

Business model innovation (BMI) in small enterprises from developing countries during COVID-19 outbreak: Exploring drivers and BMI outcomes

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Abstract:

The purpose of this paper is to provide understanding of driving forces for Business Model Innovation (BMI) during the pandemic for small businesses in developing countries, comparing them with identified BMI drivers before the outbreak and evaluating their response to the current crisis. A qualitative multiple case study is conducted as it allows the study of BMI within real life and contemporary context. Case study organisations that adopt innovative business models participated from technology, education, and social enterprises. Findings shows that small organisations are influenced by internal and external factors towards BMI during the pandemic. Case organisations showed resilience to the crisis by adjusting accordingly to allow uninterrupted operation during lockdown; developing new products, services and processes that would ensure sustained demand during COVID-19 pandemic. The study explores theoretical implications of the findings. Also, lessons from this research could be useful for practitioners from developed and developing countries. Policymakers from developing countries could benefit from focusing their activities on promoting firms to find novel ways of operating during times of pandemic preventing further economic damage and unemployment.

Keywords: Business Model Innovation, COVID-19, driving forces, small enterprises, developing countries.

Biographical notes

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1. Introduction

Business Model (BMs) and Business Model Innovation (BMI) as concepts have become popular in macro-management theory (Foss and Saebi, 2016). While many organisations have processes that encourage product and service innovation, very few have the determination to keep innovating the business models (Chesbrough, 2010; Teece, 2010). BMI goes beyond delivering a new value proposition to consumers and process innovation to create new systems; it seems evident that this is a way for organisations to thrive in constantly changing business environments (Chesbrough, 2010;

Novak, 2014; Teece, 2010). Therefore, are motivated to innovate their business model by a set of contextual factors (Bashir and Verma, 2017; Clinton and Whisnant, 2014).

Management researchers have paid special attention to the factors that influence change in organisations. Literature shows evidence of contextual factors that drive organisations towards innovative business models. They can be derived from stakeholders, market, consumer, competitors, partners, leadership, internal capabilities, among others (Cai and Li, 2018; Comberg *et al.*, 2014; Fernando and Wah, 2017; Neri *et al.*, 2018). A clear understanding of what drives a given phenomenon can help to further advance a field by identifying new problems, providing answers, and framing the rationale behind the given phenomenon (Frynas and Yamahaki, 2016).

Global challenges such as scarcity of materials, financial crisis, climate change, social and economic inequalities, among others, coerce organisations to find innovative ways to operate (Clinton and Whisnant, 2014). Evidence from literature shows that an increasing number of organisations see the challenges above as opportunities to innovate their business model (Barnett *et al.*, 2015; Boons and Lüdeke-Freund, 2013; Clinton and Whisnant, 2014; Joyce and Paquin, 2016). COVID-19 pandemic seems to be added on that list since it is having a profound impact on the lives of people around the world. Perhaps the global situation creates opportunities for organisations to find novel ways to operate overcoming existing challenges.

The COVID-19 outbreak had globally disrupted businesses and it is perceived around the world that the current economic situation is substantially worsening. Social distancing measures set by health authorities, changes in consumer behaviour, and fear of economic recession are among the factors that could impact businesses around the world. Moreover, McKinsey (2020) and World Bank Group (2020) reports that the hurdles firms must

overcome during the pandemic include changes in customer demand, disruption in supply, an altered workforce, regulatory uncertainty, and insolvency. Currently, there is no clear short-term solution to the health crisis, therefore, businesses must adapt to endure these challenges (McKinsey, 2020). Furthermore, there is opportunity to expand knowledge of the subject with academic research that focuses on understanding the impact of these uncertain times on businesses (Donthu and Gustafsson, 2020; Verma and Gustafsson, 2020).

The challenge is particularly severe for small enterprises putting many jobs at risk. Small and medium enterprises (SMEs) are important in the economic life of most countries and their competitiveness is arguably indispensable to a country's growth and success. Ninety percent of all the businesses in the world are SMEs. These businesses are responsible for 50-60% of total employment. In the Organisation for Economic Co-operation and Development (OECD) countries, 95% of businesses are SMEs and they account for 60-70% of jobs. In developing countries small enterprises accounts for the majority of jobs (Demirgüç-kunt, 2011). Therefore, it is crucial that these organisations continue to operate and analyse how they can adapt during the pandemic.

One important issue to address about small enterprises is to define them clearly and to differentiate them from other type of businesses. However, the former remains a contentious and challenging task because there are various definitions in literature, some of which are amended frequently. This study adopts the European Union definition, which categorises firms from 10 to 49 employees as small enterprises (European Commission, 2005).

Literature shows evidence of studies on BMI driving factors from a variety of approaches and settings (Bocken and Geradts, 2020; Comberg *et al.*, 2014; Van Den Heuvel *et al.*,

2020). Yet, COVID-19 context is unprecedented for researchers and practitioners. Therefore, it is relevant to understand how organisations respond to these difficult times. Currently, there is no empirical study that addresses BMI during the pandemic in small enterprise from developing countries. To address this gap, this study aims to provide an in-depth understanding of driving forces for BMI prior and during the pandemic for small enterprises in developing countries. A qualitative multiple-case study is conducted on small enterprises prior and during the pandemic. Case study organisations that adopt innovative business models participated from technology, education, and social enterprises.

This study provides a better understanding on which factors influences small enterprise in developing countries towards BMI. Since case study organisations are enquired before and during the pandemic, it allows to expand knowledge on how influential contextual elements derived from the crisis for BMI in small enterprises are. This contributes towards better understanding on how crisis shape the business models, decision making and change in organisations.

The following section outlines the theoretical underpinnings and explores the current understanding of the COVID-19 context for organisations. Section 3 covers the research design, including an overview of the case studies and participants, data collection and analysis methods. Then, section 4 presents the results of the multiple-case study analysis. Lastly, section 5 synthesises key findings with a discussion on theoretical and practical implications.

2. Review of relevant literature

2.1 Business Model and Business Model Innovation

A business model can be defined as the design of the creation, delivery, and value capture processes within an organisation (Chesbrough, 2010; Fielt, 2013; Geissdoerfer *et al.*, 2018; Joyce and Paquin, 2016; Osterwalder and Pigneur, 2010; Pironti *et al.*, 2015; Ritter and Lettl, 2017). Definition of the constituents of the business model is relevant to reach a comprehensive conceptualisation of the business model (Al-Debei and Avison, 2010). Baldassarre *et al.* (2017) identify three distinctive elements that form a business model: the value proposition which refers to the product or service that an organisation offers to deliver value to its customers (Joyce and Paquin, 2016); a value creation and delivery system which allude to processes, activities, ability and resources applied by an organisation to deliver the value proposition to the consumers (Baldassarre *et al.*, 2017; Teece, 2010); and a value capture which is the method applied by the organisation to generate revenues from the delivery of the value proposition (Yang *et al.*, 2017).

A well-articulated BM can be easily understood by member of the organisation, partners and stakeholders (Jensen, 2013). In addition, it could help visualise synergies in the value creation process (Teece, 2010; Zott and Amit, 2010). This leads to better understanding on how the organisation operates the value proposition to consumers. In practice BMs are useful to identify market segments, structure the value chain and define the value capture systems for organisations (Kraus *et al.*, 2020).

Business Model Innovation (as a business model dynamic) is defined as the act of enhancing an organisation value proposition and its operative model to maximise value creation and competitive advantage (Bashir and Verma, 2017; Chesbrough, 2010). BMI goes beyond delivering a new value proposition to consumers and process innovation to

create new systems (Chesbrough, 2010; Novak, 2014; Teece, 2010). It seems evident that this is a way for organisations to thrive in constantly changing business environments and are therefore motivated to innovate their business model by a set of contextual factors (Bashir and Verma, 2017; Clinton and Whisnant, 2014; Marika *et al.*, 2015).

Researchers concur that BMI can take place when one or more elements of the BM change (Bashir and Verma, 2017). BMI can take place with the development of a new business model, diversification into additional business models, acquisition of new business models or the transformation from one business model to another (Geissdoerfer *et al.*, 2018).

Small enterprises are known to engage in business model innovation. Literature suggests that innovation activities in these organisations is mainly guided by the vision of leaders (Alberti and Varon Garrido, 2017; Bocken and Short, 2016; Marika *et al.*, 2015). Moreover, this must be supported by an organisational culture that promote innovation.

It is generally perceived that small firms during crisis scenarios adopt a conservative approach when it comes to innovation (Marika *et al.*, 2015). A Sustainable Development Goal progress report by the UN in 2020 shows concerns of stagnation of innovation and Research and Development activities during the pandemic (Economic and Social Council, 2020). Therefore, insight from firms that sees pandemic challenges as opportunities are relevant under current context. Battistella *et al.* (2017) argues that when firms are unable to adapt their BMI in the facing of unexpected difficult times could result in loss of market share or business failure.

The study focuses on organisations that transformed their business model into a new one as a reaction of opportunities or challenges faced during COVID-19. According to our

literature review, very few articles directly link BM and BMI with theories that focuses on how firms ensure resiliency to a wide range of unfortunate and unplanned scenarios such as business continuity and disaster recovery literature (Niemimaa *et al.*, 2019). The study is set to explore links between BMI, small enterprises, and crisis scenarios.

2.2 COVID-19 Impact on businesses

The COVID-19 pandemic has undoubtedly affected human activity across the globe. Among others, impacts extend to human, social, economic and health aspects of human lives (Verma and Gustafsson, 2020). Statistics shows that millions of people have been infected globally, disrupting economies, and creating new challenges for businesses (WHO, 2020).

Government response to the current health crisis include a mix of closing of the workplace, disruption in public transport, demand of public to stay at home, restriction of movement and travel, and others in an attempt to control the spread of the virus. Leaders from many countries have decided to implement measures such as sudden or phased lockdowns that would stop a range of economic activities. These social distancing policies were implemented with short-notice and consequently, businesses across many industries have been required to adapt to these changes (Donthu and Gustafsson, 2020; Kramer and Kramer, 2020).

Aside of government normative role, organisations are taking initiative of protecting the workforce whether at work (e.g., case of essential businesses) or adapting to work from home scenarios. Furthermore, consumer behaviour has also changed during the pandemic. As a result, organisations are required to adapt and ensure their survival. Challenges faced by organisations are health conditions, marketing, workforce, sales, regulatory uncertainty, supply, and demand (Asmelash and Cooper, 2020; Crick and

Crick, 2020; McKinsey, 2020).

In terms of consumer behaviour, users seem to be shifting to digital products and services. For instance, consumers prefer online shopping rather than in-store purchases and with less brand fidelity. Furthermore, due to travel restrictions, the focus is spending on domestic and local activities (McKinsey, 2020). Internet and social media usage have increased during lockdown. Activities that have conflicts due to social distancing rules such as eating out, travelling or team sports have a long-term effect in consumer behaviour (Donthu and Gustafsson, 2020). At the moment long term effect in consumer behaviour is unclear (Donthu and Gustafsson, 2020).

McKinsey (2020) report noted that current pandemic context poses an increased risk of disruptions in supply chains across the globe. According to Donthu and Gustafsson (2020) organisations are likely to restructure their supply chains to prevent disruptions. In turn, analytics could help address these issues by providing better forecast and predicting potential supply chain disruptions (McKinsey, 2020; Donthu and Gustafsson, 2020). Furthermore, Crick and Crick (2020) suggest that decision makers in a global crisis should explore various options to implement digital collaborative strategies to improve performance, meet demand or sustain themselves on volatile markets.

New challenges posed by the pandemic is testing businesses ability to innovate, withstand and recover from difficult conditions (Verma and Gustafsson, 2020; Seetharaman, 2020).

With a better understanding of the COVID-19 context for businesses, is important to outline the theoretical framework guiding this study.

2.3 Theoretical framework

The purpose of this section is to provide a theoretical lens that would enable the analysis and understanding of the drivers of BMI that results from the empirical study of organisations that took part in this research. It is constructed from relevant theories, with understanding in the key variables that influences the phenomenon. Institutional theory and resource-based view are combined to develop a multi-theory perspective.

Firms are simultaneously driven to BMI by internal and external factors (Bidmon and Knab, 2018; Comberg *et al.*, 2014; Fernando and Wah, 2017; Kranich and Wald, 2015; Neri *et al.*, 2018; Savic *et al.*, 2016). External drivers refer to those that occur outside of the organisation therefore are generally not controlled by the organisation (Frynas and Yamahaki, 2016; Oliver, 1997). Those that occur within the organisation and are under its control are internal driving forces (Barrutia and Echebarria, 2015; Frynas and Yamahaki, 2016). Therefore, observing the phenomena from multiple perspectives allow better understanding of the complexities present in the real world.

Institutional Theory (IT) has emerged as one of predominant theories to study social context of an organisation. It focuses on the need of social legitimacy of organisations and its importance for their survival. Institutional theory provides a theoretical framework which enable researchers to distinguish and analyse the factors that lead organisations to adapt and conform to the social norms of the business environment (Frynas and Yamahaki, 2016; Glover *et al.*, 2014). Firms adapt because they cannot survive without some extent of social approval, also referred as legitimacy (Oliver, 1997). Therefore, IT proposes that external pressures shape organisational action (Heras-Saizarbitoria *et al.*, 2010). Within this context, legitimacy refers to business models that are recognised as adequate and acceptable by stakeholders because they comply with established norms,

customs, and codes of conduct.

Institutional theory defines three forms of institutional pressures (Lin *et al.*, 2020). These are normative, coercive, and mimetic drivers. Normative drivers occur when organisations comply with norms to achieve legitimacy. Coercive occur when figures in power influence the change. Mimetic influence occurs when organisations change to imitate actions of successful competitors to replicate their success and legitimacy (DiMaggio and Powell, 1983; Mizruchi and Fein, 1999). Many authors have discussed how these pressures could lead to isomorphism in organisations since firms share common and interconnected environments (DiMaggio and Powell, 1983; Frynas and Yamahaki, 2016; Islam *et al.*, 2020; Oliver, 1997). However, they could also influence organisation towards innovative practices (Edwards-Schachter, 2018; Lin *et al.*, 2020).

Organisations manage resources and assets that can be applied to achieve its goals. These resources can be personnel, knowledge, competences, capabilities, technologies, etc (Popadiuk *et al.*, 2014). It is believed that organisations that possess abundant resources are better able to survive in uncertain times (Crick and Crick, 2020).

Resource-based view is concerned with the links between organisation resources and its performance. Furthermore, addresses firm's ability to utilise its internal resources to obtain competitive advantage (Barney, 1991; Barrutia and Echebarria, 2015; Frynas and Yamahaki, 2016). Frynas and Yamahaki (2016) explains that sustainable competitive advantage happens if firm resources are valuable, rare, hard/costly to imitate and value is successfully captured by the organisation. Since identified drivers demonstrate how valuable internal capabilities influence decision making, RBV could help make sense of their role in BMI in the analysed context.

Literature have helped identify firms ability to be alert to changes in the market and change quickly is crucial for organisations (Popadiuk *et al.*, 2014). Barney *et al.* (2001) provide similar insight as the article cite dynamic capabilities and its link with RBV theory. Dynamic capabilities refer to processes applied to continually reconfigure organisations to improve performance (Velu, 2017). Literature provide insight of the connections between BMI and dynamic capabilities (Bocken and Geradts, 2020; Roaldsen, 2014; Teece, 2010).

Resource's selection and accumulation could result from internal decision-making combined with external strategic factors. Barrutia and Echebarria (2015) argue that resources value increases when organisations collaborate with partners with heterogeneous resources. RBV alone is limited to explain emerging themes such as this one, therefore, a combination of both theories is useful to explain dynamics of internal and external factors that influences BMI (Crick and Crick, 2020).

Links between institutional theory and resource-based view are explored for the analysis of BMI drivers. The theoretical framework permits critical evaluation of how both firm resources and institutional context are influential for the adoption of BMI. Furthermore, by connecting this research with existing knowledge help identify key variables that influence the phenomenon under study for further examination.

2.4 Research gaps

For researchers and practitioner COVID-19 sets the unplanned scenario in which organisations must find what works to keep operating. Similarly, to the efforts from the scientific community towards prevention and cure of the disease, it is important for scholars in strategic management to expand on how organisations could get through these difficult times (Donthu and Gustafsson, 2020; Seetharaman, 2020). Verma and

Gustafsson (2020) identified several COVID-19 research trends in the field of business and management. Seetharaman (2020) identified the need of comparative analysis of organisations that successfully made the transition into more digital business models due to COVID-19 pandemic. Kraus *et al.* (2020) presents a study on small family firms, which outline workplace impact in terms of communication during lockdown and cultural change. The review of literature revealed there is no empirical study that focuses on how small enterprises from developing countries are adopting BMI during pandemic. The methodology section explains how data was collected and analysed to answer research questions guiding the study.

3. Research Method

3.1 Design

The present research aims to analyse driving forces of business model innovation during the COVID-19 pandemic. First, the study enquires on the factors that influenced the evaluated organisations to innovate their business model. Then, driving forces during the pandemic are analysed and compared between the case studies. Resulting business model innovations from the case studies and its outcomes are investigated. The following research questions were formulated for small enterprises in developing countries:

- *What factors influenced the adoption of business model innovation for these organisations?*
- *During COVID-19 pandemic are organisations driven towards business model innovation? How different are they from driving factors before the outbreak started?*

- *How are business model innovations unfolding for these organisations?*

A qualitative multiple-case study is conducted to answer the research questions. This methodological framework allows the study of BMI within real life and contemporary context while in-depth nature of case study research could provide better understanding of inherent complexities (Creswell and Poth, 2018; Yin, 2014). The present study seeks to understand differences and similarities of driving forces for business model innovation with and without COVID-19 pandemics constraints. This methodology enables to perform a comprehensive and contextualised research because of the collection of a wide array of data (Hartley, 1994). In contrast to single case study approach, this approach allows to capture multiple perspectives of the phenomenon and the identification of contextual elements particular to the cases. It also allows cross-case comparison which would allow to better answer the research question by recognising emerging patterns of association between the constructs that could lead to relevant theoretical insight (Creswell and Poth, 2018; Eisenhardt and Graebner, 2007). Furthermore, case study research is appropriate for investigating contextual questions like the one guiding this research (Eisenhardt, 1989; Gustafsson, 2017).

The study is not limited to the identification of driving forces for BMI for participant organisations, it also seeks to analyse innovations implemented by the organisations to understand how they reacted to the pandemic context. Findings of BMI drivers before the outbreak started for organisations will be compared with evidence from literature which could help support the theoretical background of the study. The following section will cover case study selection.

3.2 Case selection

Prior the definition of case sectors, participants from a variety of sectors were identified from organisations that developed BMI. Public information, news article and professional networks were useful to recruit participants. The main goal behind the selection of cases was to select organisations from different sectors to allow observation of context specific elements. This sampling strategy could increase diversity and allow to fully describe multiple perspectives (Yin, 2014). Therefore, sampling strategy aims to be purposeful while capturing diverse perspective of the analysed phenomena (Creswell and Poth, 2018).

Cases selected have demonstrated their strategic ability to innovate their business model. Furthermore, organisations selected implemented further changes to their business model due to pandemic constraints. Three small enterprises from different business sectors were considered. The firms helped identify a range of distinct strategic elements for BMI that allows comparison of the different BMI processes (Creswell and Poth, 2018; Lauckner, Paterson and Krupa, 2012; Yin, 2014).

The study analyses firms from developing countries because of how relevant small enterprises are for their economies. In developing countries small firms are main sources of employment. However, the rate of generation of new small firms is lower compared to developed countries. The issue is exacerbated during the pandemic because unstable economies during crisis scenarios rely on their job creation (Demirgüç-kunt, 2011; Fernando and Wah, 2017; Masocha and Fatoki, 2018). The fact that developed nations have been able to provide greater financial support to these organisations through the pandemic highlight the need to improve knowledge on how they could find new ways to continuously operate during the pandemic. Since aside of internal challenges, small

enterprises from developing countries face greater infrastructure, social, cultural, and regulatory constraints (Ayyagari *et al.*, 2014).

The organisations that took part of the study are based in “Latin America and the Caribbean” and “East Asia” regions. In a recent report from the United Nations (2019), both are classified as developing regions. Therefore, the selection of cases aligns with the research questions and objectives guiding the study. Including participant from different geographies is expected to help further diversify the perspectives from participants (Yin, 2014).

It was agreed with the participants that responses would be treated as confidential, therefore, this paper do not contain direct references to individuals or organisations that took part in the study. The following Table 1 presents the description of the selected cases.

Table 1. Overview of the case studies.

Organisation	Region	Level	Sector	Description
A	South East Asia	Multinational	Global Health/ Technology	Developed a data science platform that provide valuable information to public health officials by the application of AI technology for outbreak predictions on infectious diseases.
B	Latin America	National	Education	Provide counselling services for students for access to higher education (globally) and career development.
C	Latin America	National	Social crowdfunding	Digital crowdfunding platform for social causes.

3.3 Data collection and analysis

Data from multiple sources is collected and analysed: Semi-structured interviews with relevant staff, media articles and social media from participant organisations. This strategy help address the issue of construct validity (Creswell and Poth, 2018). Interviews No. 1, 4, 5 and 6 were conducted face to face with the participants. However, considering increasing concerns about COVID-19 spread, it was decided to conduct the rest via audio and video calls with the participants.

Participants were on the Senior Management level of the organisations due to them being influential to the BMI process. They were CEO's, Presidents, Directors and Senior Managers (see Table 2). Two rounds of interviews were conducted, before and after the COVID-19 outbreak. The rationale behind the second round of interviews was to particularly evaluate the COVID-19 context and its resulted pressures for the organisations.

To provide context on the conditions when the interviews were carried out, the study refer to the timeline published by the WHO on response actions to the COVID-19 outbreak. During January 2020, the virus was gaining notoriety, globally health authorities started to provide guidance for the population. At the end of January, the outbreak was declared as a global emergency, therefore from this point on, measures began to be implemented to prevent the spread of the virus increased (World Health Organisation, 2020). In view of the rapid increase of infections around the world, many countries found it necessary to implement stricter measures such as sudden or phased lockdowns (Verma and Gustafsson, 2020). This in addition to social distancing and stay-at-home measures, limited business activity. In both contexts analysed ("Latin America and the Caribbean" and "East Asia"), health authorities implemented strict curfews during March which

lasted for months. The first set of interviews (Interviews 1 to 9, See Table 2) took place between February and March 2020. During that interview, the participants were asked about what factors that influenced their organisations to Innovate their Business Model.

The second round of interviews took place in July 2020. This means participated organisations had to adapt to the restrictions that were in place for months, with uncertainties about the future outlook. Due to workload and commitments faced by the organisations at the time, an interview with each leader of the organisations agreed for this round of interviews (See Table 2). Interviewees were asked:

- Have you innovated in your business model as a reaction of the challenges faced during the COVID-19 pandemic?
- What factors influenced this change?
- Explain what innovation were implemented in your business model?
- Could you elaborate on the perceived outcomes?

Table 2. Participant profile.

Interview No.	Participant	Role	Organisation	Focus of the interview
1	P1	President Regional Chief	A	
2	P2	Executive Officer	A	
3	P3	Founder Chief Executive	A	
4	P4	Officer	B	Drivers for Business Model Innovation. Prior COVID-19 outbreak.
5	P5	Creative Director	B	
6	P6	Mentor Chief Executive	B	
7	P7	Officer	C	
8	P8	Marketing Director Multimedia	C	
9	P9	Director	C	
10	P1	President Chief Executive	A	Business Model Innovation due to COVID-19, strategies implemented and perceived outcomes. During COVID-19 outbreak.
11	P4	Officer Chief Executive	B	
12	P7	Officer	C	

During the data collection process, there was continuous interaction with the participants to clarify and/or to understand in-depth some of the topics. Media articles and social media evidence was provided by the organisations and they provided consent for the utilisation of the data for the study.

Data was analysed within case and cross case. Understanding of the business model configuration for the case study organisations was developed to help understand the BMI drivers, implemented strategies and its impacts (See Table 3). It allows to frame the observed strategies to specific business model elements (Baldassarre *et al.*, 2017).

Table 3. Business model configuration of the case study organisations

Business Model Overview for Case Study Organisations			
Organisation	Value Proposition	Value creation and delivery system	Value capture mechanism
A	Decision making tools for public health officials to address infectious diseases.	Combination of technology and understanding of the disease to develop data science solutions.	Subscription model.
B	Hub where families and students access expert advice regarding higher education institutions application process, the transition to higher education, and preparing for career success.	Close engagement with potential clients to understand their needs and develop focused products and services.	Fees from services provided.
C	Crowdfunding platform that addresses relevant social issues in society.	It gives community the opportunity to expose causes from people in need and the ability to support them. Provide coverage of the causes through social media and newsletter, before, during and even after their intervention.	Monetisation from partnering with suppliers.

Driving forces were not determined beforehand but rather after the interviews were conducted and analysed. To allow cross-case comparison a common denomination was given for each identified driver (Battistella *et al.*, 2017). Strategies adopted as a consequence of the driving forces experienced by the organisations during the pandemic are discussed and compared to find meaning in cases reaction to them.

Thematic analysis was performed to analyse collected data. It provides an account of data that is entirely qualitative, detailed, and nuanced (Braun and Clarke, 2006). Thematic analysis is applied for identifying, analysing, and reporting themes (patterns) within qualitative data by organising and describing the dataset in detail. The analysis process presented in Vaismoradi *et al.* (2013) was applied for this research (see Table 4).

Table 4. Process of data analysis in thematic analysis

Adapted from Vaismoradi *et al.* (2013)

Analysis phases and their descriptions	
Phase	Description
Familiarising with data	Transcribing data, reading and rereading the data, noting down initial ideas.
Generating initial codes	Coding interesting features of the data systematically across the entire data set, collating data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing themes	Checking if the themes work in relation to the coded extracts and the entire data set, generating a thematic map.
Defining and naming themes	Ongoing analysis for refining the specifics of each theme and the overall story that the analysis tells, generating clear definitions and names for each theme.
Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a report of the analysis.

4. Findings and Discussion

This section presents the findings of the multiple-case study, first providing insight into the influential factors that shaped their innovative business model (Section 4.1). Then, in section 4.2, 2020 COVID-19 context will be explained including evidence on pressures exerted on analysed organisations that drove them to adjust their business model. In section 4.3, adjustments to the business model of each case study as a response of the pandemic will be presented and discussed. Then, section 4.4 will summarise the findings of the present study.

4.1 Business model innovation drivers

In this section results from the initial factors that influences the organisation to adopt an innovative business model will be presented. All case study organisations have successfully identified driving forces both external and/or internals that have influenced their business model innovation (Bidmon and Knab, 2018; Comberg *et al.*, 2014; Fernando and Wah, 2017; Savic *et al.*, 2016).

Observed external driving forces observed in this set of case studies shows that case study organisations are aware of their business environment. It can be argued that the increased awareness could be a result of a search for legitimacy by complying with expectations in the environment the organisations operate (Frynas and Yamahaki, 2016).

Organisation A and B reported that technology advancements influenced them to pursue business model innovation. Sorescu *et al.*, (2011) discusses that technology developments provide the opportunity for organisations not only to challenge their processes and product but also their business model; the article provide evidence from the retail industry. Furthermore, organisations have been able to turn technological innovation into

commercial success (Bidmon and Knab, 2018). This is the case of organisation A since they apply novel technology as part of the value proposition which initially struggled to influence its adoption, as discussed by P2:

“Dengue for instance have not seen any innovation recently or at least over the last few decades, it means that researchers, scientists and program managers were inclined to use the old tools. That required great effort on our side to promote the adoption of our platform.”

In contrast, organisation B use technology to improve the delivery of their value proposition by opening new communications channels with clients and simpler information sharing as explained by P6:

“Technology for instance encourage students to do a virtual tour, to talk to an ambassador of a program, to talk to a representative who is already taking the program of interest of them, to arrange an appointment with a director of an academic program, or an international student department... It makes our processes easier.”

Adoption of novel technology is aligned with theoretical explanation of mimetic pressure due to the popularity of the adoption of the technologies cited by the participants (Mizruchi and Fein, 1999; Neri *et al.*, 2018). In turn, firms end up implementing the novel technology or disrupting their business model to better capture value from its adoption; the digitalisation of the music industry serve as an example to illustrate this (Teece, 2010). The organisations seem to be implementing technologies (Ex. Artificial intelligence, virtual communication platforms) that other organisations can easily apply, however, when those technologies enable the firms to pair them with an innovative business

structure it could lead to BMI. Therefore, it suggests that institutional pressures can lead to innovative practice in organisations. Therefore, this contrast with more traditional IT perspective that sustain external pressures lead to homogeneity of firms (Edwards-Schachter, 2018; Lin *et al.*, 2020).

Findings from case study organisation A evidence that its ability to react to technology advancements is enabled by identification and application of internal capabilities for business model innovation with the ideation of innovative ways to capture value from AI as a novel technology.

Furthermore, all the cases recognise that stakeholders have influenced them as well. Stakeholder collaboration is recognised as an external driver. This is evident in the following statement from P8:

“The social impact we have is driven by the people that support us, that include influencers who share our causes, the donors, suppliers and the everyone that help identify people in trouble and direct them to us.”

Analysis of this statement clearly shows that stakeholders become co-creators of social value for the organisation, and they collaborate for common good. The quote above display how value is co-created as internal structures play a role in finding a common goal driven by internal and external settings. This shows agreement with institutional theory since it argues that firms' local communities, partners, local NGOs among other relevant members of the environment are a source of legitimacy (Escobar and Vredenburg, 2011; Oliver, 1997). Internal capabilities and consciousness towards societal issues from the staff are found to influence in conjunction with collaboration with external stakeholder the BMI process for case study organisation C.

Stakeholder engagement is identified as an external driver for BMI as all the cases reported that this close interaction with stakeholder understanding their concern and needs have pushed them to innovate their business model. It differs from collaboration between stakeholders in that the latter parts from the organisation reaching out to stakeholders to understand how their business model impact them, allowing organisations to maximise value creation for them. It means that rather becoming co-creator of value, stakeholders' input is valuable to strategise around the business model. For example, the following quote from P5:

“When we started to engage more with ... let's say parents and student that are not graduated from high school but are already concerned about future career path we found the need to create more services adapted to their needs.”

Contrary to stakeholder collaboration, stakeholder engagement acts as a coercive pressure because it derives from the cultural context and expectations of a community or environment in which the organisation operates in (Masocha and Fatoki, 2018; Popadiuk *et al.*, 2014). Similar to case study organisation C, organisations B internal capabilities aid them to recognise existing external need for closer stakeholder engagement which lead them to innovate their business model as a reaction of those pressures.

Furthermore, organisation A seem to particularly identify regulations as a driving factor. As Masocha and Fatoki (2018) explains, regulative practices are form of coercive pressures since regulatory players control the way firms operate. Findings across the case studies support that external pressures shape organisational action (Heras-Saizarbitoria *et al.*, 2010). See table 5 for the summarised results of observed external driving forces:

Table 5. External BMI drivers

Organisation	External drivers for BMI			
	Regulations	Stakeholder collaboration	Stakeholder engagement	Technology advancement
A	x		x	x
B			x	x
C		x	x	

Findings reveal sustainability consciousness from staff members and leaders in the organisation as an internal driving force for business model innovation. This is aligned with evidence from Fernando and Wah (2017), Neri *et al.* (2018) and Orji (2019) as it influences adoption of sustainability strategies such as development of a sustainable product or optimisation of processes that could lead to less resource consumption. Increasing worldwide concern about social and environmental issues motivated these organisations to pursue new ways of doing business with the hope of enabling new ways of value creation (Bocken *et al.*, 2014; Spencer and Ayoub, 2014). New opportunities for social and environmental value creation have allowed organisation C to create a more compelling value proposition. P7 of the organisation argues:

“For us to be sustainable of course we need to have a product which solves a problem and act as a solution that dramatically improve the communities our products support”.

Sustainability consciousness from staff is aligned with resourced-based view theory as it is a resource that influences decision making. Also, could be a source of sustained competitive advantage, especially in current times where organisations worldwide are shifting towards more sustainable approaches (Barnett *et al.*, 2015; Boons and Lüdeke-

Freund, 2013; Clinton and Whisnant, 2014; Joyce and Paquin, 2016).

Organisations B and C recognise that internal capabilities can serve as triggers for innovative action. It was observed that staff experiences, aligned human resources, flexibility to adapt, among others, are influential for BMI efforts. Furthermore, staff innovative ideas are identified as an internal driver for two of the organisations. Findings seem to be aligned with literature of resource-based view theory which supports that organisations capabilities could be applied to differentiate from others (Barrutia and Echebarria, 2015; Barney, 2001; McGrath, 2010). For Organisation A, founder's vision was enhanced with staff innovative ideas, showing how the different identified driving forces come together to shape decision making in the organisation. From a resource-based view perspective both founder's vision and staff innovative ideas are sources of sustained competitive advantages and with recognition of current technology developments lead to decision-making towards business model innovation for the organisation (Bocken and Short, 2016; Comberg *et al.*, 2014).

From the perspective of participant organisations regarding internal drivers is evident that the development cultural elements that promote innovation, influenced them to design innovative business models (Fellnhofer, 2018; Ho *et al.*, 2011; Evans *et al.*, 2017).

Table 6. Internal BMI Drivers

Internal drivers for BMI					
Organisation	Founder's Vision	Internal capabilities	Staff sustainability consciousness	Staff innovative ideas	Value complementarities
A	x		x	x	x
B		x			
C		x	x	x	

With better understanding of what influenced the case studies organisations to pursue business model innovation, the next step is to present and discuss drivers for BMI during the crisis. This allows to partially answer the research question of this study by comparing driving factors before and after the COVID-19 outbreak.

4.2 COVID-19 business model innovation driving forces for small enterprises

Drivers for BMI during COVID-19 pandemic are presented in this section. Organisations are known to innovate their BM due to a set of contextual factor (Bashir and Verma, 2017; Clinton and Whisnant, 2014; Marika *et al.*, 2015). Findings show that each case study firm admitted that they had to rethink their business model due to the COVID-19 pandemic. Yet factors that influence this varies across case study.

Organisations A and C argue that they were required to adapt as fast as possible due to the state of emergency during the crisis. President of organisation A allude this when he said:

“It was required to act fast to provide a COVID-19 dashboard and prediction; even before we had workout agreements with clients.”

As a tech company, they were driven by a sudden need from clients for solutions that addresses the pandemic. Similarly, P9 from organisation C cites:

“Our sensibility towards social issues that affects our society.”

As the main factor that influenced them to adapting their business model. This response is consistent for identification of an internal driver before and after the outbreak started. Both accounts of influencing factors reflect on the industry and context both

organisations. Global Health and Social organisations are sensible to the pandemic and the underlying effect that it has on society (Olofsson *et al.*, 2018). Observing business model innovation drivers for both, for organisation A reacts to both external and internal driving forces during pandemic times, while organisation C only identified internal driving forces (See Table 7).

For case study organisation A, the driver stakeholder engagement was identified prior and after the outbreak. P1 mentions:

“State government which is one of our main clients asked us to develop dashboard and a predictive model under an eight-month contract. We held several talks with public health officials to produce a customised product. Also, we had to move a significant number of resources towards COVID-19 efforts”.

While organisation C continued to be influenced by internal sustainability consciousness. Both organisations showed a characteristic sensitivity towards their clients and the communities they operate in. Both saw COVID-19 as an opportunity to significantly change their value proposition for one focused on COVID-19 support.

Table 7. Observed business model innovation drivers during COVID-19 pandemic.

Organisation	External Driving Forces			Internal Driving Forces	
	Stakeholder Engagement	Technological Advancement	Regulations	Staff sustainability consciousness	Internal capabilities
A	x				x
B		x	x		x
C				x	

Organisation B in contrast, is influenced by the coercive role of public health bodies during the pandemic. This is evident on the following quote from its CEO:

“Due to the spread control measures implemented by the health authorities we had to stop interacting physically with our clients.”

To mitigate the negative impact on business operation, organisation B had to find new ways to interact with clients. This is crucial due to the industry they operate in (Education), where contact with clients is part of the product they offer. This is consistent with findings from literature review on the impact of COVID-19 in businesses and identified research gaps, particularly its impact on the workplace where more understanding is needed (Donthu and Gustafsson, 2020; Kramer and Kramer, 2020). Technology have enabled new ways to interact with them:

“The use of video calls and other digital means to interact was crucial for us to make the transition to the provision of digital services and continue to operate during the lockdown.”

This technological advancements co-influences adopted changes in their business model. Internal capabilities also played a role as an internal driving force for BMI, alongside the measures taken by health authorities. As it is explained by P1, case study organisation A did not have to overcome the same hurdles:

“We are a company that works remotely with the exception of the land surveyors who have to visit different locations to provide support.”

The next section will cover innovative business model initiatives implemented in the case study organisations reacting to driving forces during COVID-19 outbreak.

4.3 Business model innovation during the pandemic

This section will present the BMI implemented in the case study organisations as a reaction of the driving forces introduced in section 4.2 and perceived outcomes for the organisations. The COVID-19 context brought new challenges for participants, forcing them to adapt to the new context (Donthu and Gustafsson, 2020; Kramer and Kramer, 2020).

The previous section highlighted the awareness organisation A and C showed towards social issues and how it acts as a driving force for BMI during the pandemic. Similarly, both organisations reacted by adapting their value proposition thus it addresses COVID-19 associated issues.

Due to their nature of their operations, for organisation A it was not difficult for a transition to work-from-home setting for their development team. However, they had to manage their human resources to prioritise the development of COVID-19 response services. With the team aligned for COVID-19 efforts, the organisation proceeded to develop a dashboard paired with a predictive model for governments. Due to the state of emergency the R1 of the organisation explains:

“It was required from us to act fast to provide some kind of dashboard or prediction even before we had an assurance of payments.”

They usually offered products with a subscription model, but in this scenario and influenced by understanding client’s requirement of the platform, it was decided to implement a single payment to access COVID-19 response services on the platform. As P1 further explains:

“We agreed with one of our major clients (a government) a single payment

for eight months of COVID-19 support in our platform, with an extension of two years if required at the client's discretion”.

Respondent from case study C confirm that they did not have to change the platform or the services they offer, just their focus. When lockdown measures were announced, they realised its negative social impact (unemployment, health risks for vulnerable individuals) and they took the initiative to focus on crowdfunding to help as much families as possible. P7 explains:

“As a digital platform for us it was very easy to do things like work from home without any disruption for part of our team. However, due to the nature of what we do we had to go to these families to provide the help they needed which of course is a risk for the team involved.”

Efforts included opening of donation channels directed to provided food and personal protective equipment to affected families and essential workers.

In contrast, organisation B response did not seek to directly tackle the virus, its spread, or its impact on society. Alternatively, the organisation seems to explore ways of continuing providing services to clients despite the restriction imposed by the local health authority. They took two courses of action to do so, the first was to implement work from home substituting all physical interaction with staff members and client for digital interactions. It support literature that suggest firms are helping staff member to adjust to work from home scenarios (Asmelash and Cooper, 2020; Crick and Crick, 2020; McKinsey, 2020). The second was to create digital services such as: online courses, seminars, workshops, masterclasses, etc. P4 recognises the pressures driving the change and the innovative changes to their value proposition as he discusses:

“We were forced to shift our operations to 100% digital, which results in the creation of a portfolio of digital products.”

Also, he continues to discuss the impact of these changes:

“The main positive outcome is that we were able to continue operating and providing services to our clients. We did not struggle financially and in fact we developed digital services that we believe are well received by our clients and they might stay when we resume operations as usual.”

For the perspective of P4, it is important to highlight that the new value proposition in the form of digital products offered by case study organisation B might be permanent instead of transitory. This challenges perspectives on BM shift during the pandemic where critics argue that changes made to BM will be temporary and firms would reverse to previous pandemic scenarios at some point (Seetharaman, 2020). The perceived acceptance of the new digital services means that consumer behaviour is also adjusting ensuring continued demand for the firm (Asmelash and Cooper, 2020; McKinsey, 2020).

Table 8. Business model innovation conducted by case study organisations during COVID-19 pandemic and perceived results

Organisation	Drivers for change during pandemic	Business model innovation	Outcomes
A	<ul style="list-style-type: none"> Stakeholder engagement Internal capabilities 	<ul style="list-style-type: none"> Reallocate human resources from other projects to COVID-19 response services. Develop services to address COVID-19 pandemic. Implemented a new payment method for clients who required COVID-19 services 	Continued to operate during lockdown due to securing contracts during uncertain times.

B	<ul style="list-style-type: none"> • Technological advancement • Measures taken by health authorities • Internal capabilities 	<ul style="list-style-type: none"> • Created new digital products: Courses, seminars, workshops, masterclasses, etc. • Substituted physical to digital interactions with clients. 	<p>Managed to continue operating during lockdown providing services to its clients. Developed digital products that are well received and will remain after operations are resumed after lockdown.</p>
C	<ul style="list-style-type: none"> • Internal sustainability consciousness 	<ul style="list-style-type: none"> • Focused services to address COVID-19 associated issues 	<p>Helped 150 families and provided food to essential workers from over 20 healthcare centres.</p>

Contrasting the common perception that innovation become stagnant in small enterprises during a crisis, the case study firms were able to maintain innovation (Economic and Social Council, 2020; Marika *et al.*, 2015). This was enabled by obtainment, development and applications of internal resources (culture, processes, experience and knowledge from the staff, etc.) to respond to external changes in the business environment. Table 8 present BMI experience through the pandemic for the case studies. Next section summarises the findings linking them to the research question of the study.

4.4 Summary of findings

Finding shows that small enterprises in contexts of this study are influenced by internal and external sources to undertake BMI. Furthermore, under certain circumstances drivers seem to be linked to each other. Similar dynamic is found in Neri *et al.*, (2018) when authors discuss enabler drivers referring to internal drivers that enable another driver for the adoption of a given phenomenon. For instance, it was discussed on findings of case study organisation C that staff awareness of social issues enabled the organisation to identify opportunities to collaborate and engage with stakeholders.

When comparing driving forces before and during the outbreak across case-study we noticed that similar themes emerge. However, before the COVID-19 outbreak, case study organisations appear to react to a more diverse set of driving forces compared to BMI that occurred during the pandemic. Perhaps, strategic leaders' attention was focused to greater challenges perceived in the pandemic context.

Factors external to the organisation that influenced firms to pursue BMI include regulations, technology advancement, stakeholder engagement and collaboration. Whereas internal driving factors include internal capabilities, founders' vision, staff sustainability consciousness, innovative ideas from the personnel, and value complementarities found by the firm in their operation (See Figure 1). Institutional theories and resource-based view theories are useful to find meaning in the findings from this study (DiMaggio and Powell, 1983; Barney *et al.*, 2001; Oliver, 1997).

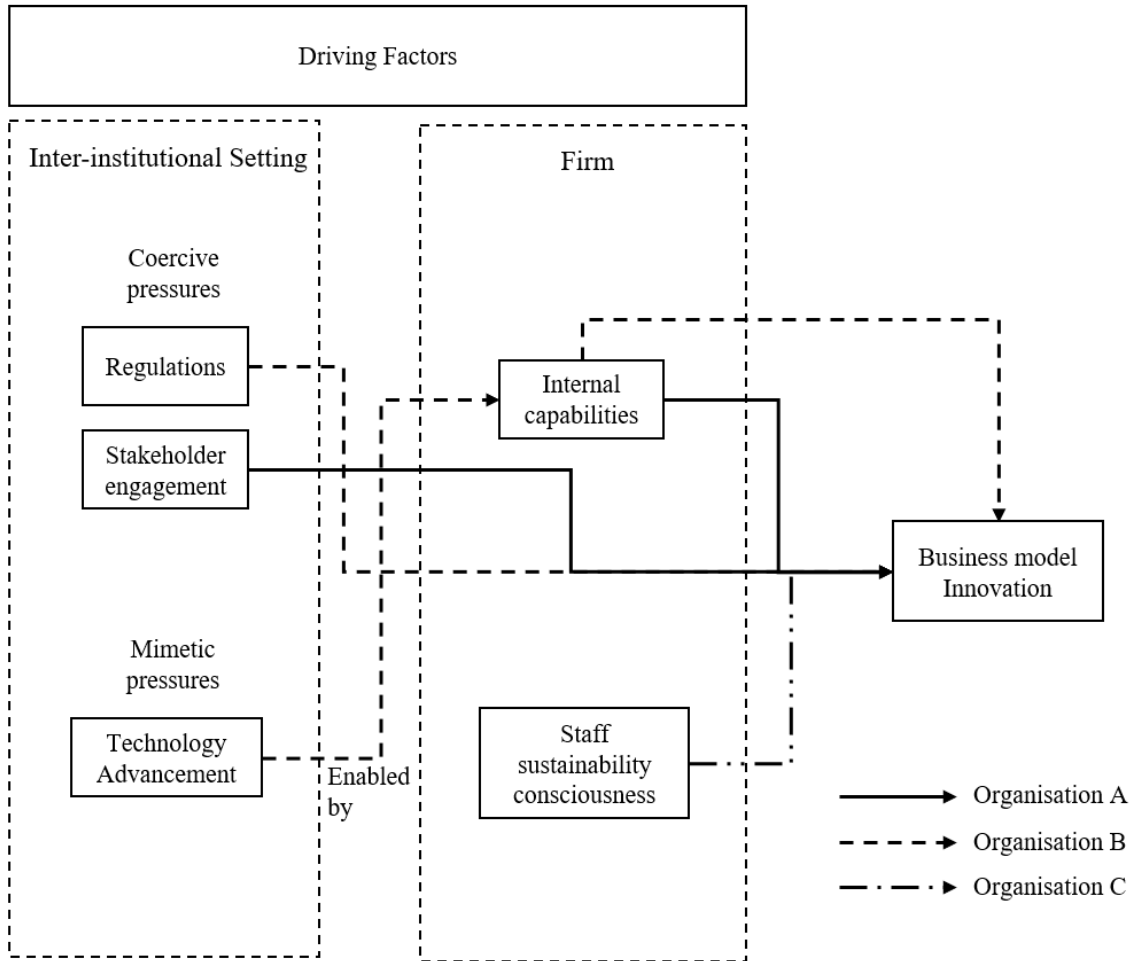


Figure 1 Findings of multiple-case study BMI drivers during COVID-19 pandemic

Studied organisations successfully reconfigured their business model to face these challenging times. Development of digital services, rework of the value propositions among other adjustment are evidence of BMI occurring in the evaluated setting. BMI led to positive outcomes across case study, which demonstrate how crucial innovation is to thrive in times of crisis (Clinton and Whisnant, 2014).

5. Conclusions

By conducting a qualitative multiple-case study analysis we were able to answer our research question. It is noticeable that the three case organisations operate in different context and face different challenges. Their BMI experience during the pandemic sets an example on how important it is to gain capabilities that allow engagement and collaboration between key stakeholders, promote a culture of innovation at all levels, enables the firm to be sensitive to changes and opportunities in their business environment. This could allow organisations to sustain competitive advantage under normal circumstances and/or survive during a crisis.

The case studies showed a recognised resilience to the crisis; adjusting accordingly to allow uninterrupted operation during lockdown, avoiding job loss, supporting their surroundings during the pandemic, and developing new products and services that would ensure sustained demand during these uncertain times. This was achieved by the addition of innovative elements to their business models. Lessons from this research could be useful for practitioners (organisational leaders, directors, senior managers, etc.) from developed and developing countries that might be facing similar challenges.

The theoretical framework based on both institutional theory and resource-based view was valuable for the study for two main reasons: 1) It helped find meaning behind internal and external influences towards BMI, and 2) It helped observe that firms' resources increase firm capabilities to identify and capitalise on external pressures. Participants adopted BMI as they pursued social approval and legitimacy through stakeholder engagement, collaboration and promoting consciousness on sustainability issues.

This paper contributes towards informing policymakers on successful lessons learnt from small enterprises innovation during COVID-19 outbreak from a business model

perspective. They could benefit from focusing their activities on promoting firms to find novel ways of operating during pandemic or times of crisis. Perhaps with effective policies that encourage firms to adopt BMI that could help them survive and/or thrive during uncertain times, preventing further economic damage and unemployment.

An understanding of what drives BMI in small enterprises from developing countries help to frame the rationale behind BMI during crisis and envision future path of research. Furthermore, regarding BMI, researchers could explore sustainable and innovative business models that were shaped during a crisis; what influenced its conception, implementation strategies and barriers. Due to the firms showing distinctive capabilities of developing an innovative business model and further innovating during the crisis; it may be worth exploring concepts such as continuous improvement in the BM and BMI fields.

Despite the new insights provided by this study, it has limitations. The research reported in this paper is exploratory in nature. For this reason, results are provisional and limited value for generalizability. The study was conducted with small enterprises from selected industries in the developing countries. Therefore, results may not be applicable outside of this context. However, we argue that the results could be applicable for similar organisations from developing countries.

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