ENTREPRENEURIAL RESILIENCE AND RECOVERY DURING AND AFTER COVID-19 CRISIS: FIRM- AND COMMUNITY-LEVEL RESPONSES IN CHINA, MALAYSIA, PHILIPPINES, THAILAND, AND THE UNITED KINGDOM

Interim Report of the EntREsilience Project

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Executive Summary

The Entrepreneurial Resilience During and After the COVID-19 Crisis (EntREsilience) was launched in 2020 to identify effective entrepreneurial firm- and community-level responses and business model practices to support resilient adjustment to the economic adversity triggered by the global COVID-19 crisis. The project conducts longitudinal case studies exploring entrepreneurial resilience in five research sites: Wuhan, China; Bangkok, Thailand; Kuala Lumpur, Malaysia; Manila, Philippines; and London, UK.

Led by Imperial College Business School, London, and involving collaboration with De La Salle University (Philippines), Mahidol University College of Management (Thailand), Malaysian Global Innovation and Creation Centre MaGIC (Malaysia), Wuhan University (China), Asian Development Bank, and UN Economic and Social Council for Asea-Pacific ESCAP (Thailand), the objective of the project is to inform entrepreneurship policy and practice -- especially how governments can harness entrepreneurial resilience to Build Back Better.

Entrepreneurial firms play a central role in facilitating economic resilience during times of economic crisis. Research shows that entrepreneurial firms hold on to their employees the longest when an economic crisis hits, and they are also the first to start re-hiring once the crisis starts to subside. So doing, entrepreneurial firms help both buffers against the economic shock and lead the eventual recovery -- and discover and innovate the post-crisis New Normal. Yet, surprisingly little is known about entrepreneurial resilience in general and even less about how entrepreneurs convert the crisis into a potential source of opportunity and how they experiment to discover the post-crisis New Normal. In this project we approach entrepreneurial resilience as a dynamic, opportunity-seeking process of proactive adjustment to the crisis conditions, one that helps convert the crisis into a ‘baptism of fire’, potentially enabling the entrepreneurial firm to emerge from the crisis stronger and help the economy to Build Back Better.

During the first eight months of the project we have:

- Launched the research partnership
- Developed our research design and methods
- Conducted an extensive Systematic Review of organisational and entrepreneurial resilience literature
- Developed our own integrative framework of entrepreneurial resilience as a dynamic, opportunity-seeking adjustment process to external crises and adversity that operates at three levels: the individual, the company, and the entrepreneurial community
- Conducted the first wave of interviews with 54 entrepreneurial companies in the UK, China (Wuhan, Shanghai), Malaysia (Kuala Lumpur), Philippines (Manila) and Thailand (Bangkok)
- Developed a coding system for interview data harmonisation
- Conducted 15 student-led business model consulting projects with participating entrepreneurs, with a focus on the crisis resilience of their business models
- Designed a website for external engagement
- Written this interim report and four country reports
- Set up policy outreach events to disseminate our insights with policy and practitioner communities

In the next stage of the project we will:

- Conduct our first round of policy and practice outreach workshops
- Carry out the second wave of interviews
- Develop a framework to support business model resilience analysis and planning in entrepreneurial ventures
- Deepen our analysis of the first wave of interviews and the exploration of emerging resilience themes
- Continue to disseminate our insights in publications
- Lay the groundwork for the third wave of interviews

We next overview our key findings and insights.
Stage 1 Key Findings: Conceptualisation of Entrepreneurial Resilience

To establish the conceptual grounding for our research, we conducted a systematic review of the organisational and entrepreneurial resilience literature. Our systematic search narrowed the relevant literature down to 146 articles published in academic journals of high quality. This review spotted three major gaps in the resilience literature. First, organisational resilience is predominantly conceived of a static quality: as an ability to endure external adversity but not necessarily proactively adapt to the new condition. Second, entrepreneurial resilience is predominantly conceived of as the entrepreneur’s ability to start anew after a business failure. Third, the external crises in the resilience literature have been typically economic shocks of limited duration and not the kind of long-term crisis that may require extensive re-think how the firm organises its operations, as is the case of the current COVID-19 crisis.

To address these shortcomings, we proposed a novel conceptualisation of entrepreneurial resilience as dynamic and proactive behaviour that seeks to convert an external threat into a source of opportunity through opportunity-oriented business model adaptations. Building on this insight we developed an integrative framework of entrepreneurial resilience that distinguishes between three levels of analysis (individual, organisation, and community) and three temporal phases (ex ante, ex tempore, and ex post). Our framework is shown in Figure 1.

**Figure 1 Integrative Framework of Entrepreneurial Resilience**

**Ex ante entrepreneurial resilience** captures the latent capacity of entrepreneurs, their businesses, and entrepreneurial communities to discover opportunities when a crisis hits and adjust their operations accordingly. Individual-level capacities comprise psychological traits and the entrepreneur’s human and social capital. Organisational capacities include resource fungibility and dynamic capabilities. Community-level enablers include the institutional environment and community-level dynamics (Autio, Nambisan, Thomas, & Wright, 2018).

**Ex tempore entrepreneurial resilience** is the capacity to respond to adversity in an agile fashion and pursue opportunities during the crisis with dynamic experimentation. At the individual level, capacities for opportunity recognition and improvisation should be important (Pavlou & El Sawy, 2010). At the firm level, resilience processes may include dynamic resource reallocation, product and service innovation, and active experimentation with alternative business models. At the community level, important resilience processes would include sharing of resources and
knowledge to buffer against adversity and generalised reciprocity norms to facilitate dynamic adjustments (Amezcua, Grimes, Bradley, & Wiklund, 2013; Wincent, Anokhin, Örtqvist, & Autio, 2010).

Ex post entrepreneurial resilience is the capacity of entrepreneurial agents to scale up the innovative business models improvised during the ex tempore phase. Resilient entrepreneurs should have developed more robust entrepreneurial competencies. The crisis should also enhance the dexterity of the entrepreneurial venture, which should be helpful during post-crisis. Entrepreneurial resilience should reinforce the resilience of the entrepreneurial communities, supporting speedier economic recovery, economic dynamism, and job creation.

Stage 1 Key Findings: Emerging Themes in Resilient Responses to COVID-19

Experimentation. We found that the COVID-19 crisis has triggered an unprecedented wave of experimentation among entrepreneurial businesses, as they seek to adjust to the pandemic. In response to the crisis, many entrepreneurs explored new products and services, partnerships and business models. During the first lockdown in the UK, many entrepreneurs experimented with ideas they already had pre-COVID but had not pursued due to time and other constraints. With the need to comply with social distancing and other lockdown restrictions, businesses that dealt with customers face-to-face transitioned rapidly from offline to online. They developed new ways of reaching their customers and offering their products and services. This trial-and-error approach characterised the accelerated innovation process seen in several businesses.

We observed three different types of experimentation. Under survival-driven experimentation, the businesses had to quickly re-think aspects of their business model rendered unviable by the crisis by testing alternative approaches. Under opportunity-driven experimentation, the entrepreneurs sought to exploit new opportunities opened by COVID-19 demand shifts and structural changes in the marketplace. Under bricolage experimentation, the entrepreneurs engaged in more incremental experiments, often by recombining their existing resources and activities in novel ways.

Digitalisation. Many of the experiments triggered by the COVID-19 harness digitalisation for proactive adjustment to the crisis. Interactions with suppliers, customers, and partners were transferred online. Especially those businesses already endowed with digital capital (i.e., digital skills, capabilities, and infrastructure) shifted to working online. Some businesses went beyond immediate adjustments by extending their offerings online. In response to the crisis, for example, Everything Green, a sustainable products and solutions company in Metro Manila, jumpstarted the development of a new e-commerce platform, which enabled it to extend its business model from business-to-business (B2B) offerings to also include business-to-consumer (B2C) offerings.

Social orientation. We observed that as COVID-19 presented an external threat that discriminated against entire communities, entrepreneurs responded by taking on social missions and engaging in altruistic behaviours. In Wuhan, we observed how the crisis prompted many entrepreneurs to relax their traditionally strong ‘in-group’ orientation (under which entrepreneurs share experiences and advice with members of their in-group but not with those outside it) and adopted a wider, community orientation, and freely shared advice and tips even with entrepreneurs who did not belong into their in-group. Many entrepreneurs engaged in social activities such as offering products for free for those in need. In the UK we observed how one entrepreneur offered his product for free to a customer who had suffered financial loss due to the pandemic. We also observed a group of entrepreneurs who decided to donate 1% of their revenue to people in need. In the Philippines, one entrepreneur started delivering food packages to their employees affected by the pandemic. The over-arching trend in this theme was the adoption of generalised reciprocity norms by the entrepreneurial businesses and their communities, as they pulled together to buffer each other against the crisis.

Community responses. A common response to the crisis by the entrepreneurs to become more closely engaged with their regional entrepreneurial communities and accessing support from customers, networks and their inner circles. The entrepreneurs’ communities provided support in various forms such as emotional support, information sharing, know-how, idea testing, and collective sense-making. Such responses were instrumental to support the pursuit of new opportunities or finding solutions to COVID-related challenges. In the UK, entrepreneurial community operators such as accelerator programmes helped connect some of the entrepreneurs to potential clients and investors and also provided technical know-how, particularly to novice entrepreneurs. Government support in the form of funding was beneficial to those that accessed the different forms of support. In China, industry associations helped pull entrepreneurs together to innovate dynamic responses. In Thailand, we observed how ex-pat entrepreneurs drew on their networks to create a cushion against the crisis and pioneer effective responses.
Converting threat into an opportunity (dynamic resilience). A very common response in our case companies was to actively seek ways to convert the COVID-19 threat into an opportunity – a response reflected in the other themes described above. Although the entrepreneurs were facing an acute and sudden crisis, they were able to recognise opportunities that arose as a result. Many entrepreneurs pivoted to cater to new customer groups and adding either B2C or B2B offerings to their value propositions. Others used the crisis to streamline their operations for greater efficiency. In some cases, the COVID-19 crisis prompted demand shifts that provided a boon for some entrepreneurs. As the crisis created new demand for, e.g., personal protective equipment, many entrepreneurs shifted their offerings accordingly to tap a new source of demand. Such opportunity-seeking responses reflected, in part, a response to demand shifts, but also, the creative boost made possible by the external pressure and the sudden slack capacity, when demand for some existing services was adversely affected. This partly forced, partly enabled the entrepreneurs to consider and pursue opportunities they might have been too busy to consider otherwise.

Conclusion: entrepreneurs as key agents of economic resilience and recovery in the face of the global COVID-19 crisis. Combined, our observations underline and confirm a key assumption that originally prompted our research project: entrepreneurs act as important, even essential agents of economic resilience in the face of a crisis and as key enablers of post-crisis economic recovery. Far from hunkering down and withdrawing to bunkers to try and endure the crisis, we saw the crisis triggering an active, dynamic, opportunity-seeking and opportunity-innovating response by the entrepreneurs we observed. The COVID-19 crisis has triggered an unprecedented wave of entrepreneurial innovation and experimentation, as the entrepreneurs are seeking ways to dynamically adjust to the crisis, repurpose their assets and resources, and seek sources of opportunity amid the pandemic. At the macro level, this response acts as a key enabler, shaper, and eventual driver of economic recovery, as the pandemic begins to subside. As a result, many traditional societal and economic practices have already been transformed almost beyond recognition in ways that were very difficult to anticipate only 14 short months ago. Through our longitudinal case studies in five countries, our research sheds light upon this, hitherto largely hidden dynamic and helps inform policy responses, as governments are getting ready to pull economies back from the depths of the economic slowdown.

Thus far, our research has uncovered five distinct mechanisms through which entrepreneurs contribute to economic resilience and eventual recovery in the face of a COVID-19 style crisis: experimentation, digitalisation, community orientation, social mission, and opportunity-seeking. Through these responses, entrepreneurs help discover, legitimate, and eventually scale a post-COVID ‘new normal’. This is a potent dynamic that governments should recognise and nurture. Going beyond those headline themes, our interviews conducted thus far hint of considerable nuance within each theme, the closer examination of which will further elaborate emerging insight. For example, we see signs that experimentation is not an on-off activity: there are many different shades of experimentation that are undertaken for different reasons, produce different outcomes, and tend to occur at different stages of the crisis. A closer examination of these will help us to elaborate on the most productive forms of experimentation that are likely to yield the greatest economic impact in the post-crisis stage. Similarly, there are many different drivers and manifestations of social mission, which in itself appears to constitute an important mechanism through which entrepreneurial ventures legitimise the post-crisis ‘new normal’ – i.e., the set of business practices adapted to and taking advantage of the post-crisis social order. In the next phase of our project, we will continue exploring the identified themes in greater detail, and also, start tracking experimental and adaptive actions that drive enduring changes in the entrepreneurial firms’ business models and upgrade their robustness and scalability.

In the next stages of our research, we will also begin to focus more on the wider economic implications of the entrepreneurial resilience dynamic. During the first round of interviews, our focus has been predominantly on micro-processes of adjustment and adaptation, as entrepreneurial firms are hit by an external crisis of undetermined duration. This analysis gave rise to the discovery of the five mechanisms highlighted above. In the next phase of our research, we will explore how these micro-level actions connect with the wider regional, economic, and social contexts within which the entrepreneurs operate, thereby shedding light upon meso- and macro-level mechanisms through which entrepreneur help discover, legitimise, and consolidate the post-COVID new normal.

We next conclude our report by summarising emerging insights from our research for policy and practice.
Insights for Policy and Practice

Insights for Policy

1. **Recognise the important role entrepreneurs play in facilitating economic resilience.** Our most important recommendation for policymakers is that they should recognise the important role entrepreneurs play in both buffering against economic downturns, discovering effective ways to adapt to the crisis, and bounce back stronger once the crisis subsides. Many governments have taken important steps in providing subsidies to help entrepreneurs hold on to their employees in the face of the demand shock created by the COVID-19 pandemic. These subsidies also enable many entrepreneurs to put their slack resources into effective use by experimenting with new ways to operate and innovate new offerings. It is important to recognise that subsidies do not only help protect employment, but also, support the ability of entrepreneurs to experiment.

2. **Connect entrepreneurs to policy discussions on how to build back better.** Many governments have assembled advisory panels to advise the government on how to build back better once the COVID-19 crisis subsides. Given the importance of entrepreneurial innovation for post-COVID recovery, it is important to ensure that the voice of the country’s start-up community and its entrepreneurial ecosystems is heard in those panels. In the United Kingdom, for example, this voice is currently not present in the UK’s economic advisory panel.

3. **Encourage and support entrepreneurial experimentation.** Many governments are tempted to cut funding for research and innovation due to the financial strain caused by the pandemic. We believe that, as a general rule, such moves would be short-sighted especially when it comes to entrepreneurial experimentation. We have seen that the COVID-19 crisis has boosted experimentation by entrepreneurial businesses. There is good reason to believe that this experimentation is not merely incremental, run-of-the-mill experimentation under which entrepreneurs experiment around their current offering. As the COVID-19 crisis may render entire sections of business models unviable (e.g., because of social distancing or lockdown regulations), the entrepreneurs may have to undertake a more radical re-think of what their business is about and what they should be doing. As a result, the prospect of radical new innovations increases. Given that slowdown in demand has created slack in many entrepreneurial businesses, they thus have both the need and the opportunity to undertake radical experiments that they would not normally consider. In fact, many of the more radical business model innovations are forged in the depths of a crisis. Our advice to governments, therefore, is to use the COVID-19 crisis as an opportunity to encourage radical business model innovation by providing appropriate grants and support.

4. **Support digitalisation projects.** Given the social distancing imperative created by COVID-19, many entrepreneurial businesses are currently pushed to move many of their activities and interactions into the digital space. We observed how many entrepreneurs used the COVID crisis as a motivator to take on digitalisation projects (e.g., by offering their products and services through digital platforms) that they would not have considered otherwise. In a sense, the COVID-19 project is making the digital future happen faster than it would have happened otherwise. It is important to support this process, as digital business models, being able to support social distancing and location constraints, are inherently more robust against many crises than are more physical business models. An investment in digital is likely to be an investment in greater resilience and scalability.

5. **Facilitate entrepreneurial ecosystems.** Entrepreneurial ecosystems are regional communities specialised in supporting the start-up and scale-up of new ventures who often compete with innovative business models. In our research, we have discovered that an external crisis such as the COVID-19 pandemic has strengthened the community orientation of entrepreneurial businesses and their regional communities, as they seek to buffer themselves against a common threat. Such communities are an important platform for sharing ideas regarding how to best adjust to the new conditions, with insights and advice often shared even with relative strangers. Governments should recognise the importance of entrepreneurial communities not only as a buffer against the crisis, but also, and perhaps even more importantly, as learning platforms that facilitate dynamic and proactive adaptation to it. By supporting entrepreneurial ecosystems and communities, governments can therefore facilitate dynamic and proactive adjustment and the discovery of a post-COVID new normal.

6. **Leverage increased social orientation by entrepreneurs.** The ‘closing of ranks’ against a common threat is not limited to entrepreneurial ecosystems only, as we have seen the crisis prompt entrepreneurs take on social missions. There is a widespread realisation that the COVID-19 crisis not only threatens businesses, but also,
the social communities within which they operate. Our research has reported a previously unreported dynamic, under which many entrepreneurs take on a mission to mitigate social harm caused by the pandemic. It is important for governments to recognise this mechanism and think about policies with which they can harness this reaction of entrepreneurs to help alleviate some of the social harms caused by the pandemic and support a more robust recovery.

**Insights for Practice**

1. **Look for opportunities in the crisis.** A widely used saying states that in every crisis, there is an opportunity, and the larger the crisis, the greater the opportunity. Economic shocks not only suppress demand for some offerings: typically, they also redirect demand towards alternative products and services. This demand displacement effect has been particularly visible during the COVID-19 crisis due to social distancing requirements. Although the COVID crisis challenges many business models and renders some unviable, it also creates new demand that entrepreneurs should look out for.

2. **Use resource slack productively.** If you are forced to stop or discontinue some activities, you should not simply go idle and wait for the crisis to go away. This is the time for a creative re-think of what your business is about. While some resources (e.g., a space for cafeteria) are understandably more difficult to repurpose for alternative use, other resources (e.g., human capital and customer relationships) will be easier to reallocate for the pursuit of alternative opportunities. Entrepreneurs should use the forced downtime to take a step back and re-think their business, and they should actively seek alternative uses for their human, physical, and knowledge resources that have been forced by the crisis to go idle. Some of the greatest entrepreneurial ideas are spawned during a time of economic crisis.

3. **Challenge your deeply held assumptions.** We have seen that some entrepreneurs have so deeply internalised their business models that they seem unable to take a step back and challenge some of their fundamental business model assumptions. Yet, this could be exactly what the crisis calls for. If, say, a restaurant is forced to cease trading because of social distancing requirements, that does not mean that people would stop eating. A restaurant in the food business, so the entrepreneur should think about whether there are alternative means for providing customers with an enjoyable eating experience. Home delivery is one obvious solution, but there are others. How about supplying homes with meal ingredient kits with instructions so they can cook their own gourmet experience?

How about providing online cooking courses? When a crisis hits and creativity is called for, it is useful to step back and take a fresh look at the business you are in. If you have catered to consumers only (a business-to-consumer business model), perhaps it is time to think how you could start servicing the business market?

4. **Leverage things digital.** The great thing about digitalisation (i.e., the application of digital infrastructures and technologies to re-think your business) is that digital technologies are immensely flexible and ideal for social distancing. With digital, products are becoming services and platforms. Like it or not, the future is going to be digital, so entrepreneurs are well advised to take the COVID-19 crisis as an opportunity to leap into the future by ‘digitalising’ their business models. This can take many forms. The business can simply shift its customer interactions onto the digital platform. Food delivery reservations do not need to be made by phone: they can be done digitally. Products can be sold through online marketplaces. At the simplest level, the COVID crisis might offer an opportunity to finally re-design your web page and re-think how you want to present your business to prospective customers.

5. **Connect with your community.** One of our more striking findings has been to see how entrepreneurs and their communities have been able to pull together in the face of a common external threat. This phenomenon we have seen in all the countries we have studied: at a time of external crisis, your old competitors and foes suddenly become your partners, as they realise that the chance of surviving the crisis is created when everyone starts helping one another. There is power and help available in your community. People want to share their ideas and experiences. The entrepreneurial community is a powerful platform that helps all of its participants to figure out ways to survive the crisis and convert it into an opportunity. In our research we have seen situations where the entrepreneur has been so overwhelmed by the COVID adversity that they have withdrawn to their shells instead of reaching out to others. Our advice to entrepreneurs is: if you find yourself in trouble, ask your network for suggestions how to fix the problem. You will be surprised by the amount of advice you will receive.

6. **Avoid a ‘race to the bottom’.** Given the power of the entrepreneurial community to help its participants to innovate their way out of the crisis, the worst mistake entrepreneurs can do is to continue treating their competitors as adversaries. Doing so would disrupt the community dynamic described above. When faced with external adversity, the best solution is to pull together and work together so the entrepreneurial community can find the right solutions in response to the crisis.
Research Method

Research Design

We adopted an inductive longitudinal multiple case study method to explore COVID-19 related response strategies (Eisenhardt, 1989; Morgan and Smircich, 1980; Yin, 1994). We used Wuhan as our exploratory research site and subsequently extended our research to Bangkok, Manila, and Kuala Lumpur, which act as confirmatory research sites. To provide contrast to advanced economies, we also conduct parallel case studies in London, which is one of the most adversely affected locations in Europe.

We chose an inductive approach because of the novelty of the phenomenon under study and because of our aim to induce a process model of resilient crisis responses by entrepreneurial firms and communities. An inductive, qualitative research design explores complex, temporal and little-known phenomena (Bryman & Bell, 2015; Corbin & Strauss, 1990). Given the research focus on understanding entrepreneurs’ immediate adjustment strategies in the face of the crisis, an interpretive paradigm was deemed to be most appropriate (Blumberg, Cooper, & Schindler, 2014).

In addition, given the sensitivity of the research topic, we used a proxy longitudinal design that combines a variety of data sources including the media, archival and online materials, to reconstruct the path dependencies of small businesses and the overall context of the crisis. By investigating entrepreneurs’ experience and the corresponding context prior to, during and after the crisis, our study answers the call that crisis research should examine the whole sequence of a crisis as a process, which is something entrepreneurship literature has failed to achieve (Buchanan & Denyer, 2013). By implementing a proxy longitudinal case study design, our research adds to extant entrepreneurship literature that mostly focuses on one segment of the crisis event sequence and enhances our understanding of a crisis in its entirety.

Theoretical Sampling Protocol

Implementing theoretical sampling in case selection allowed us to isolate the extraneous variations across cases and focus on the focal relationships of our interest. It also enables us to uncover the causality, rather than the correlation, between constructs, and in turn to induce credible theory from multiple cases.

We identified 5 pairs of ‘polar-outcome’ firms at each research site, a total sample of 10 cases. Each of the 5 sampling dimensions was a pair of contrasting responses to the COVID-19 crisis: Proactive (vs. Reactive), Grow (vs. Suffer), Community-dependent (vs. Not), Digitally Enhanced (vs. Not), and Change Business Model (vs. Change Product/Service).

In securing the sample cases, we selected firms with favourable antecedent characteristics of entrepreneurial resilience (i.e., potential resilience-enablers) associated with resilient outcomes, as many as possible. We reached out to more firms to locate the ideal sample set, and also to conduct pilot interviews on company backgrounds to filter out firms that did not match the profile or were unlikely to opt-in for a one-year commitment.

With 10 sample cases at each research site, we categorised them into the sampling matrix based on the company backgrounds. We did this to ensure that samples are fairly evenly distributed among all characteristics. In the next step, we paired them up, controlling for the potential antecedents of firm-level entrepreneurial resilience. For example, we can compare multiple digital firms from different research sites to identify any interesting cross-case patterns or underlying logics of ‘whys’ that emerge.

When our initial sample set did not have adequate coverage of the antecedent characteristics, we also employed theoretical saturation – selecting additional cases and collecting more data as the big picture matured. This allowed us to do a first round of both within-site (for causal relationships) and cross-site comparison (for country differences). Moreover, we kept a very small number of firms that did not exhibit any of the antecedents but still performed well in the face of the COVID-19. This choice offered the potential to capture effective resilience enablers that are not previously identified in existing literature, while also providing a control group that helped us explore causal effects. We will monitor the ‘pairs’ (within and cross-sites) during the second-round interviews recording the firm’s current progress and how the firms anticipate their response strategies to evolve. In the third-round interviews, we will also implement the ‘racing design’: i.e., allow the sample firms ‘race’ to their long-term outcomes in a longitudinal setting, observing and documenting the processes (Gehman et al., 2018). Throughout the data collection, we also aim to continuously monitor the entrepreneurial community-level dynamics around both more and less successful firms.
Data Collection

We collected data on several aspects:

- The case firms
- The communities of those case firms
- Regional entrepreneurial ecosystems
- The country’s SME sector landscape
- The country’s entrepreneurship policy framework

Our systematic review suggested that the resilience of an entrepreneur in the face of an external shock is conditioned by:

- The entrepreneur’s personal characteristics, previous experience and professional background, family background, education, and networks
- The characteristics of the business, such as its sector (service, manufacturing, digital, technology-based), accumulated reserves, business model, management team composition, ownership structure, established business and customer relationships and firm size
- The regional community of entrepreneurs, its cohesiveness, social norms (especially reciprocity norms), and business group characteristics
- The regional entrepreneurial ecosystem structure, especially the availability of specialised resources and support, including policy support
- Industry sector
- The country’s institutional environment, especially the quality of its institutions

Given the above, it was, therefore, important to collect data not only on the firm level, but also, describe the wider economic and societal context within which it was embedded. We therefore collected data on the following:

- The country’s entrepreneurship policy framework: drawing on government reports and similar documentation, we described the country’s entrepreneurship policy framework, including relevant policy agencies and their support programmes and initiatives.
- Regional entrepreneurial ecosystem: drawing on stakeholder interviews, reports, and business press, we described the structure of the regional entrepreneurial ecosystem, including key structural elements such as new venture accelerators, science parks, venture capital and seed investor community, size of start-up community, major networking events and similar institutional arrangements.
- The local business community (this covers more conventional SME communities that may be organised, for example, around commercial chambers, small business associations, and similar).
- The case companies, collecting both archival and interview data. The archival data would compose of:
  - Company web pages (e.g., ‘About Us’, ‘Management Team’, product or service offerings, company history, etc.)
  - News items
  - Product and service brochures
  - Annual reports including balance sheets and income statements (where available)
- The main source of new data was composed of interviews with the case companies, as detailed below.

Interview Protocol

We anticipated conducting 3-4 rounds of interviews with each case company for 12-16 months. The first interview focused on the entrepreneur, the company, and the experience of the business with the COVID-19 crisis over the past six months. In addition to learning to know the company, we explored what the business was doing and how it was going when the COVID-19 crisis hit. We explored challenges, how they emerged, and how the firm coped with a reacted to those challenges. We investigated adjustments the business made in the face of the crisis, and whether it received any help or advice from public sector agencies, the owners’ personal contacts, other businesses within the company’s ‘in-group’ (i.e., friendly businesses that are part of a close network or a business group), other businesses within the company’s ‘out-group’ (i.e., more distant businesses that are not in the in-group and may even be actual and potential competitors) or from other sources.

We explored what changes the business had to undertake immediately, and what adjustments it has made over longer turns. We were particularly interested in changes in the operational model of the business – i.e., its business model, and whether the company has started to use digital tools to conduct parts of its business (e.g., customer interactions, joined platforms, other). In this study, we are particularly interested in whether entrepreneurial businesses are able to harness digitalisation to enhance their resilience. We also explored whether the business saw the crisis (perhaps after the initial shock) as a threat or an opportunity. One of our working hypotheses is that those businesses that take a proactive attitude and see how they can improve
their operations during the crisis will be more resilient. The business may, for example, discontinue some old product or service lines, add new ones, move some of its operations on digital platforms, and explore reorienting its business to activities where the impact of COVID-19 is smaller or may even increase demand (e.g., home deliveries).

The case interviews were in-depth, semi-structured interviews lasting approximately 1 – 1.5 hours each. The overall interview outline is summarised below.

- First-round interviews: pre-crisis operations, business models and contingency measures of the firm; retrospective interpretations and experiences of entrepreneurs and their ventures, how the crisis unfolded and what pressures and challenges it generated; emotions and feelings of stakeholders; how the firm adjusted on the fly, and how the firm interacted with its community to mitigate the crisis impact.
- Second-round interviews: a set of ongoing interviews recording the firm’s current progress; firm- and community-level interactions and learning process; lessons learned and how the firm anticipates its response strategy to evolve; what the community interactions are, and how the firm anticipates its response strategy to evolve.
- Third-round interviews: business models and operational templates under the ‘new normal’; retrospective exploration and reflections of ‘what worked’; what appears to be the most effective response strategies and why; post-COVID plan and future outlook.
- Follow-up interviews (based on theoretical saturation): additional evidence needed to support and confirm the process models and empirical implications.

Coding Protocol

We use Atlas.ti to strengthen our coding protocol that adopts a systematic abductive approach to address both research objectives and pragmatic considerations in project delivery. In the first phase, we applied a grounded-theory interpretive approach to our inductive concept development starting with an initial set of transcripts. This allowed us to codify data grounded on direct inputs from respondents to inform theory building and validation (Gioia, Corley, & Hamilton, 2013). This process produced an initial set of concepts at the country level, referred to as first-order codes, that are reviewed, discussed, and consolidated at the cross-country level through multiple collaborative research workshops. First-order codes serve as the basis for a cross-country codebook that allows us to transition to the second phase, involving independent country-level coding.

Given the diversity of contexts among respondents and the research team, the codebook offers a pathway towards a “stable frame for the dynamic analysis of textual data” to improve intercoder agreement (MacQueen, McLellan, Kay, & Milstein, 1998). The codebook is collaboratively finalised and follows Adu’s (2019) guideline that includes four key elements: (i) anchor code, (ii) empirical indicator, (iii) code column, and (iv) code description column (see Figure 3). Lastly, intercoder reliability is tested using Atlas.ti to ensure that the application of the codebook is consistent. A coefficient greater than 0.9/0.8 is considered reliable and prompts country teams to continue coding the next transcript (Lavrakas, 2008). If the coefficient is lower than 0.9/0.8, the transcript must be recoded until the set threshold is met. This cycle is repeated until coding all transcripts are completed. Figure 2 summarises our approach.
Develop initial code book (based on 4 transcripts)

Review and finalize initial code book, following Adu (2020)

Independently code one transcript (PH, TH)

Rcode previous transcripts using new guidelines

(if $\alpha<0.9/0.8$): Review and revise codebook

Run intercoder reliability assessment using Atlas.ti

(if $\alpha>0.9/0.8$): Continue coding

Figure 2 Codebook Development Protocol

<table>
<thead>
<tr>
<th>Anchor code</th>
<th>Empirical Indicator Source</th>
<th>Code label</th>
<th>Code description</th>
</tr>
</thead>
<tbody>
<tr>
<td>This contains labels of the research questions that are connected to empirical indicators.</td>
<td>This is the source or location of the relevant information selected.</td>
<td>This contains labels given to the empirical indicators.</td>
<td>This contains information on how the code is defined.</td>
</tr>
</tbody>
</table>

Note: Taken from Adu (2020) A Step-by-step Guide to Qualitative Data Coding

Figure 3 Codebook Format
References


Appendix

Appendix 1: Overview of Project Plan

<table>
<thead>
<tr>
<th>Project Stages</th>
<th>Preparations</th>
<th>Milestone 1 (March 2021)</th>
<th>Milestone 2 (September 2021)</th>
<th>Milestone 3 (February 2022)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Confirm feasibility of the project and established research consortium</td>
<td>Understand early effects of the Covid-19 crisis and associated firm- and community-level responses, with consolidated findings and early policy implications from five countries</td>
<td>Produce effective adjustment strategies for entrepreneurs and policy insights to facilitate resilient firm- and community-level responses and recovery strategies in both developed and developing countries</td>
<td>Identify the causal relationships between the entrepreneurial resilience-enablers and outcomes</td>
</tr>
<tr>
<td></td>
<td>Confirm both firm-level and community-level response dynamics are in operation</td>
<td></td>
<td></td>
<td>Unearth the antecedent-outcome process of the firm- and community-level resilience</td>
</tr>
<tr>
<td>Activities</td>
<td>Exploratory interviews with entrepreneurs from Wuhan</td>
<td>Select a sample of approximately 50 cases</td>
<td>Second-round interviews</td>
<td>Third-round interviews</td>
</tr>
<tr>
<td></td>
<td>First-round interviews</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outputs</td>
<td>Systematic literature review of entrepreneurial resilience strategies during external shocks</td>
<td>First interim report</td>
<td>Second interim report</td>
<td>Final report with an elaboration of tangible firm-, community- and policy-relevant insights</td>
</tr>
<tr>
<td></td>
<td>Early insights on entrepreneurial resilience</td>
<td>Virtual workshops and outreach events with local policymakers and entrepreneurs</td>
<td>1-2 conference papers from each site, publishing site-specific findings, and 3-4 conference papers at the project level</td>
<td>3-4 journal articles reporting different aspects of the study, including both academic and practitioner journal papers</td>
</tr>
<tr>
<td></td>
<td>Preliminary process model</td>
<td>Virtual workshops and outreach events with local policymakers and entrepreneurs</td>
<td></td>
<td>Package of teaching materials for entrepreneurship teaching and training</td>
</tr>
</tbody>
</table>

Appendix 2: Progress to Date

Fieldwork conducted: As of April 2021, we have conducted the first round of interviews with 54 entrepreneurs. The interviews provided detailed narratives of the impact of the pandemic on each business and the participants’ responses. All interviews have been transcribed and field notes were recorded immediately after each interview. The number of interviews conducted in each location is as follows:

- China: (15 participants)
- Malaysia: (8 participants)
- Philippines: (9 participants)
- Thailand: (7 participants)
- United Kingdom: (15 participants)

Engagement activities: The emerging insights from the project will be disseminated via outreach events, which will take place in the coming months at the different locations. Events are currently scheduled in the United Kingdom, the Philippines and Thailand. Collaborating with our local outreach partners, we will discuss the key findings as well as their implications for policymakers and entrepreneurs. We are also launched a dedicated website for the project, which is intended to facilitate further engagement.

More on our website: entresilience.com