	12	6 million
8	Beauty products	Black African participant	6	2	1.8 million
9	Printing and telecoms	Indian participant	20	40	38 million
10	Panel beater	Indian participant	25	22	12 million
11	Logistics and storage	Indian participant	46	120	35 million
12	Consumables to restaurants	Indian participant	6	4	4 million
13	Events company	Indian participant	30	12	10 million
14	Manufacturing	Indian participant	6	98	22 million
15	Wholesaler	Indian participant	28	88	200 million

No, number; ZAR, South African rand.

†, No full-time employees.

Business continuity

The entrepreneurs who participated in the study had a business operating during the COVID-19 pandemic. Table 1 shows that some SMEs achieved a high turnover despite resource scarcity.

Data gathering process

Data were gathered using online semi-structured interviews. A semi-structured interview guide was created based on the three elements of bricolage theory (making do, resources at hand and combination of existing resources for new purposes) and related literature to guide the interview process. The interview guide covered themes on entrepreneurial crisis context (Kuckertz et al., 2020), bricolage behaviours, resourcing actions and the utilisation of resources for business model adaptation (Baker & Nelson, 2005; Kuckertz et al., 2020; Thorgren & Williams, 2020). The interview guide had open-ended questions to facilitate an open conversation.

The participants signed a consent form before the interviews could begin and gave permission to record the semi-structured online interviews. The structure of the interviews was flexible, allowing a natural flow between questions (Saunders & Lewis, 2018). As the data collection continued, new insights from the interviews were explored in subsequent interviews. The interviews lasted approximately 45 min.

Data analysis approach

The recorded interviews were transcribed and quality-checked to ensure they reflected the interview discussions. These data were analysed using computer-aided qualitative data analysis software that helped organise chunks of data and audit trails (Saunders & Lewis, 2018). A thematic narrative analysis was applied to analyse the 'what of the data,' rather than how the story was told (Maitlis, 2012). As per Table 2, the narrative thematic analysis occurred in three steps (Maitlis, 2012).

Firstly, open coding was utilised to create first-order and in vivo codes for codes identified using participants' words. Secondly, first-order codes with similar meanings were grouped into second-order codes, such as assessing human capital constraints, entrepreneurial pivoting, engaging external stakeholders and product diversification. Thirdly, aggregate themes were identified from the second-order codes, including sense-making of the resource constraints, leveraging the entrepreneurs' resourceful behaviours, maximising stakeholder relationship resources and business model adaptation. The developed themes were compared among the participants. In the last stages of data analysis, the aggregate themes were compared against existing literature.

Data quality was ensured using three strategies. Firstly, the data were triangulated by interviewing three black African entrepreneurs based in Gauteng. The findings did not reveal significant differences across participants. Secondly, dependability was ensured using a systematic coding process that showed how the aggregate themes were

TABLE 2: Narrative thematic analysis.

First-order codes	Second-order codes	Aggregate themes
Uncertainty of who can trade or not Uncertainty of when the lockdown would end Impact of lockdown restrictions on employees A sudden decrease in turnover A sudden decrease in sales and customer spend Suppliers unavailable Limited raw materials	Understanding the threats Sense-making of the business constraints	Entrepreneurs' sense-making of resource constraints
Thinking positively Being reflective Decisions implemented immediately Asking for help Working harder than before Being innovative and agile Scanning the business environment Diversifying into different industries	Entrepreneurs' positive emotions Entrepreneurs' proactive actions Leveraging the entrepreneurs' pivot capabilities	Leveraging entrepreneurs' resourceful behaviours
Focusing on trials and experimentation Learning new things and implementing them	Learning by doing	
Managing employees' numbers and salaries Working from home Hiring new employees with the skills required Open communication with external stakeholders Support from networks Network members' engagement in decision-making Using existing relationships with financial institutions Payment holidays and loans Collaboration with suppliers and competitors Joint relationship resources Re-negotiating supplier terms	Keeping employees Engaging external stakeholders Seeking institutional support Opting for co-competition over competition	Maximising stakeholder relationship resources
Understanding the market needs Diversified into new products Using online platforms Reallocation of budget to marketing activities Online marketing and brand awareness Employees marketing the business Sacrificing the owner's salary and closing offices Staff reduction Monitoring costs Loan and payment holiday from financiers	Product diversification Enhanced marketing Financial management actions	Business model adaptation

formulated. Thirdly, authenticity was demonstrated by including quotations to support the study's findings.

Findings

Aggregate theme 1: Sense-making of resource constraints

Interpreting threats by the crises

The first step in managing the crisis was interpreting the threats caused by the pandemic and exploring their implications. All participants in the three industries (i.e. retail, services and manufacturing) had to determine threats facing their businesses and what they were allowed or not to do in their industries. For example, the findings showed that the different lockdown levels and holding physical events affected those in the services industry, especially events:

'Okay, purely based on being unable, or not being allowed to provide the service, is our biggest thing.' (Participant 4, Indian, Wedding planner)

While still navigating the pandemic, entrepreneurs in Gauteng and KwaZulu-Natal experienced looting of their businesses. An Indian service-based entrepreneur was significantly affected by the KwaZulu-Natal looting. She could not supply her customers with personal protective equipment and explained that the looting had a more severe impact on the business than the actual pandemic. Black African entrepreneurs in Gauteng also commented on the looting in the province, but it was not as impactful as in KwaZulu-Natal. One participant in the service industry argued that the uncertainty of the crisis was a threat to businesses:

'There was COVID, then lockdown because those are two different things. COVID made people sick and scared to do things and made people die. But the lockdown closed the economy. And then there was looting. So, this shows us that nothing is guaranteed, nothing is certain, nothing will stay the way it is.' (Participant 6, Black African, Media and advertising)

Sales and revenue constraints

The participants revealed that COVID-19 impacted their customers' spending patterns, caused by job losses and salary cuts. The entrepreneurs struggled to ensure their cash flow, negatively affecting their revenue. For instance, an Indian non-essential retail entrepreneur, Participant 15, in the footwear industry had a decrease in customers, resulting in a declining turnover. Similarly, the participants in Gauteng also experienced a decline in customer demand and revenue:

'And all those SMEs that were our clients shut down because they could not navigate COVID-19. The consulting part of the business was suffering a lot. Moreover, it was the challenge ...' (Participant 5, Black African, Professional consulting and cleaning)

Human capital constraints

Indian entrepreneurs in KwaZulu-Natal, supported by those in Gauteng, mentioned they had to adhere to the lockdown regulations restricting the number of employees on the business premises. During the lockdown, few employees were allowed to be physically present on the business premises, while most were working from home. As working from home was a new concept for many entrepreneurs, they had limited strategies for managing employees' online work and performance. Participants with essential services businesses implemented rotational schedules to keep staff members healthy and curb the spread of the disease. A wholesale entrepreneur attested to this:

'We implemented a rotational basis on how we will work and on warehousing staff dispatching staff drivers; we had to discuss this at great length to prevent any further spread of COVID-19.' (Participant 15, Indian, Wholesaler)

Supply chain constraints

The immediate constraint to manufacturing businesses was the shortage of raw materials. What added to the impact of

COVID-19 on the manufacturing industry was the notion that international suppliers were involved in the process. Some suppliers reported being unwell and infected with the virus, thus affecting their ability to supply goods. Suppliers not regarded as essential services had to minimise their business activities, leading to stock shortages. The entrepreneurs in KwaZulu-Natal and Gauteng had supply chain constraints:

'During COVID, as you're aware, most countries went into lockdown ... The number one manufacturers of latex are in Malaysia and Thailand ... Not only was [there] a reduced quantity of latex available, but there was no latex export to us.' (Participant 14, Indian, Manufacturing)

Aggregate theme 2: Leveraging entrepreneurs' resourceful behaviours

Entrepreneurs' positive emotions

All participants, Indian and Black African, from various industries discussed their positive emotions and a deep sense of responsibility. The positive outlook was a source of resilience to overcome the COVID-19 challenges and ensure their businesses' survival. The participants' emotional intelligence helped them deal with the crisis while being considerate towards their employees. Lastly, their positive mindset influenced their coping ability and adapting to disruptions:

'I was very optimistic for the business ... I think that helped us. It guided us through because as much as there was so much negativity around us, I was confident that we would pick up the pieces and continue.' (Participant 12, Indian, Consumables to restaurants)

Entrepreneurs' proactive actions

Some necessary actions were to be creative and innovative by identifying and exploiting new opportunities. Innovativeness requires time, commitment and effort from entrepreneurs. Lastly, both Indian and Black African entrepreneurs stressed the importance of being decisive and implementing decisions quickly. Most participants mentioned the urgency of making decisions. Participant 3 said: 'Decisions needed to be made immediately ... we needed to decide and implement it immediately' (Indian, Public relations and marketing). While navigating the crisis, a participant with 20 years of experience in the service industry mentioned the importance of seeking help to ensure business survival:

'I think it is crucial for entrepreneurs to be able to share and not be ashamed about saying, I need help. I think that is the most crucial thing.' (Participant 13, Indian, Events)

Leveraging the entrepreneurs' pivot capabilities

All entrepreneurs shared the significance of making resource adjustment decisions, scanning the business landscape and changing their business models quickly. Some adjustments included diversifying their constrained resources into different products. One participant in the service industry said:

'The biggest resource I have is my ability to look at what is happening in the marketplace and figure it out, so you almost

want to work backward and figure out how I can make it relevant in my business?’ (Participant 1, Indian, Personal coaching and consulting)

Learning by doing

Most entrepreneurs emphasised learning and unlearning quickly about resourcing actions they needed to take. Similarly, Gauteng entrepreneurs corroborated the findings of ‘learning by doing’. As they navigated the resource constraints, they could determine what was and was not working. The pandemic offered an opportunity to learn by doing:

‘COVID-19 taught us as a business and my team that we must always be ready to adapt and look at what the industry is doing. Do not be too rigid with your services; always look for what else we can do. What else can we learn by doing?’ (Participant 7, Indian, Information technology)

Aggregate theme 3: Maximising stakeholder relationship resources

Keeping employees

Indian and Black African participants indicated that employees’ role in the business survival was crucial. Five participants expressed that their top responsibility as business owners was to keep their employees, which was a priority for business sustainability:

‘We were going to pay the staff the full salaries to retain them for when we did open. So that was one of our decisions, no matter how hard it was.’ (Participant 12, Indian, Consumables to restaurants)

The participants mentioned using the company’s savings to pay employees. Some Indian entrepreneurs even upskilled and developed their employees to cope with the business needs that emerged during the crisis. In contrast, some Indian and Black African entrepreneurs had to make the tough decision to retrench employees:

‘I had a sales team that had to downgrade due to COVID-19. I had a client relations team that had to downgrade because of COVID-19.’ (Participant 7, Indian, Information technology)

Engaging external stakeholders

The findings revealed entrepreneurs’ reliance on their existing external networks and relationships during resource-linked decision-making. The entrepreneurs obtained specific industry insights from their networks. Participants said they actively engaged with their suppliers, who helped manage and negotiate financial resources. The engagement with the external stakeholders also involved those in the global value chain. For example, wholesale companies negotiated with their suppliers in China:

‘And especially our suppliers being in China, China being the epicentre of this at the time, they were very accommodating to our needs. So whatever orders we had on the manufacturing line, they were willing to pause it for us.’ (Participant 15, Indian, Wholesaler)

Many participants considered customers an essential resource to the sustainability of the business. Engaging with customers

was based on open and continuous communication while reassuring them that the business could still meet their needs. These relationship findings were true for entrepreneurs in Gauteng, especially in manufacturing. Participant 8, Black African, Beauty products revealed:

‘I think I was just leaning into people’ (Participant 8, Black African, Beauty products).

Seeking institutional support

The entrepreneurs contacted their banks and financial institutions for financial support. Some opted for payment breaks, while others took loans to ease their cash flow challenges, but the data showed that more participants opted for payment breaks. Moreover, the participants explained they obtained financial assistance from the government’s Unemployment Insurance Fund:

‘I’m also applying for Unemployment Insurance Fund [UIF] because we were essential workers; we applied. Funny enough, everyone else complained that they didn’t get the funds. But in three days, our UIF was full; COVID-19 relief was paid off.’ (Participant 2, Indian, Information technology)

It should be noted that most participants did not seek government assistance. They instead went to private banks to obtain loans and overdraft facilities.

Opting for cooperation over competition

The participants agreed that collaborating with suppliers and competitors was one of the resourcing actions towards business sustainability. The findings demonstrated entrepreneurs’ willingness to make the relationships long-lasting. They mentioned having to collaborate with other entrepreneurs and some of their clients. The findings were validated by the data gathered from the Black African entrepreneurs in Gauteng province:

‘We collaborated a lot with other small businesses that operate with us, where we say, “Can you do this work? Can you come to assist us, and this collaboration will be a permanent thing?”’ (Participant 2, Indian, Information technology)

The findings highlighted that while some resources were constrained during the crisis, participants had to seek collaborative relationship resources to sustain their businesses.

Aggregate theme 4: Business model adaptation

Product diversification

The entrepreneurs had to creatively repurpose their products to address their customers’ new needs to survive the pandemic. To demonstrate they understood the changes in their environment, participants (even those in Gauteng) had to introduce new products into the market:

‘One of the major things that were [sic] a change for us during COVID-19 was, we introduced a new product, which is doing very well for us now’. (Participant 6, Black African, Media and advertising)

Not all participants could introduce new products. One participant operating a manufacturing plant, which had to halt production because of the shortage of raw materials, could not reconsider any combination of resources to continue business during the crisis because of the complexity of their business operations.

Intensified channels to market

Participants also enhanced marketing and branding as strategies for navigating the crisis. Funds were reallocated to support digital platforms, business services and rebranding products. In some cases, employees were given temporary roles as marketing and salespeople, as indicated by these participants:

'The biggest one was increasing our digital marketing spend. I think that significantly changed our landscape a little bit.' (Participant 7, Indian, Information technology)

'... creating a sales environment, where the technicians also sell ... are doing sales, you know, they are bringing in the leads as well.' (Participant 2, Indian, Information technology)

The data showed that some entrepreneurs, even those in Gauteng, introduced e-commerce and online shopping and opened pop-up stores and food delivery services as channels to reach their customers.

Financial management actions

The findings indicated that the crisis affected financial resources. Some participants experienced a decreased turnover and had to implement measures to manage the cost structure. The previous discussions showed that some entrepreneurs ensured their employees were paid their salaries and were upskilled. However, some entrepreneurs had more significant challenges, having to retrench employees to manage finances and the sustainability of the business. Participant 10 in the service industry explained:

'We went in, trying to trim our bills right down to the bone from day one. We did it while we were in lockdown.' (Indian, Panel beater)

As most employees worked from home during the lockdown, entrepreneurs in Gauteng mentioned that eliminating office space (Participant 5, Black African, Professional consulting and cleaning) and outsourcing (Participant 8, Black African, Beauty products) were necessary actions to reduce the company's costs.

Discussion

The study explored how Indian entrepreneurs' resourcing actions influenced business model adaptation during the COVID-19 crisis in a resource-constrained environment. The research showed no significant difference between business looting and COVID-19 crisis management. The findings of the Indian entrepreneurs in KwaZulu-Natal were confirmed by Black African entrepreneurs in Gauteng.

The first contribution of the study is that it articulates the role of the entrepreneur in influencing business model

adaptation. This focus fills the research gap on the interaction between the micro or macro levels in business model adaptation. The second contribution is that entrepreneurial resourcefulness actions are driven by sense-making of the resource constraints, leveraging 'self-reliant' entrepreneurial bricolage behaviours, maximising 'joint' stakeholder resources and business model adaptation. The third contribution is that sense-making is necessary to socially construct and assess resource constraints before deploying or recombining resources. The fourth contribution is that the study builds on existing literature by showing that entrepreneurs depend on self-reliant entrepreneurial bricolage behaviours, including positive emotions, actions, pivoting and learning.

The fifth contribution is that when the entrepreneurs' self-reliant resourcefulness is inadequate, they engage in joint or collective bricolage, even collaborating with competitors. The entrepreneurs will exploit resources obtained from and through their networks and partnerships. The type of resource requirement influences the self-reliant or joint resourcing actions (Michaelis et al., 2022). All these elements (sense-making, self-reliant and joint bricolage) are precursors of business model adaptation. The sixth contribution is that entrepreneurs prioritise adapting their business models by combining existing resources and introducing new resources to survive the crisis. Finally, the seventh contribution is that some elements of effectuation, such as cooptation, contribute to resourcing actions, suggesting it is not mutually exclusive from bricolage. Thus, the interrelatedness of the dimensions of effectuation and bricolage gives entrepreneurs superior resources to survive the crisis.

Sense-making of the resource constraints

Similar to Van Heerden and Roos (2021), this research shows that entrepreneurial businesses experienced a sudden decline in turnover and customer numbers, limited access to employees on office premises, travel restrictions and supply chain challenges because of the crisis. These constraints were identified as part of the entrepreneurs' sense-making. Contrary to the studies on the business model that generally focus on business-level interventions without analysing entrepreneurs' specific actions (Belitski et al., 2022; Kuckertz et al., 2020), this research shows sense-making is an essential action step before the allocation of resources and business model adaptation. Building on the work of Hoyte et al. (2019) on sense-making in venture creation, this study's findings demonstrate how entrepreneurs tried to understand the resource constraints while engaging in the social construction or reframing of their resource scarcity. Based on this study's findings, the argument is that sense-making is a critical component that directs resourcing actions as entrepreneurs navigate a crisis. Thus, sense-making helped the entrepreneurs determine whether they could rely on their capabilities (self-reliant bricolage behaviours) or seek resources from other stakeholders (joint bricolage).

Self-reliant bricolage behaviours

The study demonstrates that self-reliant entrepreneurial bricolage behaviours and actions are the primary resources for managing the crisis. The self-reliant bricolage focuses on entrepreneurs' behaviours, which are their resources. Unlike Thorgren and Williams (2020), who stated that a small percentage of firms are passive and do not do anything, this study demonstrates entrepreneurs had to adopt a positive emotional outlook, act swiftly, and pivot and learn as part of their entrepreneurial actions. Their ability to act speedily aligns with Fisher et al. (2020), suggesting that entrepreneurs have the urgency to act fast, demonstrate creativity and address opportunities and challenges during uncertainty. According to Baker and Nelson (2005), working swiftly and pivoting are ways of making do with what entrepreneurs have at hand.

All participants mentioned having no experience managing exogenous crises like COVID-19 and having to rely on their positive outlook and faith in their capabilities. These findings confirm the element of effectuation (Sarasvathy, 2001) and entrepreneurs' positive psychological capital (Baluku et al., 2018). In addition, entrepreneurs' openness to learning and unlearning during the crisis was a vital resource that helped them adapt their business model. In sum, this study shows that entrepreneurs would exploit their resource endowments before seeking help from stakeholders to adapt the business model.

Joint bricolage by maximising stakeholder relationships

The findings showed that entrepreneurs relied on stakeholder relationships that included employees as internal partners, customers, suppliers, institutional support and competitors. Some participants had to support their employees and provide full salaries. Unlike Thorgren and Williams (2020), who highlighted some of the immediate actions included reducing labour costs, this study shows entrepreneurs' immediate response was to maintain employees' jobs and salaries to motivate them to remain in the business. Expanding on Baker and Nelson (2005), the findings show that entrepreneurs maximise the external stakeholder relationship when the internal resources are inadequate. Surprisingly, the entrepreneurs also explored and utilised the resources at hand by collaborating with competitors and suppliers. This finding aligns with the Sarasvathy (2001) effectuation assumption that effectual entrepreneurs focus on cooperation rather than competition. This shows that effectuation mechanisms explain how the bricoleur acts on the collaboration resources, meaning that bricolage and effectuation are not mutually exclusive.

Business model adaptation

The findings show entrepreneurs' influence on business model adaptation. Entrepreneurs' actions, sense-making, self-reliant bricolage and joint bricolage are essential antecedents of business model adaptation. These findings extend existing

research on business model adaptation in crises without exploring the entrepreneurs' role (Belitski et al., 2022; Kuckertz et al., 2020; Newman et al., 2022). Like other studies (Fisher et al., 2020), this study reveals that SMEs pursued growth opportunities during the crisis by introducing new and diversified products and services, expanding into new markets, managing costs, e-commerce, virtual platforms and customer segments. However, introducing new products was impossible for all sectors, showing selective bricolage influencing what entrepreneurs can or cannot do (Baker & Nelson, 2005). Those in manufacturing explained that their processes were complex, making modifying existing products or creating new products difficult. These findings use a different lens to that of Thorgren and Williams (2020), who stated that some entrepreneurs are passive and do not take action, while this study's entrepreneurs were willing to change but were restricted by technical processes.

As this study was conducted towards the end of the pandemic, it shows how the management of costs unfolded, extending the work of Kuckertz et al. (2020) and Thorgren and Williams (2020). The study reveals that entrepreneurs were reluctant to reduce employee numbers at the beginning of the crisis based on the personal bonds they shared. As the pandemic progressed and businesses were severely affected, cost-containment measures included taking advantage of payment holidays from financiers, requesting extended payment terms from suppliers and reducing fixed costs, such as rent and salaries. The prolonged crisis made other entrepreneurs accept the financial challenges and retrench some employees. These findings explain why a study by Thorgren and Williams (2020) at the beginning of the pandemic found that entrepreneurs were reluctant to delay payments and apply for loans. As the pandemic continued, businesses experienced severe financial challenges and were more accepting of looking for additional capital resources for survival. Kwong et al. (2019) reported similar findings, where Pakistani entrepreneurs relied on external funding, such as loans, when internal financial resources were depleted. Lastly, similar to Kuckertz et al. (2020), the findings of this study show that the government was able to provide financial assistance to entrepreneurs to some extent.

Conclusion

This study investigated how entrepreneurs' resourcing actions influence business model adaptation during a crisis. The findings indicate that entrepreneurs' resourcing actions during the crisis fell into four aggregate themes: making sense of the resource constraints, exploiting the entrepreneurs' bricolage behaviour, maximising stakeholder relationship resources and business model adaptation. Through the micro or macro focus, the study shows entrepreneurs' role in shaping crisis response strategies. While these findings contribute to the existing research, business service providers could use them to help entrepreneurs prepare better for crises. Small- and medium-sized enterprise development programmes could focus on

identifying mechanisms to help entrepreneurs prepare for and navigate crises. Moreover, this study provides valuable insights into practical resourcing actions in crisis management that entrepreneurs can adopt.

This study has several limitations and suggestions for future research. Firstly, as the sample is limited to the Indian population, it does not reflect South African entrepreneurs' complete demographic profile and cannot be generalised to other races. Therefore, future studies on crises should include other races (mixed race), as individuals' cultural orientation may influence how they respond to the crisis. Such studies could explore generalisability using quantitative methods. Secondly, the focus was on entrepreneurs who maintained successful businesses during the crisis. Future research should also explore entrepreneurial failures during or immediately after a crisis. Thirdly, this study is cross-sectional; therefore, there is a need to collect data throughout a crisis. Fourthly, the study attempted to do industry analysis, but this was limited. Future research could explore crisis management strategies used in different industries.

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Competing interests

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Authors' contributions

The manuscript was developed from J.R.'s master's research report. J.R. contributed to formulating the study's argument, data collection, analysis and writing the final research report. A.M. supervised the research and contributed to the conceptualisation of the study. A.M. synthesised the literature review, re-analysed the data and converted the research report into a journal article. Jennifer reviewed the final manuscript.

Ethical considerations

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Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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