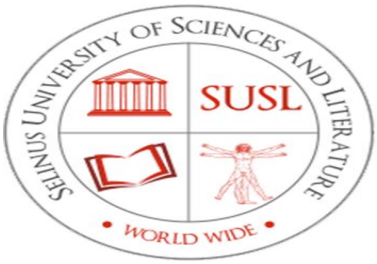

SELINUS UNIVERSITY
OF SCIENCES AND LITERATURE

ANXIETIES, CRASHES & STRATEGIES IN THE COVID-19 PANDEMIC PERIOD
AN ASSESSMENT OF THE IMPACT OF BUSINESS PLANS

A DISSERTATION SUBMITTED TO THE SELINUS UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
(PhD) BY RESEARCH

BY

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UNDER THE SUPERVISION

OF

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2022

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DECLARATION

This dissertation is the product of a research solely conducted by the author. The writings and findings have been based on an independent view following a rigorous exercise, reading, collection of secondary data, gathering survey data, examination of raw data, and statistical analysis. Nevertheless, in bringing this work to a fruition, the author consulted several sources, which are duly acknowledged (where applicable) through explicit references enclosed herewith.

In conducting this research, the author did comply with the guidelines and regulations set by the Selinus University. The author also does abide by the dissertation submission process. Chapter 1, Chapter 2, Chapter 3, Chapter 4, and Chapter 5 were earlier submitted before consolidating the five Chapters in one fell swoop, thereby making it to be a single document.

The views expressed in this dissertation are solely those of the author and do not represent the views of the any other individual or an entity.

I hereby give consent for this research work if accepted by the authorities of Selinus University to be made available and shared by the University for the purpose of education.

Thank you for your time.

Yours sincerely,

Udeinya Kevin Onovo

ABSTRACT

The purpose of this research flows from the need to investigate how business plans are impacting on the performance of businesses during the COVID-19 pandemic. In trying to achieve this purpose, the research objectives are three-pronged, viz. (i) Assessing the impact of business plans (models and strategies) on the performance of businesses at a time the COVID-19 pandemic is behind several disruptions and uncertainties; (ii) Identifying the commonalities in the approach of businesses that are taking measures to vitiate the negative impacts of the pandemic; (iii) Ascertaining the links (if any) of business plans being modified or changed outright by businesses as part of measures that would support survival initiative and facilitate continuity in the face of the COVID-19 pandemic.

Chapter 1 (Introduction) tables the rationale for the research, research objectives, three research questions, three null hypotheses, and three alternative hypotheses. **Chapter 2 (Literature Review)** focuses on business strategy, business model dynamics, and business model framework to explicate business plan (model and strategy), business model innovation, impact of the COVID-19 pandemic on businesses, the impact of business plans, and response approaches that enable businesses cope with and tackle the challenges of the COVID-19 pandemic. **Chapter 3 (Research Methodology)** is where the quantitative research strategy is highlighted as being dominant in this research. The research approach, tests conducted, and tools used includes the following: sampling, survey method, close-ended questionnaires, Likert rating scale, descriptive statistics and Statistical Product and Service Solutions (SPSS), Cronbach's alpha, mean, standard deviation, weighted mean (also known as weighted average), t-test, Cohen's d, Levene's test for equality of variances, Analysis of Variance (ANOVA),

Tukey Post Hoc Test, multicollinearity, correlation, skewness, and kurtosis. **Chapter 4 (Raw Data and Statistical Analysis)** centres on data collection and analysis by illustrating the survey (raw) data collected from two hundred and twenty-three respondents, who are workers in the United Kingdom, and subjecting the key survey data among the collection to a range of statistical analyses to achieve the following: (i) Accept or void either the null hypothesis or alternative hypothesis and (ii) Solve the three research questions. **Chapter 5 (Conclusion and Recommended Future Work)** lays what the research is deemed to achieve by making inferences based on the findings that are statistically based, stating the contributions of this research to the knowledge industry, and proffering recommendations on the areas for studies in the future.

The results of the statistical tests regarding Research Question 1 (Did companies implementing business plans (strategies or models) have an impact on business performance during the COVID-19 pandemic?) demonstrates that the alternative hypothesis for RQ1 (Research Question 1) holds and overrides the null hypothesis. The alternative hypothesis for RQ1, which holds after the statistical analysis read: **There is a significant difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.**

In trying to solve Research Question 2 (During the COVID-19 pandemic, has there been an impact on business performance following a change or modification in the business plan (strategy or model)?) the outcome of the statistical tests shows that the alternative hypothesis for RQ2 (Research Question 2) is reinforced and nullifies the null hypothesis. The alternative hypothesis for RQ2, which holds read: **There is a significant difference between the companies that changed their business plan (strategy or**

model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

In the case of Research Question 3 (Did the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic modify due to a change in the business plan (strategy or model)?), the statistical tests discredit the null hypothesis; and upholds the alternative hypothesis, which read: **There is a significant moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.**

This research has not envisaged the post-pandemic situation, particularly the would-be business performance amongst the businesses that have modified their business plans or have implemented novel business plans to tackle the challenges of the ongoing COVID-19 pandemic. In view of the uncertainties of a post-COVID-19 period, it is submitted that there are strong grounds to promote a post-COVID-19 assessment of the impact of the business plans that may have been salutary to the businesses in this pandemic era to determine the following: (i) Whether the COVID-19 era business plans (strategies and models) have a significant effect on business performance after the pandemic; (ii) Any links or interrelationships between the degree of impact of business plans on business performance during the COVID-19 pandemic compared to the business performance post-COVID-19.

DEDICATION

My beloved wife and best friend Onyekachi,

my wonderful three children Munachiso, Oluomachi, and Daberechi,

my great mum Roseline, great dad Ndubisi (bless his soul, O God),

my caring five siblings Ifeyinwa, Igwebuike, Okechukwu, Kemakolam, Njideka.

PREFACE

It is a great pleasure to present this dissertation entitled ‘Anxieties, Crashes & Strategies in the COVID-19 Pandemic Period: An Assessment of the Impact of Business Plans.’

The primary basis of this dissertation is to discern whether and how business plans (strategies and models) under the COVID-19 pandemic period are impacting on business performance.

The COVID-19 pandemic offers several lessons. On a personal note, the outbreak of COVID-19 affected my personal life, social life, professional (business) endeavours, and lifestyle. COVID-19 really unsettled me for a while, engendering sudden responses and changes as it became pertinent to make changes, including rejigging business plans to secure business stability and sustenance.

My work experience, previous studies culminating in BSc (Upper Second-Class Honours) in Accountancy, and MSc (Commendation) in International Relations have contributed to my ability to cope with the thorny situations caused by the COVID-19 pandemic.

The intense urge to embark on this research has been the need to discern whether business plans are a major driving force used by businesses to circumvent or withstand the ramifications of the COVID-19 pandemic. Fortunately, the Selinus University graciously encouraged me by allowing this research. This prestigious educational institution, Selinus University, has provided direction, opportunities, guidance, supervision, and a priceless platform for studies.

Smart Survey (a reputable UK-based digital survey company) and Dr. (Ms) C. Yee, who holds a PhD in Psychology, have been serving in solving several queries

relating to the data collection and statistical analysis. Professor Salvatore Fava (BSc Hons., MSc., MBA, PhD), as lead supervisor of the research, has been of immense guidance and support. I do appreciate the survey respondents. I am profoundly grateful to my wife, children, siblings, mum, and dad (bless his soul, O God).

I do hope you enjoy reading this treatise.

Yours sincerely,

Udeinya Kevin Onovo

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GLOSSARY OF ABBREVIATIONS, ACRONYMS, TERMS & CONCEPTS

- **Bankruptcy**: Bankruptcy is a legal proceeding involving a petitioner, person or business that claim inability to repay outstanding debts.
- **BBLS**: Bounce Back Loan Scheme.
- **BC**: Business Continuity.
- **BC/DR**: Business Continuity and Disaster Recovery.
- **BICS**: Business Insights and Conditions Survey.
- **Big Tech**: This is a term that refers to the leading leviathan technology companies in their respective sectors. Their services and products dominate the global market because consumers heavily rely on it.
- **BMI**: Business Model Innovation.
- **BoE**: Bank of England.
- **Business**: A business is an entity or organisation engaged in certain activities for profit or charity (non-profit making) or to promote a social cause.
- **Business model**: This is a concept that describes the how businesses create value for itself and its stakeholders.
- **Business Model Canvas**: A strategic management template or framework used for developing new business models, documenting existing ones and organising management and in improving each of the nine business model elements.
- **Business model design**: The creation and validation of BMs for new ventures.
- **Business model reconfiguration**: The change of existing business models.
- **Business model innovation**: Business model innovation is a novel process for creating and capturing value. It usually involves changing one or multiple components in a subsisting business model.
- **Capability**: This could be a qualification and or skill that is necessary to perform a task or a series of activities.
- **CARES Act**: Coronavirus Aid, Relief and Economic Security Act.
- **CDC**: Centers for Disease Control and Prevention.
- **Change management**: This is a process by which an organisation gets to its future state, its vision.

- **CJRS:** Coronavirus Job Retention Scheme.
- **Company**: This is the term for is a legal entity formed by an individual or group of individuals to engage in and operate a business.
- **Competitive advantage**: A factor or circumstance or condition that enables a business to occupy a superior position ahead of its rivals in a particular area by virtue of offering consumers a greater value than other competitors through lower prices or by providing greater utility and better servicing facilities that justify the prices of its goods and services.
- **Core ideology**: What a person or an entity stands for and the reason for existing.
- **Core values**: The essential and enduring tenets of an organisation that also serve as a set of timeless guiding principles
- **Core purpose**: Regarding an organisation, it is the reason for being.
- **Corporate social performance**: This explains the economic responsibility to the consumers and investors, legal responsibility to the regulatory bodies or government, legal responsibility to the law, ethical responsibilities to the society, and discretionary responsibility to the community.
- **Corporate strategy**: A business' resource allocation arrangement and priorities, action programs, and long-term objectives.
- **Corporate Sustainability Framework**: A set of models, tools, and theories—to help organisations address complex social and environmental sustainability issues
- **Cost structure**: Monetary consequences of the means employed in the business model
- **COVID-19**: Coronavirus Disease 2019
- **CQC**: Care Quality Commission.
- **Crisis**: This is basically an event or a sequence of events that has substantial ramifications if it is not properly managed.
- **CTRF**: Contingent Term Repo Facility.
- **Customer**: A term that describes the people or organisation that a business is serving and who would be benefitting through an interaction with the business.
- **Customer insight**: Customer insight. Identifying changes in customer behaviour is cited by respondents as the single most significant challenge to a product and service innovation that organisations will face over the next five years. A greater

understanding of customers' business or personal needs will be similarly essential to the personalisation of products and services.

- **Deregulation**: This is a term used to explain the reduction or removal of government excessive or overwhelming power in any industry. It serves to create latitude for competitors and enhance competition.
- **Digitalisation**: The transition of existing systems, interactions, communications, business activities, and business models into (more) digital ones to conform with the digital age.
- **Digital Darwinism**: Digital Darwinism refers to the consequences of not adapting to the advancement in technologies. Companies can hold onto outdated technology or business models that does hold down costs, but the speed of the digital revolution can make waiting equivalent to the companies going extinct or making losses.
- **Digital technology**: This is a term referring to the electronic gadgets, devices, tools, equipment, and systems that process, transmit and store data in binary form.
- **Digital transformation**: This occurs when digital technologies are instituted and used to drive and sustain major changes in a business.
- **Disaster entrepreneurship**: Attempts by the private sector to create or maintain value during and in the immediate aftermath of a natural disaster by taking advantage of business opportunities and providing goods and services required by community stakeholders
- **Disruptive innovations**: Disruptive innovation which was coined by Clayton Christensen in the mid-1990s describes how new entrants in a particular industry or market disrupt status quo that favours established (incumbent) businesses.
- **Dominant logic**: This concept is overwhelming to the extent that it serves as a set of guiding rules, instructional documents, norms, and beliefs that the management creates to guide their decisions and actions.
- **Disaster recovery**: This term encompasses IT technologies and best practices designed to prevent or minimise the loss of data and business disruption in the event of a catastrophe like war, natural disaster, massive equipment failures, service disruption because of cyberattacks, civil emergencies.

- **Ecological footprints**: It is a method to measure the amount of demand for ecological resources by an individual or entity or community in contrast to the availability of resources and the rate at which those affected resources regenerates and are replenished. It could be used to calculate how much of the environment (resources) is needed to sustain a particular lifestyle. It serves to determine the demand an individual or entity puts on ecological resources compared to the availability of resources and the rate at which the affected resources regenerates or are replenished. Basically, it is used to determine the demand side versus the supply of nature.
- **Ecological modernization**: Ecological modernization, which is part of the framework for sustainable development, tackles pollution and reduces consumption by saving resources, water, energy, and so on. It is a technology-based approach that promotes and facilitates environmentally friendly approaches and clean technologies.
- **EIDL**: Economic Injury Disaster Loan.
- **EU**: European Union.
- **EUL**: Emergency Use Listing.
- **Exnovation**: The process of deliberately (rather than by default) deciding to kill off an innovation when it is failing to achieve a set purpose.
- **Environmental jolts**: These could be described as unforeseen (or difficult to envisage) concerns that are disruptive and have negative impacts.
- **FAO**: Food and Agriculture Organisation
- **FinTech**: This is coined through two words ‘financial’ and ‘technology’ and denotes a technology-enabled financial innovation that has in several ways influenced the way financial institutions offer their services.
- **Firm**: A profit-making business that is engaged in providing professional services.
- **Formalisation**: A process in which managers specify in written form the procedures, rules, and responsibilities for the individual employees, organisational units, groups, teams, and the organisation in general.
- **GDP**: Gross Domestic Product.
- **Globalisation**: This is the term denoting the ceaseless interconnection of people and entities through culture, industry, trade, and exchanges.

- **GMT**: Greenwich Mean Time.
- **Greening**: Greening is the process that promotes and incorporates environmentally friendly systems that preserve natural resources. It involves adopting the environmentally friendly versions like green home and green office. The targets are usually to minimise water consumption, reduce their greenhouse gas emissions, cut down on waste, promote resource efficiency, reduce environmental impacts, act on climate change, and so on.
- **HMRC**: Her Majesty's Revenue and Customs.
- **ICSB**: International Council for Small Business.
- **IFAD**: International Fund for Agricultural Development.
- **IFC**: International Finance Corporation.
- **ILO**: International Labour Organisation.
- **Innovation**: Innovation is properly defined as an original, disruptive, and fundamental transformation of an organisation's core tasks to improve productivity by creating new products or services.
- **IMF**: International Monetary Fund.
- **JCVI**: Joint Committee on Vaccination and Immunisation.
- **LIRE**: Low Interest Rate Environment.
- **MSMEs:** Micro, Small and Medium Enterprises.
- **Multisided platforms (MSPS)**: There are technologies, products or services that create value primarily by enabling direct interactions between two or more customer or participant groups, e.g., e Uber app, eBay, Facebook, Apple's iOS, PayPal.
- **NBA**: National Basketball Association.
- **NBER**: National Bureau of Economic Research.
- **NPD**: New Product Development.
- **OECD**: Organisation for Economic Co-operation and Development.
- **OEM**: Original Equipment Manufacturer.
- **ONS**: UK's Office of National Statistics.
- **Organisation**: A set of interdependent relationships among primary stakeholders.
- **OWS**: Operation Warp Speed.

- **PAPRs**: Powered Air-Purifying Respirators.
- **PHEIC**: Public Health Emergency of International Concern – World Health Organisation.
- **PPP**: Paycheck Protection Program.
- **Primary stakeholders'**: The stakeholders who 'bear some form of risk because of having invested some form of capital (human or financial) and something of value in a business.
- **Processes**: The patterns of interaction, coordination, communication, and decision-making employees use to transform resources into products and services of greater worth.
- **Process information intensity**: The extent of information processing required to manage the activities efficiently and effectively in a business' value chain or its business process. It also denotes the extent by which customers utilise information before a decision to use a specific product or services.
- **R&D**: Research and Development
- **Resources**: People, money, and technology
- **Revenue model**: A way a company makes money through a variety of revenue flows
- **Reverse logistics**: The process of taking products back from customers. Reverse logistics includes customer returns, such as when they're unhappy with an item, but they also include recycling opportunities and any other scenario in which items are returned
- **Risk management (RM)**: This encompasses identifying risks, measuring the probability and the possible impact of events, and eliminating or reducing their effect with the minimum investment of resources.
- **Risk measurement**: This involves two variables, viz. frequency of occurrence (probability) of the risk and the magnitude of the consequences that the risk creates.
- **RQ**: Research Question.
- **RM**: Replacement Market.
- **SARS-Cov-2**: Severe Acute Respiratory Syndrome Coronavirus 2.
- **SBA**: Small Business Administration.

- **Self-triage tool**: In medical parlance refers to a mechanism for checking symptoms to determine if someone potentially ill and needs either self-care at home, or non-urgent care, or urgent (emergency) care in a healthcare setting.
- **SBM**: Sustainable Business model.
- **SDG**: Sustainable Development Goals.
- **SDLT**: Stamp Duty Land Tax.
- **SEISS**: Self Employment Income Support Scheme.
- **SME**: Small Medium Enterprise.
- **Space economy**: The activities and the use of resources that create value and benefits for mankind while exploring, managing, researching, understanding, and utilising space.
- **SQ**: Survey question.
- **Strategic communication**: The communication aligned with the overall strategy of an entity in a way that enhances strategic positioning.
- **Strategic principle**: This is usually the memorable and actionable phrase that echoes an entity's corporate strategy and communicates it.
- **Strategic renewal**: This is a set of procedures that are formulated to build quality strategy by transforming strategy and capabilities.
- **UAW**: United Automobile, Aerospace and Agricultural Implement Workers of America.
- **UCLA**: University of California, Los Angeles.
- **VAT**: Value Added Tax.
- **Value chain**: The concept that describes the full range of steps and activities which are required to create a product or service and delivery to the customers and other end users.
- **VIF**: Variance Inflation Factor.
- **WHO**: World Health Organisation.

LIST OF SYMBOLS

©: Copyright

α: Alpha

&: And

/: ???

>: Greater than

<: Less than

≥: Greater than or equal

≤: Less than or equal

%: Percent

CHAPTER 1

INTRODUCTION

1.1 Rationale for the Research

One of the main challenges in the world at this period is an infectious disease known as Coronavirus Disease (COVID-19), which is caused by a strand of coronavirus named the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2) by the World Health Organisation. (WHO, 2020a). COVID-19 was declared a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 by the Director-General of WHO. The origin of COVID-19 is not precisely known. However, the city of Wuhan, which is the capital of the Hubei Province in the People's Republic of China (China from now on), is where the first confirmed case of the disease occurred. (Yusha, 2020; WHO, 2020c).

"The COVID-19 outbreak in Europe at the end of February 2020 signalled a new watermark. Over the span of a few days, at most weeks, the normal working of societies as well as economies was interrupted almost worldwide." (Carletti et al., 2020, p. 23). Businesses and people's sources of livelihood have been seriously threatened, and in some cases, damaged. (Bank of England, 2020; World Health Organisation, 2020b; European Union, 2020). With a surge in the COVID-19 infection level, many individuals, households, communities, businesses, institutions, and state actors are facing a series of challenges and disruptions in hitherto routine activities and normal ways of life.

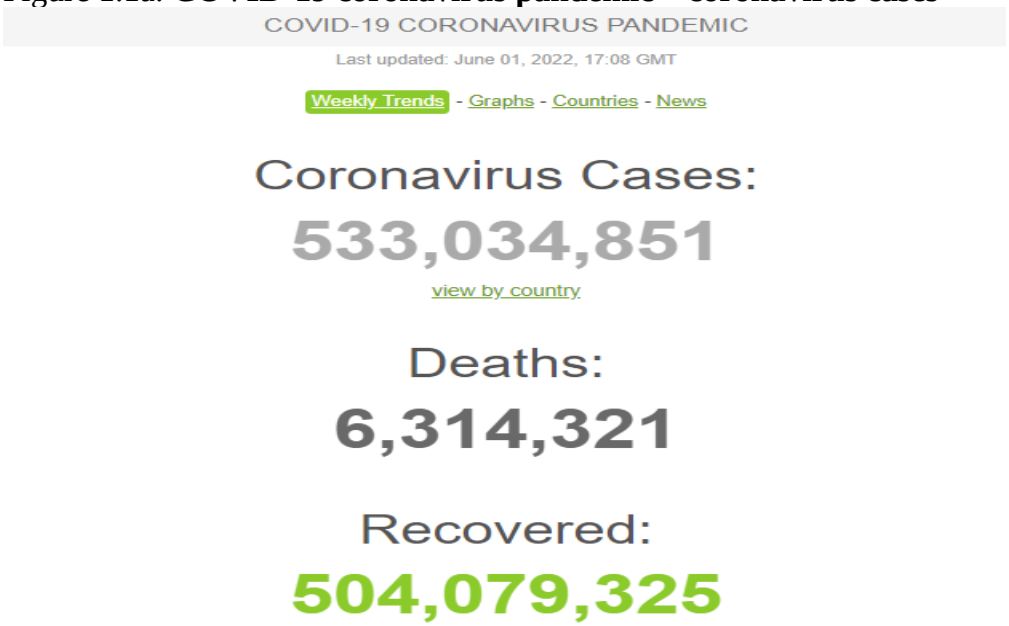
A data published in 2020 by Her Majesty's Revenue and Customs (HMRC) of the United Kingdom illustrate that some 9.9 million jobs have been furloughed under the Coronavirus Job Retention Scheme (CJRS); and this figure accounts for circa £46.4 billion of the UK government's expenditure as of 13 December 2020. (HMRC, 2020). "Our latest survey of British households' pointed to the large declines in household income and spending due to [the] COVID-19 [pandemic]. We found that many households cut spending, even if their income did not fall." (Bank of England, 2020). In a speech in May 2020, the Chair of the Federal Reserve of the United States, Jerome Powell, did offer brief glimpses of the magnitude of the pandemic: "We are [experiencing] an economic downturn without modern precedent. It was sudden, and it is severe. It has already erased the job gains of the past decade and has inflicted acute pain across the country. And while the burden is widespread, it is not evenly spread. The pain of this downturn is compounded by the upending of normal life, along with great uncertainty about the future. In the best of times, predicting the path of the economy with any certainty is difficult. John Kenneth Galbraith famously said that economic forecasting exists to make astrology look respectable. We are now experiencing a whole new level of uncertainty, as questions only the virus can answer complicate the outlook."

In a joint statement on 13 October 2020, the International Labour Organisation (ILO), Food and Agriculture Organisation (FAO), International Fund for Agricultural Development (IFAD) and World Health Organisation (WHO) said: "The COVID-19 pandemic has led to a dramatic loss of human [lives] worldwide and presents an unprecedented challenge to the public health, food

systems and the world of work. The economic and social disruption caused by the pandemic appears devastating. Tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase 132 million by the end of the year. Millions of enterprises face an existential threat. Nearly half of the world's 3.3 billion global workforce is at the risk of losing their livelihoods." (WHO, 2020). A report 'COVID-19 weekly epidemiological update' issued on 29 December 2020 by the World Health Organisation reiterated the complex situation facing the world because of the COVID-19 outbreak and its pandemic scale. The WHO announced the coronavirus current statistics; and raised serious concern over additional challenges considering the rise of a SARS-Cov-2 variety known as 501Y.V2, which may spread more readily.

Figure 1.1a illustrates the mortality level and the confirmed cases of COVID-19 as at 17.08 GMT on 1 June 2022.

Figure 1.1a: **COVID-19 coronavirus pandemic – coronavirus cases**



Source: Worldometers. (1 June 2022).

Bloom et al. (2020) in a study *'The impact of COVID-19 on businesses' expectations: Evidence from the decision maker panel'* under the auspices of the Bank of England (BoE) said that there has been and continues to be a serious economic uncertainty caused by the COVID-19 pandemic. Carletti et al. (2020, p. 23) said: "What started as a virus outbreak in China became a worldwide problem in an instant. At the time of writing, the economy is surrounded by uncertainty over the duration of the [COVID-19] pandemic and the economic lockdown, the drop in GDP, the recovery phase." Expressing a similar view, Falk et al. (2020) and Altig et al. (2020) posit that the COVID-19 pandemic has created uncertainty considering the direction of the global economy. "Multiple COVID-19 variants are spreading globally. In the United Kingdom (UK), a new variant has emerged with an unusually large number of mutations. This variant seems to spread more easily and quickly than other variants." (Centers for Disease Control and Prevention, 2021). In a 2020 report, the UK's Office of National Statistics (ONS) said that "43% of businesses in the accommodation and food service activities industry were temporarily closed or paused trading compared to the 17% across all industries. Across all industries, 3 in 10 businesses had less than three months' cash reserves, rising over 50% of businesses in the other service activities industry. The proportion of businesses' workforce on furlough leave has increased slightly to 16%, doubling from 8% in Wave 16 (5 to 18 October 2020)."

With the COVID-19 pandemic, the disruptions in businesses and industries could be observed through the various guidelines set by the regulators or state actors dealing with the seemingly dire situation. Movement restrictions, lockdowns, temporary closure, work-from-home order, restriction in non-essential

services, compulsory non-opening hours for local shops ('bricks-and-mortar branch model') to fetch a phrase from Carletti et al. (2020), and a series of other decisions by the policy makers are having a disruptive impact on businesses.

Geaneotes and Mignano (2020, p. 1), in a piece of work for the International Finance Corporation (IFC), a member of the World Bank Group, notes that "COVID-19 crisis is expected to roll back some of the progress made against global poverty over the last two decades, with the greatest impact on individuals at the base of the economic pyramid. Inclusive businesses that expand access to the goods, services, and livelihoods [of] these individuals are responding to the crisis by reorienting and adapting their inclusive business models and operations." A publication, *'Adjusting business models to sustain Agri-food enterprises during COVID-19,'* written by Kelly et al. (2020) identified agribusiness as one of the industries modifying their business models to cope with the uncertainties and ramifications that surrounds COVID-19 pandemic.

Carletti et al. (2020) offers important insights into the pre-COVID-19 world in relation to the business models of several banks' by identifying three developments that significantly contribute towards improving the stability of the financial sector and are impacting on the business models of banks' in the last decade: (i) The low interest rate environment (LIRE), which affects the profitability of financial institutions; (ii) Increased prudential requirements, regulatory scrutiny and compliance costs in the wake of the 2007-2009 financial crisis; and (iii) Massive application of digital technologies and the influx of new competitors ('FinTech' companies and 'BigTech' players). Carletti and colleagues further affirm that the measures taken by governments round the globe to tackle

the surge in the COVID-19 pandemic is accelerating the shift towards digital technologies, rise in bad loans, sustained low interest rate period, and other issues that have impacted on banks' business models in the last decade.

Many state actors like the United Kingdom and notable international health regulatory bodies like the World Health Organisation (WHO) were apparently taken aback by a surge in the COVID-19 infection level. The seeming initial vacillation by many regulatory bodies–like the WHO and some state actors–in taking swift measures that could have nipped in the bud the COVID-19 pandemic or prevented a rapid surge in the infection level may have widely contributed to the disease spreading at an alarming rate in 2020.

As the COVID-19 pandemic continues to threaten households', communities', livelihoods, people's means of income, business entities, governments' [economy] and human lives, the need to tackle it head-on is paramount. Consequently, people, institutions and state actors are taking measures towards halting the spread of the disease and bringing it under firm control and possibly a denouement.

"National governments have put in place or activated short-term work schemes to address the COVID-19 economic challenges [especially] policies [that] preserve jobs (wage compensation schemes). These contributed to mitigate the income loss in all EU countries with the overall income loss reduced by half." (European Union, 2020). Further guidelines issued by governments round the world include lockdown and movement restrictions, working-from-home order, self-isolation, financial handout, business loans, medical test, vaccination programmes, temporary suspension of non-essential services, and contact tracing.

Many notable organisations, including Gavi, the World Health Organisation, the Coalition for Epidemic Preparedness Innovations are supporting the distribution of COVID-19 vaccines. (WHO, 2020).

In the United States, the government did initiate Operation Warp Speed (OWS), a public-private partnership. The OWS goal being "to produce and deliver 300 million doses of safe and effective vaccines with the initial doses available by January 2021, as part of a broader strategy to accelerate the development, manufacturing and distribution of COVID-19 vaccines, therapeutics, and diagnostics (collectively known as countermeasures)." (U.S. Department of Health & Human Services, 2020). OWS was achieved and is yielding positive results with the manufacture of the first COVID-19 vaccine by two multinational corporations: Pfizer Inc., an American pharmaceutical company, and BioNTech SE, a German biotechnology company. In the United Kingdom, part of the early guidelines for controlling the spread of COVID-19 include an advice that people should "wash hands–keep washing your hands regularly; cover face–wear a face covering in enclosed spaces; make space–stay at least 2 metres apart–or 1 metre with a face covering or other precautions." (United Kingdom Government, 2020).

Given the foregoing, many businesses, communities, people, households, institutions, regulatory bodies, and governments seem to be facing a myriad of challenges because of the COVID-19 pandemic. Basically, some of the challenges include an alarming mortality rate, bouts of anxieties, worrisome infection level, mutant COVID-19, business closure and collapse, multiple COVID-19 variants that are circulating globally, economic contraction, structural changes, school closure, redundancies and job losses, record level health crisis and emergencies,

steep fall in employment. The impact of the COVID-19 pandemic appears to be overwhelming. It may suffice to say that the ramifications of the COVID-19 pandemic are having serious impact that appear extensive given that it is affecting a countless number of individuals, industries–accommodation and food service, health and healthcare, agriculture, arts, construction, information and communication, professional services, transport, education, entertainment, and recreation, finance and insurance, manufacturing, mining, and quarrying, real estate, transportation and storage, utilities, wholesale and retail trade, power.

This research would assess the impact of business models on the survival or otherwise of businesses in this COVID-19 pandemic period. It would explore how several businesses are withstanding and overcoming the COVID-19 pandemic. This research would find out how businesses are and could be maintaining a growth and sustainable path in the face of perceptible disruption, turbulence, and uncertainties in the business world. In part, this research is an assessment of the impact of the business plans–models and strategies–being deployed by businesses to handle disruption to ensure sustained growth and profitability during this COVID-19 pandemic.

The research is a remarkable shift from what appears to be the norm given that the body of related literature has seemingly focused on the impact of the COVID-19 on business models.

1.2 Research Objectives

The purpose of the research is to assess the impact of business plans (models and strategies) on the growth and sustainability of businesses at a time of

noticeable disruptions and economic uncertainties caused by the COVID-19 pandemic. The research further seeks to identify (if any) the commonalities in the approach and strategy of businesses in dealing with the impact of the COVID-19 pandemic. The links (if any) of novel innovations or existing business plans (models and strategies) being changed or modified or replaced outright as businesses in the various industries adopt survival and growth strategies to surmount the challenges of the COVID-19 pandemic will be explored.

1.3 Research Questions and Hypotheses

There are 3 key research questions. Each of the questions is driven by both one null hypothesis and one alternative hypothesis as illustrated in Table 1.3a, Table 1.3b, and Table 1.3c.

Table 1.3a: Research Question 1 and Hypotheses

Research Question 1 (RQ1)	**Hypotheses**
Did companies implementing business plans (strategies or models) have an impact on business performance during the COVID-19 pandemic?	**Null Hypothesis**: There is no difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic. **Alternative Hypothesis**: There is a significant difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

Table 1.3b: Research Question 2 and Hypotheses	
Research Question 2 (RQ2)	**Hypotheses**
During the COVID-19 pandemic, has there been an impact on business performance following a change or modification in the business plan (strategy or model)?)	**Null Hypothesis**: There is no difference between the companies that changed their business plan (strategy or model compared to the companies that did not have a business plan (strategy or model) in in any area of business performance during the COVID-19 pandemic. **Alternative Hypothesis**: There is a significant difference between the companies that changed their business plan (strategy or model compared to the companies that did not have a business plan (strategy or model) in in any area of business performance during the COVID-19 pandemic.

Table 1.3c: Research Question 3 and Hypotheses	
Research Question 3 (RQ3)	**Hypotheses**
Did the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic modify due to a change in the business plan (strategy or model)?	**Null Hypothesis**: There is no moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic. **Alternative Hypothesis**: There is a significant moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Chapter 2 is divided into two parts and has focussed on business model dynamics in the context of the COVID-19 pandemic.

The first part serves to explicate the business model dynamics by presenting several scholarly viewpoints on the following: Business model and business model innovation; the structure and barriers to a business model (innovation) process; the challenges associated with business model innovation; and strategies for business model innovation with emphasis on the basics and concepts of organisational strategy, strategies for sustainability, framework for business continuity, and recovery from the COVID-19 pandemic.

The second part looks at several literatures on the impact of COVID-19 pandemic on businesses and the responses in terms of the approaches and strategies of businesses–large, medium, and small businesses–that are trying to survive the turbulence in a pandemic period or evade the problems provoked by this pandemic or take advantage of the opportunities that the COVID-19 pandemic presents. Basically, Part 2 covers the following: Impacts of business models and business model innovations on businesses during this COVID-19 pandemic period; and the various ways several businesses are coping with and responding to the challenges of the COVID-19 pandemic.

PART 1

BUSINESS MODEL DYNAMICS

2.2 Business Model

A business model is "a system of interconnected and interdependent activities" that determine the various ways and means businesses can engage in business with their customers, partners, and vendors. (Amit & Zott, 2015, p. 37). Business models are "simplified representation of the elements–and [the] interactions between the elements–that an organisational unit chooses in order to create, deliver, capture, and exchange value." (Geissdoerfer, Bocken & Hultink, 2016, p. 1218).

A business model is a tool that illustrates the competitive strategies by which an innovating business would gain advantage over its competitors or rivals. (Chesbrough, 2010; The Economist Intelligence Unit, 2005; and Frankenberger, Weiblen, Csik, and Gassmann, 2013); and this tool, business model, is usually definitive on how an organisation's capability are (to be) deployed in the delivery of value propositions to the customers. (Ritter and Pedersen, 2020; and Teece, 2010). Magretta (2002) argues that a business model describes how the pieces of a business fit together in a way that appears to be the managerial equivalent of the scientific method that often starts with a hypothesis that passes through tests and revisions when necessary.

Osterwalder & Pigneur (2010) reason that a business model could be described by using nine basic building blocks–also known as the "business model

canvas"–that illustrate the logic of how businesses try to create value and endeavour to remain steadfast and efficient in business to make money. The nine building blocks include the following: (i) **Customer segments**: The diverse groups of people or organisations a business is targeting for business purposes; (ii) **Value propositions**: The bundle of services and products that create value for a specific customer through solving a problem or satisfying a need; (iii) **Channel**: The diverse ways or means by which a business communicates, and sales or distributes its range of products and services to the various customer segments; (iv) **Customer relationship**: The relationship between a business and each customer segment, which could be based on an automated service or self-service or personal service and driven by sales and business generation plan as well as aggressive customer acquisition and retention strategies; (v) **Revenue streams**: These are "transaction revenues resulting from one-time customer payments" and the "recurring revenues resulting from ongoing payments to either deliver a value proposition to [the] customers or provide post-purchase customer support" (p. 30); (vi) **Key resources**: The resources are the most important assets–human, intellectual, physical and financial–that facilitate value creation, business growth, earnings, and are required to make a business model work; (vii) **Key activities**: These are the key things a business is expected to do to make its business model work and to operate successfully in general. The key activities in question can be categorised into three, namely production, problem solving, platform development and management; (viii) **Key partnership**: The collaboration between a business and its various suppliers and partners that makes it possible for the business model to work well and facilitate value creation, value delivery, and overall business

success; and (ix) **Cost structure**: The important expenditures–variable costs and fixed costs–incurred while operating under a particular business model. The two broad classes of business model cost structures are cost-driven and value-driven. (Osterwalder & Pigneur, 2010, p. 41).

A business model model integrates and combines elements to facilitate a business' capacity to address recurring transformational or transactional needs, and strategically respond to competitors. (Drakulevski & Nakov, 2014). A well-developed and functional business model is a major source of innovation. (Massa & Tucci, 2013). A business model is relevant in achieving outstanding financial and societal performance by creating value, generating profits, and fostering growth. (Ritter & Pedersen, 2020; Osterwalder & Pigneur, 2010). The fundamental goal of a business model is to facilitate the competitive means for providing value to the customers. (Pynnönen, Hallikas & Ritala, 2012).

A business model "defines who your customers are, what you are selling, how you produce your offering, and why your business is profitable. Who-what-how-why describes a business model of which the first two–who and what–address its external aspects and the second two–how and why–address its internal dimensions." (Gassmann, Frankenberger & Csik, 2014: p.7).

The concept 'who, what, how and the why' in business models serves to demonstrate the connection between a business that creates value for itself and its stakeholders. (Johnson, Christensen & Kagermann, 2008; Frankenberger, Weiblen, Csik & Gassmann, 2013).

2.2a Elements and Factors of Business Model

A defined plan of action, defined structures, and defined goals are some of the important factors of innovation and change management. (Gassmann et al. 2014). The quality of ideas is crucial in creating a business model. (Loewe & Dominiquini, 2006). Ritter and Pedersen (2020, p. 215-216) highlights four elements of business models, viz. (i) **Customers**: The organisations and people interacting with a business; (ii) **Value proposition**: A term that describes what is being offered to the customers and the value the business creates for those who patronise it and how the needs of the customers are being addressed; (iii) **Value demonstration**: The interaction initiated by a business to show and convince people about the benefits of a product or service, and the other advantages inherent in the value proposition; and (iv) **Capabilities**: The "organisational routines through which combinations of resources (inputs) are transformed into new resources (outputs)."

Johnson et al. (2008) argues that business models that are designed to create and deliver value would usually comprise of four interlocking elements, namely: (i) **Customer value proposition**; (ii) **Profit formula**: how the company would add value for itself while providing value to the customers; (iii) **Key resources**; and (iv) **Key processes**: operational and managerial processes that allow a business to expand and deliver value. Drakulevski & Nakov (2014) argument, in part, though not the same compared in terms of the terminologies used, is in tandem with Johnson et al. (2008). The point of divergence being that Drakulevski & Nakov makes a case for five additional elements, viz. **Customer handling and distribution channel**: This describes the various ways by which

businesses reach their customers; **Value configuration**: This explains the arrangement of activities and resources; **Partner network**: The relationship and cooperation agreements with several businesses to offer and commercialize value; **Cost structure**: The monetary consequences of the means employed in the business model; and **Revenue model**: The several ways a business generates revenue or makes money.

Amit and Zott (2001) argue that a business model innovation is characterised by three design elements, namely content, structure, and governance. In this context, Amit and Zott (2015) posit that one of the elements, structure, describes the interconnection and sequence of activities; governance is what identifies the roles, office and people with the responsibility to perform a specific or set of activities; content denotes the activities to be performed.

2.3 Business Model Innovation (BMI)

Crossan and Apaydin (2010, p. 1155) defines innovation as the "production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome." Innovation is a necessity. (Adner, 2012). Innovation is central to make progress even in a period of economic crisis. (Nidumolu, Prahalad & Rangaswami, 2009). Innovative business models (IBMs) are original and disruptive (Lynn, 1997); pivotal in achieving competitive advantage (Frankenberger, Weiblen, Csik & Gassmann, 2013; McGrath, 2010; Teece, 2010 & The Economist Intelligence Unit, 2005); and

does add more value to the demands of customers while reducing the private costs of production. (Berkhout, 2014). Business model innovation (BMI) is an essential tool used by businesses to achieve superior performance by creating and capturing value in a novel way that involves a change in one or multiple components in a business model. (Frankenberger, Weiblen, Csik & Gassmann, 2013). BMI describes either "a process of transformation from one business model into another within incumbent companies, or after mergers and acquisitions, or the creation of entirely new business models in start-ups." (Geissdoerfer, Bocken & Hultink, 2016, p. 1220). In entrepreneurial firms, BMI is characterised by designing a novel business model while in the incumbent firms it involves the reconfiguring a subsisting model. (Massa & Tucci, 2013). Innovation, which basically describes how organisations create value and grow by developing novel ideas or using existing knowledge in a new way, is strategic in the growth of an organisational unit in today's highly competitive environment. (Stevanović, Marjanović, and Štorga, 2016; Frankenberger et al. 2013; and Rüb, Bahemia, and Schleyer, 2017). BMI is one of the handful of growth approaches that is central in business by offering a strategic approach. (Ringel, Taylor & Zablit, 2015).

Innovation could occur in conditions of high uncertainty. (Gassmann et al. 2014, p. 68). Aceleanu and Şerban (2009) argue that innovation involves discovering new ways of creating value and serves as the lifeblood of many organisations whose survival and growth depend on developing new technologies, products, and services. "A successful organisation is [arguably] a creative organisation because creativity is the single most important contribution [the] employees of a firm can contribute to ensure its success. Innovation is beneficial

only if it creates value." (Aceleanu and Şerban, 2009, p. 53). Innovation involves an improvement of the system in a refreshing way to bring about novel, perceptible, and significant changes in the operational processes that are large enough, general enough, and durable enough to substantially affect the operations or character of an organisation. (Moore, Sparrow & Spelman, 1997; and Hartley, 2006). Organisational innovation is complex and comprises of three main components: drivers and determinants; the process of ideation, development, and implementation; and the outcomes. (Gopalakrishnan & Kovoor-Misra, 2021, p. 2). Innovation effectiveness and managerial competence are central for a business that desires to stay in their trade or services to grow and prosper over a long time. (Loewe & Dominiquini, 2006). Massa and Tucci (2013) reason that a business model design entails the creation and validation of business models for use by new ventures while business model reconfiguration is the transformation of existing business models.

Innovation is often much more than the creation of a new product, improved service, and disruptive technology because it encompasses a broad consideration of all the elements of a business model and gives a business the answers regarding some basic questions: "What customers should we serve? Can we open new markets or plug into untapped segments? What customer benefits will we provide? What products and services will we offer? Where in the value chain should we play? What partners can we work with to reach our target customers? How will we get our products to market? How will we make money? Are there unconventional ways to generate revenues and profits, or radically take costs out of our business? Can we bring this innovation to market significantly

better than anyone else–and how can we keep that advantage long enough to make this opportunity pay off?" (Loewe & Dominiquini, 2006, p. 31).

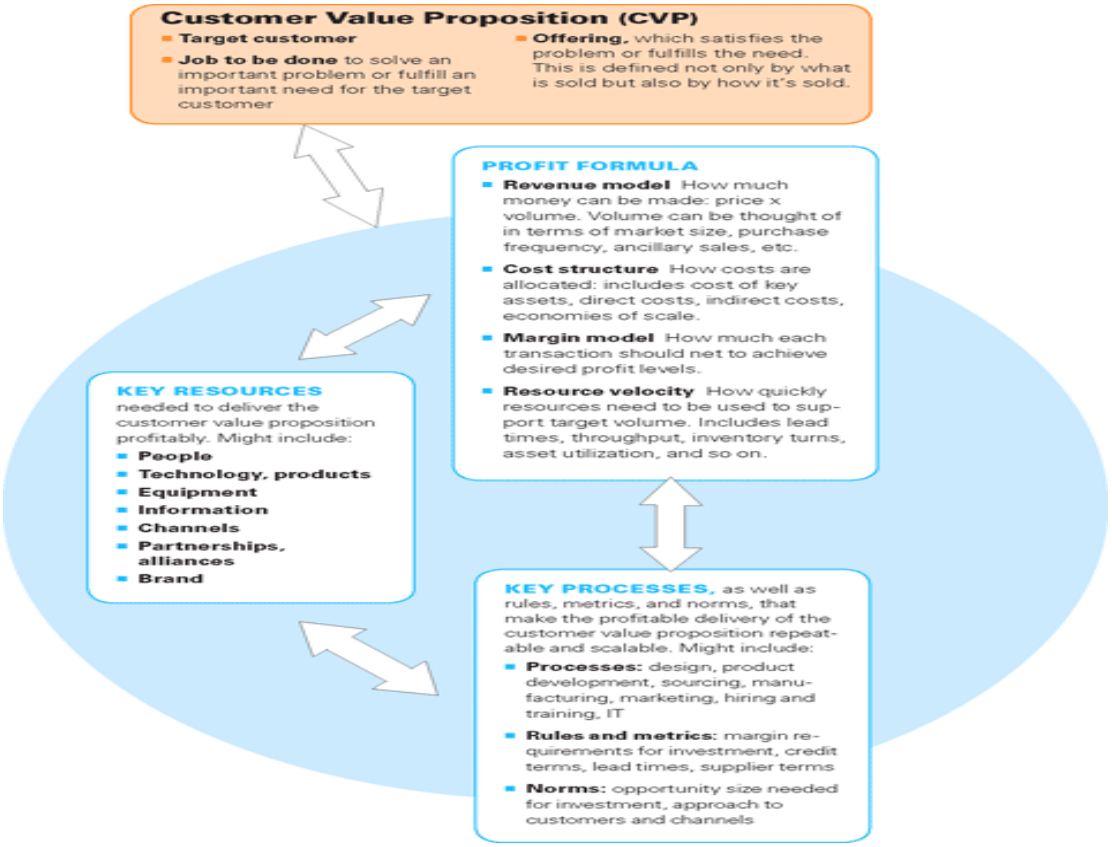
BMI is not a sole engine driving business growth and profitability given the complementary role a competitive strategy would bring into the fore to ensure that the right results are achieved. (Ritter & Pedersen, 2020). Business model innovations is not all about creating a new product or service given that it also serves as a vehicle that brings about the emergence of new opportunities for economic exchanges. (Frankenberger et al., 2013). New opportunities can drive purposeful and systematic innovation. (Drucker, 1998). Being innovative is a precondition of being resilient as innovative businesses tend to continuously anticipate and adjust to cope with a broad range of issues. (Kuckertz et al., 2020).

The key aspects of business model innovation are "novelty, lock-in complementarities and efficiency." (Chesbrough, 2010, p. 358). Hartley (2006) notes Everett Rogers' work on diffusion of innovation that gives a broad insight into some core factors that would make an innovation easily adopted: "**Relative advantage** (does the innovation have significant advantages over current alternatives); **Compatibility** (easier to adopt where consistent with current practice, values or beliefs); **Complexity** (easier to adopt where simple and easily understood); **Trialability** (new ideas taken up where they can be tried out at [a] low cost before wholesale take-up); **Observability** (use and benefits can be seen by others, acting as a further stimulus to take-up)." (Hartley 2006, p. 57).

Priyono, Moin & Putri (2020) argues that innovation could be swayed by external forces and a continuous update of technologies. Priyono et al. (2020) also argue that growth and profitability might not be sustainable save the business

models are updated or rejigged in a way that addresses market and industry trends. Business model innovation is influenced by multiple factors, and the seven main influencing factors include market pressure, government policy, entrepreneurship, culture and strategy, technology, human resources, and organisational capabilities. (Tian, Q., Zhang, S., Yu, H., Cao, G., 2019).

Figure 2.3a: **The Elements of a Successful Business Model.** (Johnson et al., 2008, p. 62).



Pynnönen, Hallikas & Ritala (2012) argue that a customer-driven business model innovation is key to a continuous development in technology and businesses aligning with current and emerging customer needs, noting that a

disconnection with customers or inability to understand customers' preference and the value of technologies could lead to the creation of services with no users.

Innovative business models would counteract forceful competitors, address consumers persistent urge for improvement, and help to develop a clearer view of a full set of dependencies, collaborative opportunities, value-creating partnerships. (Adner, 2012). A new business model is a game changer if it disrupts competitors via four pivotal elements of innovation, viz. customer value proposition, the profit formula, the key resources, and the key processes. (Johnson, Christensen & Kagermann, 2008). BMIs are not necessarily beneficial or successful. (Hartley, 2006). However, the success of a businesses could be attributable to the use of a good business model while poor or below par performance and losses can be an indication that the operating business model need reassessment or review. (Magretta, 2002).

2.3a The Business Model Innovation Process

Business model innovation process begins with the analysis of the sources of new opportunities (Drucker, 1998; and Johnson et al., 2008); and this innovative process creates a new market or makes it possible for a business to create and exploit new opportunities in existing markets. (Amit and Zott, 2015; Magretta, 2002).

In a business model innovation process, there are three key actors, viz. customers, partners, and competitors (Gassmann et al., 2014); and there are four stages, including generating possibilities, incubating and prototyping, replication and scaling up within the organisation, and sharing good practice across

organisations. (Hartley, 2006, p. 13). In an article entitled 'The innovation process: a step-by-step guide' Landry (2017) notes the argument by Tucker Marion that there are three key phases in the business innovation process that every organisation would typically cycle through, namely discovery, development, and commercialisation. The discovery phase is when "ideas are generated and vetted by potential users, and where teams work to discover whether they're tackling the right problem." Soon after an idea is solidified and a minimum viable product (MVP) selected, there should be a transition into the second phase called development. During the development phase, though, depending on the product or service, the focus might be: "Design and engineering, identifying and selecting new suppliers, creating the manufacturing and supply chain plans, establishing a software development kit for third-party vendors, developing relationships with channel partners, and gathering consistent customer feedback". The feedback by customers should be ongoing throughout the innovation process.

The iterative processes of creating a business model are ideation, conceptual design, virtual prototyping, experimenting, detail design, launch, adjustment and diversification; and these processes or steps are "cyclical or repetitive", which paves the way for organisational units to timely respond to any circumstance. (Geissdoerfer, Savaget & Evans, 2017). The business model innovation process comprises four iterative phases, viz. Initiation, Ideation, Integration, and Implementation. (Frankenberger, Weiblen, Csik & Gassmann, 2013).

Frankenberger et al. (2013) describes in detail the various iterative phases of business model innovation process. **Initiation**: This is the first phase, which

focuses on analysing the ecosystem to understand "the needs of the players within the ecosystem and to identify relevant change drivers." **Ideation**: The second phase involves thoughts on deconstructing and overcoming any subsisting business logic and applying appropriate tools for generating business model ideas. **Integration**: This phase is about "the building of a new business model" and tackling challenges that would ensure all pieces of the new business model are integrated by collaborating with partners. **Implementation**: This is the final phase, which is also known as realisation. The challenges in the implementation phase are twofold: "The innovating firms need to overcome the internal resistance and implement the new business model in a step-by-step process, including pilots, trial-and-error, and experimentation." (Frankenberger et al. 2013, section 4.6).

Massa and Tucci (2013, p. 423-424) describe the activities inherent in a business model innovation as occurring in twofold: entrepreneurial activity that creates, implements, and validates novel business models for newly formed organisation; and business model reconfiguration that modifies or redesigns existing business models considering emerging or current business trends and challenges.

There are three ways to facilitate innovations to create and deliver new processes, values, and capabilities, viz. (i) "Creating new organisational structures within corporate boundaries in which new processes can be developed; (ii) Spinning out an independent organisation from the existing organisation and develop within it the new processes and values required to solve the new problem; (iii) Acquiring a different organisation whose processes and values closely matches the requirements of the new task." (Christensen & Overdorf, 2000, p. 7).

In the views of Amit & Zott (2015, p. 39), a business model innovation can occur in several ways, such as, adding new activities, linking activities in novel ways, changing one or more parties that perform one or more activities. As illustrated in Figure 2.3b, Amit & Zott (2015) put together six posers that should be solved in the hope of ensuring that a business model innovation fit for purpose is introduced.

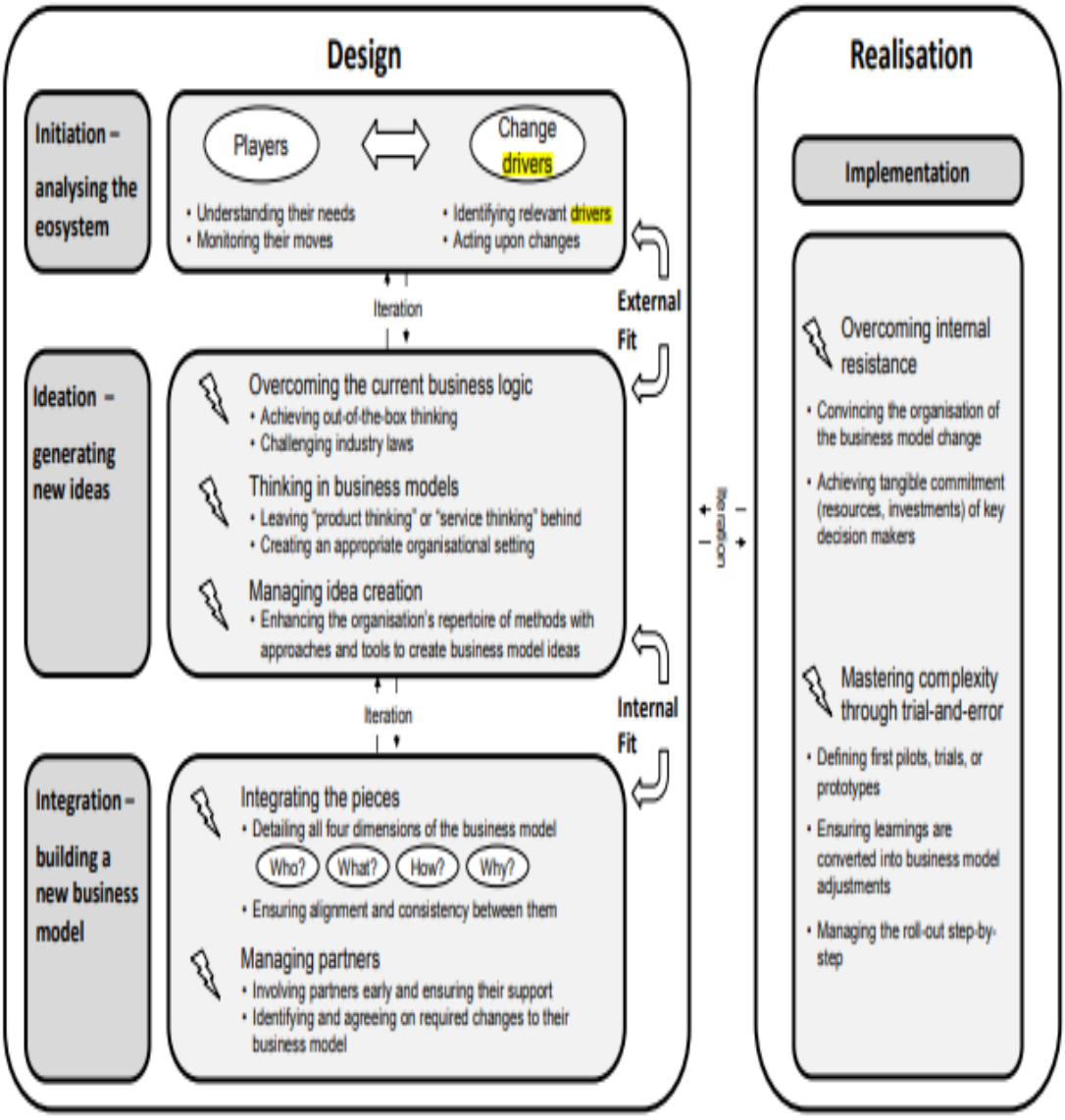
Figure 2.3b: **Six questions about business model innovation.** (Amit & Zott, 2015, p. 40).

Johnson et al. (2008) argues that a decision on whether to use or modify an existing model to solve problems, or an alternative involving a decision to create a novel model to solve issues, should be preceded by three considerations and steps, namely (i) A strong conviction that there is the opportunity to create a value for a real customer; (ii) Constructing a blueprint that illustrates how to create value or profit for itself while creating value for customers; and (iii) A comparative analysis between the existing model and the proposed new model to determine how much change is required to capture the opportunity in question.

In a treatise, 'the 4l-framework of business model innovation: a structured view on process phases and challenges,' Frankenberger, Weiblen, Csik, and

Gassmann (2013) outline four generic phases that characterise the business model innovation process: Initiation, Ideation, Integration, and Implementation. See Figure 2.3c.

Figure 2.3c: **The 4I-framework – Phases of the business model innovation process and their key challenges**. (Frankenberger et al., 2013).



Regarding the four generic phases (initiation, ideation, integration, and implementation), Frankenberger et al. (2013) notes the following: **Initiation**

focuses on the analysis of the ecosystem to unravel a need and know the factors driving innovation; **Ideation**, which refers to the generation of new ideas and a set of possible alternatives, "focuses on the generation of ideas for potential new business models;" **Integration** would involve developing and building a new business model considering the ideas identified in the ideation phase; **Implementation** encompasses bringing an innovation into life by deploying a new business model. "Once fully designed and integrated, the new business model can be implemented." (Frankenberger et al. 2013, section 4.4, para. 1).

Gassmann et al. (2014) advocates a managerial-driven top-down innovation process that culminates in a modification of at least two of the four main factors (who-what-how-why) that describes a business model; and a "step-by-step approach" when rolling out a business model innovation as it helps to develop prototypes, test prototypes, elicit feedbacks from stakeholders, potential customers and suppliers, and determine if a prototype should be refined to make it better. "Business model innovation [is] to be implemented top-down, otherwise it will not succeed. This is by no means to suggest that [the] lower and middle managers in large firms or even the employees of small and mid-size enterprises (SMEs) cannot contribute in significant ways. But when a push results in a shove, we must bear in mind that successful implementation almost always hinges on top management support–not just because resources need to be distributed during rollout, but most importantly to offer direct opposition to resistance." (Gassmann et al. 2014, p. 65).

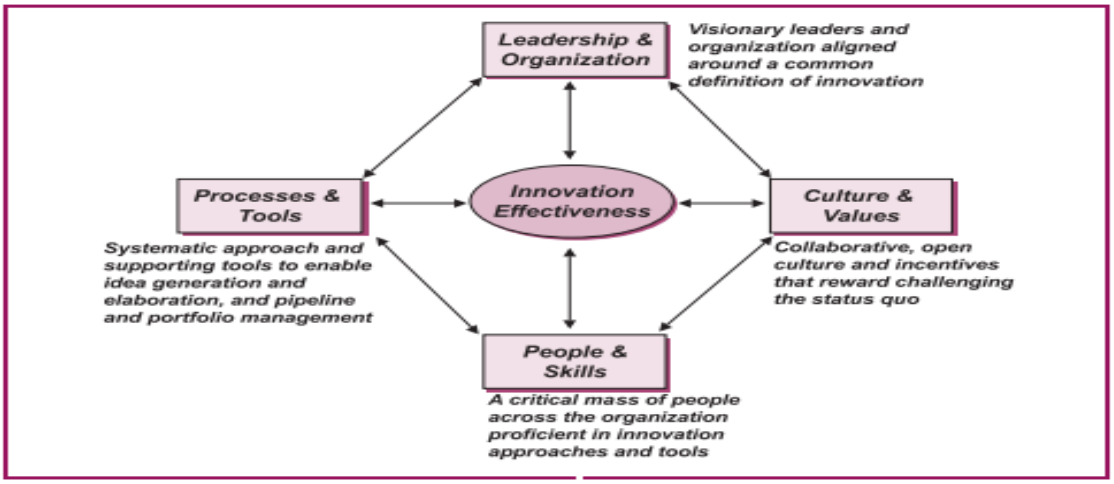
Lorenzi & Riley (2000, p. 120) assert that the process of innovative change can take either of four different forms: (i) **Operationally**: This concerns

the changes that affect the way the ongoing business operations are conducted, such as, the automation of a particular area; (ii) **Strategically**: A kind of change that occurs in the strategic business direction, e.g., moving from an outpatient to an inpatient focus; (iii) **Cultural changes**: This kind impacts has impact on the basic organisational philosophies by which the business is conducted; and (iv) **Political changes**: This often relates to the workforce that occur primarily for political reasons. Lorenzi and colleague also aver that these forms of innovative change could either be micro or mega: "microchanges", which encompasses modifications, enhancements, improvements, and upgrades; and "megachanges", which could occur when a new system or a very major revision of an existing one is implemented.

Hartley (2006, p. 11) identifies seven dimensions of innovation, viz. (i) **Product innovation**–the creation of new products; (ii) **Service innovation**–novel ways for service delivery; (iii) **Process innovation**–which restructures or redesigns the organisational processes, such as, skills, facilities, equipment, and technologies that are involved in creating/delivering a product or service; (iv) **Position innovation**–a change in the context in which the product or service is applied; (v) **Strategic innovation**, which is, basically, the new goals and purposes of an organisation; (vi) **Governance innovation–**this centres on new forms of citizen engagement and democratic institutions; and (vii) **Rhetorical innovation**–centres on new language and new concepts.

Loewe & Dominiquini (2006, pp. 25-28) highlights four keys to a systemic innovation capability, viz. leadership and organisation, processes and tools, people and skills, and culture and values. See Figure 2.3d

Figure 2.3d: **4 keys of systemic innovation capability.** (Loewe & Dominiquini, 2006, p. 25).



Leadership and organisation: ‘‘Executives that are serious about innovation think about it, demonstrate its importance through their actions, and then follow through to make sure it gets done.” (Loewe & Dominiquini, 2006, p. 26).

Processes and tools: A good innovation processes share some characteristics like allowing divergence and exploration at the front end to ensure that any new idea(s) that emerge are novel, not a regurgitation of old ideas or maintaining ideas that are commonplace. Loewe & Dominiquini (2006) further argue that it is essential to synthesise individual ideas into bigger platforms before selecting one or more ideas to develop as this could help the innovating entity to avoid taking too much risk on a single idea without considering other options. Loewe and colleague also promote experimentation that serves to test critical assumptions and refine the business model prior locking-in because this approach when deployed could minimise the risks associated with market entry and

incorporate key learning into the business model; and avert a situation where quality ideas are suddenly or prematurely ended.

People and skills: The innovation process should not be limited to the research and development (R&D) team. The process should involve a cross-functional innovation team with as many employees as possible and meaningful to harness creativity, diversity, and innovation talent.

Culture and values: The ambience within an organisation should be one that enables employees to freely express their ideas–without fear–for management consideration. There is a "need to create a safe zone for innovators and accept mistakes as a necessary part of innovation. If not, fear will prevent step-out ideas from being put forward and companies will remain trapped in their status quo." (Loewe & Dominiquini, 2006, p. 28).

There is no single innovation template that fits all firms and businesses. So, an innovation diagnostic should precede an innovation process to determine innovation capability. (Loewe & Dominiquini, 2006). Innovation diagnostic involves the following: A ''health check'' of the four keys of systemic innovation capability illustrated in Figure 2.3d; Identifying the opportunities and challenges that could emerge in an innovation cycle; Making a comparison with the best practices of leading innovators. (Loewe & Dominiquini, 2006, pp. 29-30).

2.3b Purposes of Business Model

"The task most commonly attributed to a business model is to explain how the focal firm creates and captures value for itself and its various stakeholders within this ecosystem." (Frankenberger, Weiblen, Csik & Gassmann, 2013,

section 2(2.1), para. 7). A good business model answers age-old questions: “Who is the customer? And what does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to [the] customers at an appropriate cost?” (Magretta, 2002, p.4).

Amit and Zott (2015) argue that a business model innovation is essential for several reasons: First, it represents the opportunity to take advantage of underutilized source(s) of future value. Second, a business model innovation is whole as it is not bridled by products and processes, thereby making it much more difficult for competitors in an industry to replicate or imitate the entire novel architecture as would have been the case if innovations are solely confined in a single novel product or process. Third, “innovation at the level of the business model can sometimes translate into a sustainable performance advantage.” Fourth, a business model innovation can be a potentially powerful competitive tool. Fifth, an innovative business model can either “create a new market or allow a company to create and exploit new opportunities in existing markets.” Amit and Zott (2015, pp. 37-41).

Chesbrough (2010, p. 355) narrates that the functions of a business model include the following: (i) Articulating the value proposition; (ii) Identifying a market segment and specifying the revenue generation mechanism; (iii) Defining the structure of the value chain required to create and distribute offering and complementary assets needed to support position in the chain; (iv) Providing the details on the revenue mechanism(s) by which the business will be paid for providing products and services; (v) Providing an estimate of expenditure and

profit potential in light of value proposition and value chain structure; (vi) Describing the position of the business within the value network that links the suppliers and customers (including identifying potential complementors and competitors); and (vii) Formulating the competitive strategy by which the innovating business will gain and hold advantage over rivals.

Based on the following, it appears that a fit for purpose business model for the private sector is founded to create and deliver a minimum of twofold value, viz. (i) Enhanced value for business entities and their stakeholders by ensuring that a business model drives and sustains growth, success, and profitability; and (ii) Additional value for the customers by delivering the desired needs in terms of quality product and service at a fair cost.

2.3c Challenges to the Business Model Innovation (BMI)

In the various activities in and phases of business model making or innovation, from the conceptual phase (or concept design stage) to the implementation phase (or business model rollout stage), there are barriers, obstacles, and challenges that impede measures to innovate business models. (Geissdoerfer, Savaget & Evans, 2017; Frankenberger et al., 2013).

There are internal and external barriers to the BMI process (Bahemia and Schleyer, 2017; and Loewe & Dominiquini, 2006), but the major obstacle to a business model innovation is internal–within the organisation–and it is entrenched by the employees who are “wary of change” and “afraid of losing something” and are inclined to promote the preservation of the status quo. (Gassmann et al. 2014, pp. 63-67). Rub et al. (2017) argues that internal barriers to the BMI process

include–though is by no means limited to–trust, lack of courage, capacity of employees, cost, time, lack of knowledge, production capacity, poor networking, dominant logic, safety issues, manufacturability of designs, lack of resources and negative attitude towards novelty, subconscious filtering process, path dependency, corporate identity, formalisation and centralisation, existing assets and structure, managerial choice; while the external barriers may include international competitors, language and cultural issues, finding the right partner, language quality requirements, legal rights–working hours, minimum wages or safety regulations, suppliers' and customers' quality specification, customers' adoption, uncertainty, cost, time. Rub et al. (2017) further avers that tackling these barriers lies in part in corporate (organisation) learning, stable processes, acquisition of workers', time and experiences, external partnership and building networks. Chesbrough (2010, pp. 354-362) appears to highlight two main barriers to BMI in existing businesses. One of the barriers could be structural considering Chesbrough's argument on workers' resistance to any change idea(s) being rooted in conflicts between prevailing (more traditional) business model and any potential substitute model that would alter subsisting configuration. Another barrier hinges on managerial indecision or confusion or doubt regarding what is a suitable business model. Chesbrough (2010) further argues that overcoming these barriers would depend on the "processes of experimentation and effectuation, and the successful leadership of organisational change." (Chesbrough, 2010, p. 354). On the idea of experimentation, the argument is that an alternative business model should be representative of the market and piloted before adoption to determine suitability. "The question is: Why don't more organisations conduct such

experiments to probe for potential new business models before the time comes when external innovations render their traditional ones redundant?" (Chesbrough, 2010, p. 358). On the idea of a process of effectuation, Chesbrough, (2010, p. 362) argues that it "creates actions based on the initial results of experiments, generating new data which may point towards previously latent opportunity." On the managerial part, the argument is that there is a need for an organisation's culture to embrace the possibility of a new business model while still using an earlier model until a new and more effective one takes over.

Frankenberger et al. (2013) highlights some of the challenges affecting BMI in the various phases–Initiation, Ideation, Integration, and Implementation–of innovation. In the initiation phase, the challenges as tabled by Frankenberger and colleagues includes: (i) Identifying and understanding the key change drivers; (ii) Facilitating a smooth interaction of the innovation partners; and (iii) Discerning the opportunities that abound and the needs of the diverse players because their needs and inclination does influence innovating businesses and help to identify the starting point for building a new business model. In this context of identifying the change drivers, the argument, in part, is that technological advancement as well as environmental and regulatory changes have times without number provoked the process that led to a "re-thinking" of business models. Regarding the ideation phase, which involves the generation of novel ideas, the main challenge that an innovating business may encounter is to determine how to go beyond the traditional approach of new product(s) development and transcend hitherto frontiers and the dominant logic. In other words, it may serve well if businesses incorporate measures to "overcome the current business logic, [and]

focus on business model thinking, and apply tools for the creation of business model ideas." (Frankenberger et al. 2013, section 4.6, para. 1). Another central issue in the ideation phase is the dearth of "systematic tools to develop new business model ideas" (Frankenberger et al. 2013, section 4.2, para. 2), though there are multiple tools and methods that facilitate new ideas for products and service. In the integration phase, in which the activities seem to centre on creating a new business model, the challenges are to ensure that all pieces of the new business model are synthesised, and the relevant partners integrated into the design of the business model. "A lack of integration of the business model dimensions can lead to [serious] difficulties or even failure in the implementation of the new business model." (Frankenberger et al., 2013, section 4.3, para. 2). Frankenberger et al. (2013) notes that as a business new model is aligned and integrated with those operated by partners of an innovating business, there is a likelihood that some complexities would arise thereby necessitating a solution approach by stakeholders. In the implementation phase, the drivers of innovation struggle to "overcome the internal resistance and implement the new business model in a step-by-step process, including pilots, trial-and-error, and experimentation." (Frankenberger et al. 2013, section 4.6, para. 1).

Adner (2012, pp. 33-34) notes three distinct risks of innovation: (i) **Execution risk**, which applies to the issues that businesses have to solve as they bring an innovative idea to the desired specifications and fruition within a specified amount of time; (ii) **Co-innovation risk** is the type that centres on the perception of any potential losses that a business may incur in the process of contributing to a co-innovation, and the extent in which the success of a business'

innovation drive would depend on the successful commercialisation of other innovations; and (iii) **Adoption chain risk** involving the extent various partners in an innovation project would adopt the outcome before the end consumers have the chance to weigh the value proposition in full.

Loewe & Dominiquini (2006) construes six obstacles in innovation: short-term focus, leadership expects a payoff sooner even when being realistic is appropriate, management incentives are not structured to reward innovation, lack of a systematic innovation process, belief that innovation is inherently risky, and the problem of time, resources. Gassmann et al. (2014) argue that the success or failure of innovative business models and ideas aimed at revolutionising an organisation's architecture does squarely rest on the support of top management and management commitment, noting that the actions taken by management teams are, in the employees' eyes, outward signs of commitment to change initiatives. The primary cause of business model ineffectiveness or failure is the management; and the success of a business model often hinges on management's ability to rightly and timely tweak or revise or overhaul when necessary. (Magretta, 2002). "The most intriguing issue in creating and managing [a highly] efficient business model is in the proper combination of resources and competencies aimed at adding value to the organisational performance." (Drakulevski & Nakov, 2014, p.42).

2.3d Drivers of Business Model

"Drivers of innovation are the triggers that initiate innovation in the organisation and can be external or internal. External drivers can be new

regulations, new markets, and a crisis; and internal drivers could be new knowledge and resources." (Gopalakrishnan & Kovoor-Misra, 2021, p. 2).

There are four interrelated attributes that fuel strong innovation: (i) Speed in adopting new technologies; (ii) A well-run research and development processes; (iii) Technological platforms, and (iv) A systematic exploration of adjacent markets. (Ringel, Taylor & Zablit, 2015). Speed facilitates "first-mover advantages" through early preparation–testing of prototypes, eliciting customers reaction and feedbacks, iteration–that enable companies to "catch consumer trends as they emerge, leave competitors flat-footed, and even drives costs down and quality up." (Ringel et al. 2015, pp. 7-10).

Gregurec, Furjan & Tomičić-Pupek (2021) highlight the argument of Bhatti, Santoro, Khan, & Rizzato (2021) that organisational agility, knowledge absorptive capacity, and top management mindfulness are essential factors that influence innovation in businesses that are aiming to enhance overall performance in a competitive environment and industry. "It is the people, the knowledge workers whose skills and expertise are the foundation for all innovation." (Lorenzi & Riley, 2000, p. 123). Gassmann, Frankenberger & Csik (2014) viewpoint is that a mere reckoning about a potential route to creating additional value for customers, or an idea on how to solve a concrete problem, can be the starting point for a business model innovation. A business model innovation could arise when there is a need to carry out significant changes on some or all the elements of an existing model. (Johnson et al. 2008).

Frankenberger, Weiblen, Csik & Gassmann (2013) argue that innovation in the private sector is driven by competition and competitive pressures. Hartley

(2006) found that innovation can occur both in the private sector and in the public sector, stressing that innovative ideas in the private sector are often taken to be stimulated by competition, competitive advantage, and businesses battling for survival and sustenance. “For the private sector, successful innovation is often represented as a virtue in itself and as a means to ensure competitiveness in new or revived markets. For public services, innovation is only seen to be useful where it increases public value in governance or services, in terms of quality, efficiency or fitness for purpose.” (Hartley, 2006, p. 61). Hartley also found four primary catalysts of innovation: **Policy**, which plays out when innovation follows a top-down process due to the decisions of government or policymakers; **Organisation**, which follows a ‘bottom-up’ process, particularly when the innovation process is activated by an organisational unit; **‘Sideways-in’**, the term for professionally driven innovation; and **User**, which is applicable in cases of innovation spurred by customers and stakeholders.

Business model innovation for existing organisations is often influenced by existing structures of the business. (Massa & Tucci, 2013). “Incumbent firms usually establish a dominant logic of how things work. This logic might be counterproductive for business model innovation as it prevents new perspectives and a creative ‘out of the box’ thinking style. The dominant logic functions as a subconscious filtering process erasing everything that does not fit [into] the current business model.” (Rüb, Bahemia & Schleyer, 2017, section 2c, para. 3). Bouchikhi & Kimberly (2003) argue that there have been instances where businesses hold firmly their fundamental corporate identity even in the face of compelling reason(s) for a business model innovation in a changing business

ecosystem, thereby impairing strategic options and adaptive capacity in innovation. In a further explanation, Bouchikhi and Kimberly (2003) makes a reference to the 2001 legal battle instituted by Gemplus International against and Texas Pacific Group–a company that bought a significant shareholding percentage in Gemplus. Gemplus' argument as voiced in the various interviews is that Texas Pacific Group (TPG), an American company, nurses a long-term plan to move the core of the activities of Gemplus out of France in a way that could change the identity and erase the historic significance of its location in France.

Johnson et al. (2008, pp. 64-65) outlines five strategic circumstances that could lead to a business model change: (i) "The opportunity to address through disruptive innovation the needs of large groups of potential customers, who are shut out of a market entirely because existing solutions are too expensive or complicated for them"; (ii) In response to the opportunity that a novel [tested] technology or invention creates; (iii) "The opportunity to bring a job-to-be-done focus" and redefine industry profitability–bridge the gap in customer needs, which could be discovered by further research on customer needs vis-à-vis the services provided by the competitors or businesses in a particular industry; (iv) The need to fend off low-end disruptors; and (v) The need to respond to a shifting basis of competition.

Gassmann et al. (2014) proffer two main factors that could form the basis for creating an innovative business model, namely megatrends and regulatory changes, and technological advances. Gassmann et al, (2014) further says that megatrends and regulatory changes highlight the possibility of some future developments and trends–beyond the control of managerial personnel–playing a

central role in driving the making of new business models. So, there is a need for entity administrators to think outside the box and be on the watch for key economic and business indicators, market trends, customer inclination, and the flow of money. Basically, their argument seems to be that businesses should keep an 'eye on the ball' and react timely in certain situations by making timely changes and disruptions. On the tech aspect, Gassmann et al. (2014) make a reference about Kodak, arguing that the company's loss of its leading position and global market share could be linked to a poor strategy of sticking to and failing to quit analogue photography despite the signs of the time on technology development and advancement. Gassmann and colleagues further argue that Kodak failed to reap from the outset–before the photo industry became flooded with digital photography–the inherent potentials of new and substitution technologies despite being the first company to develop in 1975 the first-ever digital camera.

McKinsey & Company reinforce the argument on digitalisation: "Digital is a critical source of growth and a powerful way to increase brand equity by creating brand advocacy and a compelling story. Digital also enables companies to reimagine key enterprise processes, both front-end and back-of-house." (McKinsey & Company, 2018, section 1, para. 1). Gregurec, Furjan & Tomičić-Pupek (2021, p.13) notes that "adopting digital technologies is a means towards helping SMEs to boost the digitisation of their operations and processes, improve overall performance, effectiveness, enhance efficiencies, reengineer business models, ensure business survival and enhance business process innovation." Nobody disputes the immense potential of digital technologies in automating tasks

to replace manual approaches. (Soto-Acosta, 2020). However, in what appears to be a note of caution, (Soto-Acosta, 2020, p. 262) argues that "creativity, empathy, judgment, intuition, interpersonal sensitivity, problem-solving are some specific interpersonal human competencies that machines for the moment do not have. Therefore, the question is not whether to replace the human workforce with machines, but how technology can be leveraged to allow employees to do their work more effectively."

KPMG (2018) echoes the consequences of "Digital Darwinism", saying: "remember Blockbuster and Kodak? These household names went bankrupt for the same reason: They failed to discern how new technology could destroy their businesses. At Blockbuster, the advent of movies on demand meant that no one needed to visit a video rental store [while] Kodak didn't understand that digital cameras spelt the end [of] its film photography sales."

2.4 Business Strategy

A good business model is not entirely or solely what is needed in efficiently managing a business because a good strategy is also key in ensuring driving operational efficiency, favourable disruptive change, competitive advantage, growth, and profitability. (Magretta, 2020). The strategy of businesses affects their corporate performance. (Amit & Zott, 2015; Ritter & Pedersen, 2020). A competitive strategy is the central traction behind businesses that create value, grow, and make profit. (Ritter & Pedersen, 2020). The touchstone in business strategy includes developing customer insight, building core competencies, and beating the competition. (Adner, 2012). Though the strategy of businesses helps in

overcoming internal resistance, mitigating the barriers hindering successful change, and mollifying workers' fear of uncertainties, it must achieve two central goals, viz. develop a long-term vision that inspires action; and achieve short-term milestones that confirm its suitability and fit for purpose. (Gassmann et al., 2014, p. 70).

Ibrahim (1993) reiterates the famous 1980s writings by Michael Porter that distinguishes between two types of strategies: (i) **Corporate strategy**, and (ii) **Competitive strategy**. Corporate strategy is the mission, trade, and service of a business while competitive strategy refers to the distinctive competence of a business. In the 1980s, Michael Porter had identified three different generic strategies for the advancement of businesses, viz. **Focus, Cost leadership** and **Differentiation**. (Ibrahim, 1993; Chadwick & Cappelli, 1999). "These strategies help businesses to achieve, build, defend, and sustain their competitive advantages." (Ibrahim, 1993, p. 14). Ibrahim (1993) avers that focus, which is one of the generic strategies propounded by Porter, involves concentrating on a specific market, group of customers, product(s), or service(s). A business that adopts the focus strategy creates a competitive advantage in a narrow and well-defined niche to avoid head-on collisions with large competitors. (Ibrahim, 1993). Businesses choosing the cost leadership strategy are the low-cost producers that set out to be cost efficient; while differentiation is the generic strategy that is characterised by offering unique products or services at premium prices. (Ibrahim, 1993).

Porter (2008b) argues that strategy involves being operationally effective and engaging in a set of activities that work together to deliver a unique mix of

value. Businesses have a duty to operate as strategists to respond and handle competitors and competition because competition for market share and profitability is as much a fight with industry rivals as it is with four other competitive forces–customers, suppliers, potential entrants, and substitute products. (Porter, 2008a).

Since the factors that influence businesses are various, any process to create a strategy should be a function of in-depth information and clear understanding of participating businesses and applicable industry or industries. (Dälken, 2014).

2.4a Approaches to a Business Strategy

Strategy-making process and strategic choices should take on board narratives that are "coherent, plausible and acceptable to most key stakeholders within the company." (Kaplan & Orlikowski, 2014, p. 17). Kaplan & Orlikowski (2014) argues that choosing a strategy and the process to achieve it should be connected to understanding the past, discerning the present, and future expectations because effective projections of the future and exploring multiple possible future outcomes and occurrences should not be unconnected to a resounding understanding of the present and past.

Further insight by Kaplan & Orlikowski (2014, p. 18) regarding the process of creating a compelling strategic narrative: "To create a coherent strategic narrative, ask yourself: Does this narrative offer a view of the future that can be made consistent with [the] understanding of our company's past and our concerns in the present? Does this narrative connect the past, present and future in ways that

make sense? To make the narrative plausible, ask yourself: Does this narrative address important aspects of the external environment, including market and technological changes? Does it offer our company a distinctive competitive position? Does the narrative provide a reasonable response to the competitors' actions? How well does this narrative [consider] company's existing resources and capabilities? To create a narrative that will be acceptable within the organisation, ask yourself: Will this narrative bring [the] people in the company together [to] reduce conflict? Will this narrative resonate with all—or at least most—of the key stakeholders in the organisation?"

Cossin & Metayer (2015, pp. 46-49) highlight five distinct approaches in–and ways of looking at–strategy: (i) Strategy as a kind of planning and structured (step-by-step) process; (ii) Strategy as redrawing the competitive boundaries to redefine the competitive landscape of a business; (iii) Strategy as a calculated response addressing current or emerging challenges, threats, risks, and opportunities; (iv) Strategy as the development of core competencies and competitive advantages; and (v) Strategy as a path towards optimizing the value created for the stakeholders. Binns, Harreld, O'REILLY III, C. H. A. R. L. E. S. & Tushman (2015) espouse an approach that gives latitude to the various management teams in a business on being proactive and decisive in taking measures that address challenges and solve problems. Bingham, Eisenhardt & Furr (2011) underscore three strategy options: Position, Leverage, and Opportunity; and reason that figuring which of the three archetypes is suitable for a business should involve a managerial assessment of circumstances, an evaluation of subsisting resources, and a clearer idea on how the available resources are to be

combined to achieve the desired targets. Bingham et al. (2011, pp. 20-21) also notes that "sometimes very ordinary resources assembled well are all that [are] required for competitive advantage. Sometimes it makes good sense to bypass the largest markets and focus instead on where resources fit best. In other circumstances, it may be preferable to ignore existing resources and attack an emergent market. In some situations, basic rules of thumb work better than detailed plans." (Bingham et al., 2011, pp. 20-21).

Kim & Mauborgne (2008) argue that one of the best approaches in driving a profitable growth is by avoiding the "**red oceans**"–the overcrowded industries where competition is fierce and intense–because profit and growth opportunities may shrink in a matter of time as rivals battle one another over controlling part of the market share. Kim and Mauborgne (2008) also advocate the creation of a niche described as "**blue oceans**." The blue oceans are a kind of uncontested market space where competition is not intense as demonstrated by Cirque du Soleil, the Montreal-based entertainment company, when its reduced [expenditure] facilitated the process in creating and delivering sophisticated elements in theatre thereby meeting the expectations of the adult audiences. "The added value lured adults, who had not gone to a circus for years, and enticed them to come back more frequently–thereby increasing revenues. In blue oceans, you invent and capture new demand, and you offer customers a leap in value while also streamlining your costs." (Kim & Mauborgne, 2008, p. 70). The most important feature of blue ocean strategy is that it rejects the fundamental tenet of conventional strategy that a trade-off exists between value and cost; rather, it focuses on creating uncontested market spaces, making the competition irrelevant, creating and capturing new

demand, breaking the value and cost trade-offs, and aligning business activities in pursuit of differentiation and low cost. (Kim & Mauborgne, 2008).

Porter (2008a) outlines five competitive forces–popularly known since the 1980s as Porter's Five Forces–that could shape the strategy of businesses. Porter (2008a) argues that the five forces can have serious positive impacts on business performance if factored into a strategy set-up. The five competitive forces are: (i) **Threat of new entrants**, (ii) **Bargaining power of suppliers**, (iii) **Bargaining power of buyers**, (iv) **Threat of substitute products or services**, and (v) **Rivalry among existing competitors**.

Figure 2.4a: **The Five Forces That Shape Industry Competition.** (Porter, 2008a).

Dälken (2014) argues that the five forces formulated by Porter have been the key factors that underlie business strategies because it is founded on the grounds that businesses are operating in a micro-network of buyers, suppliers, substitutes, competitors, and new market actors. Dälken (2014) further argues that considering the speed of deregulation, digitalisation, and globalisation, managerial

teams should endeavour to go beyond the use of the five forces model in measuring competition and profitability. Andriotis (2004) says three elements, namely Intermediaries, Information Technology (IT), and Government Regulations should be added to Porter`s age-long Five Competitive Forces, arguing that these three distinctive elements and competitive forces in view of the perceptible changes and advancement in the past decades.

Intermediaries: In part, Andriotis (2004) argument is that intermediaries play the role of middlemen in many industries–including the tourism and travel industry, where travel operators have proven their ability in swaying clients' decision regarding destination choices–in a way that places them in the distribution chain between sellers and buyers.

Information technology: On the IT side, Dälken (2014) and Nielsen and Aagaard (2021) and The Economist Intelligence Unit (2005) argue that the power of information technology serves businesses in achieving competitive advantage. Dälken (2014) believes technology is one of the most important drivers of change and a central key in the implementation of change.

Government regulations: In this context, Andriotis (2004, p. 135) notes that "a political dimension has an immediate impact [on] firms and each country's business environment. This is more evident in the travel and tourism industry, where government is a vital force initiating tourism expansion [in] a destination or country and creates the necessary infrastructure required for tourism development." Andriotis (2004) stresses that the impact of government regulations has been evident due to the regulation of many markets through enforcing guidelines and rules of competition in the private sector. Mohapatra (2012, p. 274)

argues that “individual forces and their collective impact will change as the government policies and macroeconomic and environmental conditions change.”

Binns, Harreld, O’Reilly & Tushman (2015, p. 1-3) argument, in part, supports a strategic renewal–a set of procedures–to “build strategy, experimentation and execution into the day-to-day fabric of the organisation” to minimise or avert the potential impact of a crisis and guide the managerial team into a new era of innovation.

Binns et al. (2015) advocates that a strategic renewal approach that encompasses the following: (i) Adopting growth aspirations that connect with people emotionally; (ii) Seeing strategy as a dialogue (fact-based conversation) as opposed to a ritualistic, document-based planning process; (iii) Using the experimental approach to explore emerging possibilities and opportunities; (iv) Creating management communities, and leadership forums, thereby building a social network of leaders who can constructively engage and win over the internal resistance of workers’; and (v) Applying execution disciplines through a full-fledged commitment of management and the supply of needed resources.

Binns et al. (2015) outline five principles for strategic renewal that could help a business in hindering and tackling market disruption: (i) Selecting growth aspirations that connect with people emotionally; (ii) Treating strategy as a dialogue as opposed to a ritualistic, document-based planning process; (iii) Conducting experiments to explore future possibilities; (iv) Engaging a leadership community in the work of renewal; and (v) Applying execution disciplines to the effort.

Binns et al. (2015) further highlights four tests that underlie the decision of a business to proceed on a strategic renewal path: First, profits being dominated by maturing businesses in which an organisation faces limited opportunities for growth. Second, a situation where there is a direct threat to the organisation's core source of profits. Third, indications of potential threats or future competition from the emerging players or newcomers. Fourth, a test that illustrates that there are new ways of profit-making that constitute or create a threat to the core capabilities of businesses.

2.4b Innovation Strategies

Magretta (2002) & Rüb et al. (2017, June) emphasise that partnerships and collaborations are at the core of innovation and strategy. "By working in concert with others within and across organisations, you can accomplish greater things with greater efficiency than you could ever accomplish alone" but when your success depends on others as observed in Michelin's failed innovative idea, 'The PAX System', it becomes clearer that success would depend on execution, end-user response, product ecosystem, innovation ecosystem, and a comprehension of the strategic positions of both the OEM–original equipment market and the RM–replacement market. (Adner, 2012, pp. 16-26).

Barney (1999) reinforces the concept 'Transaction Cost Economics' as being crucial in determining the conditions for outsourcing a specific economic exchange or managing a particular economic exchange within a business or organisational boundary; and believes that economic exchange involves cooperating with businesses that possess critical capabilities, developing

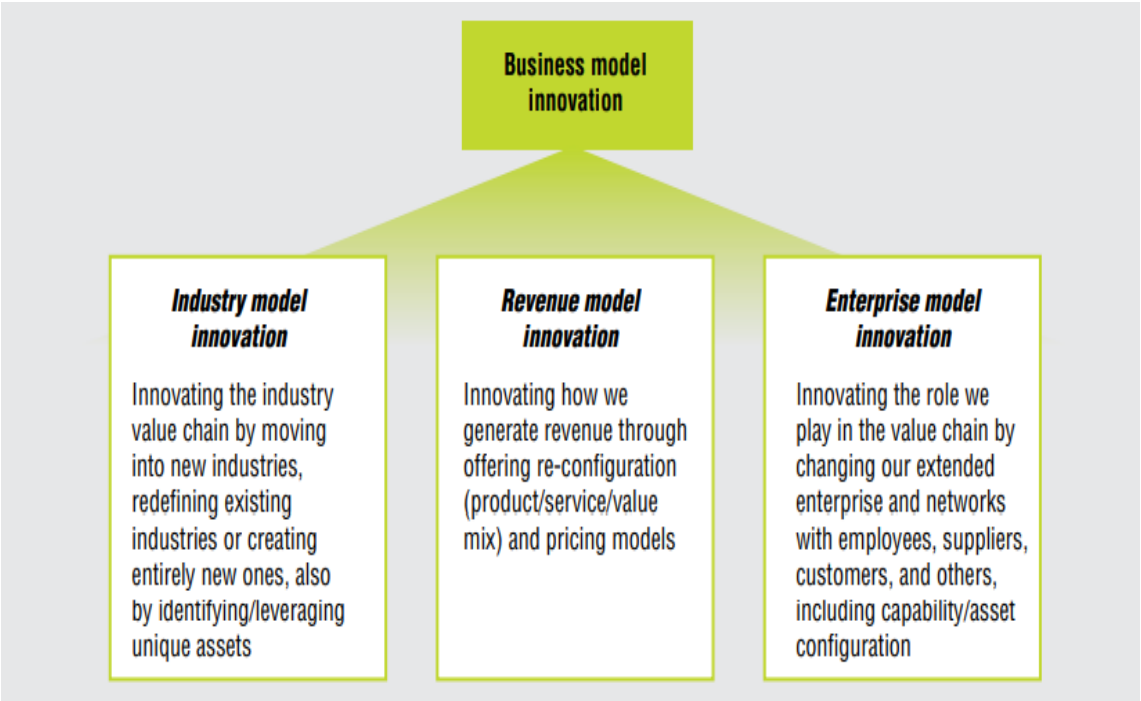
capabilities independently, and acquiring another business that already possesses needed capabilities. Market success is achievable if value proposition and ideas are created based on a seamless collaboration and consensus amongst partners. (Adner, 2012).

Magretta (2002) makes a reference to the approach used by Dell, a computer manufacturing leviathan, arguing that Dell's branded goods are offered for less to a carefully chosen customer base in several localities. Basically, Dell's sale of computers is direct to the end consumers and appears to achieve at least two outcomes, viz. (i) Circumventing a costly link in the value chain, and (ii) Significantly improving the company's inventory management system. "While Dell's direct business model laid out which value chain activities Dell would do (and which it wouldn't do), the company still had crucial strategic choices to make about which customers to serve and what kinds of products and services to offer." (Magretta, 2002, section 5, para. 3). Dell's approach and model brought about a radical change in the manufacture cum sale of computers by shifting from the company's initial traditional build-to-stock model to a build-to-order model. (Amit & Zott, 2015).

In Figure 2.4b, Giesen, Berman, Bell, & Blitz (2007, pp. 5-6) illustrate three distinct types of business model innovation strategies, viz. (i) **Industry model innovation**, which could occur by innovating the "industry value chain", and can be accomplished when an entity makes horizontal moves into new industries as "Virgin has done with its moves from its beginning in music and retail [into] such diverse industries as airlines, railways, beverages, financial services, etc." The industry model innovation could as well happen by "redefining

existing industries" as Dell and Apple have proven through jettisoning intermediaries and directly engaging with customers in the sale of computers and delivery of music directly to customers via iTunes. (ii) **Revenue model innovation strategy** involves reconstructing offerings, such as, service, product, and value mix, and introducing a new pricing regime as observed in Netflix's transition to a movie rental option that offers monthly subscriptions, not a product-based rental structure. (iii) **Enterprise model innovation strategy** focussing on networking in a way that redefines organisational boundaries by expanding the value chain to allow or broaden integration, outsourcing, competencies, external collaboration, and partnership(s). The enterprise model enhances collaborative innovation in a way that reduces cost and promotes the innovating organisation's high-margin activities.

Figure 2.4b: **IBM framework for business model innovation.** (Giesen et al., 2007, p. 5).



Hartley (2006) stresses that there are limitations to the innovations that follow a linear or rational planning approach considering several issues like resource allocation and "complexities deriving from the interventions of political as well as managerial leaders."

Sull (2015, p. 53) calls into question the wisdom behind a linear process in strategy when it is obvious that an iterative, loop-based approach would be more effective as it incorporates new information and makes room for "ongoing revision as new information emerges, mitigating the tendency to escalate commitment to a failed course of action." Sull (2015, pp. 52-60) formulates a strategy loop, which comprises of four major steps, viz. Make Sense, Make Choice, Make Things Happen, and Make Revisions as shown in Figure 2.4c.

Figure 2.4c: **The Strategy Loop.** (Sull, 2015, p. 55).

Make sense: This appears to be the initial step. It encompasses the collection and studying the raw data from a variety of sources as this would

provide much more detail on how events may unfold. “To make sense of a situation, managers should establish a tone of open inquiry rather than advocacy. Teams are most likely to make sense of novel situations if they dig into the data with an open mind.”

Make [a] choice: The emphasis is to understand the priorities that would guide actions and resource allocation. “Determining the right priorities is a critical function of management under any circumstances… Conversations to make choices conclude when a group agrees on a set of priorities that are both consistent with its interpretation of the situation and sufficiently concrete to be understood by everyone required to execute the strategy.”

Make things happen: To achieve quality results would depend in part on [the] commitment and rigour. “A simple but powerful mechanism–the promise–can help managers [to] make things happen. A promise is a personal pledge a provider makes to satisfy the concerns of a customer within or outside the organisation. Businesses can use promises to ensure that employees understand what they need to do and that those individuals deliver on their commitments. To a large extent, then, execution will hinge on the quality of promises made and on the consistency with which those commitments are honoured. In this context, the objective of the discussions to make it happen should solicit personal promises–between employees and their managers–to perform actions that are aligned with agreed-on priorities. The promises might take place within an existing procedure,

such as, performance management, or in off-line negotiations, but their purpose is the same–to weave a web of commitments that ensure coordinated action."

Make revisions: Managers and change drivers should anticipate anomalies and revise key assumptions. "Managers need to recognize [the] emerging patterns to anticipate new opportunities and threats. But spotting such patterns also requires people to revise and sometimes even abandon their existing mental models… When a person's established patterns of thinking clash with changing circumstances, the existing mental models typically prevail. But letting go of the old is as important as spotting the new. Thus, managers must keep their mental model fluid, modifying them considering changes in the broader context. They should analyse what has happened and use the results to revise their assumptions, priorities, and promises."

2.5 Corporate Sustainablility

Conceptually, the position of the United Nations is that "sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future." (World Commission on Environment and Development, 1987, section 4(II)(49), para. 11).

Sphera (2020) notes that corporate sustainability is a business strategy for long-term growth that encompasses protecting the environment, achieving both societal and environmental goals by working in harmony with people and the planet. Corporate sustainability has three pillars, viz. Environmental, Social, and Economic. **The Environmental Pillar**: This includes the strategies that are

deployed to "eliminate and offset greenhouse gas emissions, use green energy, eliminate toxic hazards, reuse or recycle materials and manage waste, reducing the carbon footprint throughout the value chain." **The Social Pillar**: This relates to the various practices that promote the people's safety, welfare, health, and wellbeing. It includes activities like "establishing an effective safety culture, ensuring that customers have the information they need to use products safely and protecting access to [the] basic resources." **The Economic Pillar**: The strategy here is to ensure that businesses can "survive and thrive to make a long-term positive impact." (Sphera, 2020).

Corporate sustainability involves a five-stage process, namely viewing compliance with regulation and law as opportunity; making value chains sustainable; designing sustainable products and services; developing new business models; and creating next practice platforms. (Nidumolu et al., 2009). However, experts like Rondinelli & Berry (2000) seem to have come to the realisation that the three key principles of sustainable development, which are environmental, economic, and social, are consistent and applicable in the businesses striving towards achieving sustainability. Bansal (2005, pp. 198–199) while exploring how these three principles of sustainable development–environmental integrity through corporate environmental management, economic prosperity through value creation, and social equity through corporate social responsibility–apply to a business did argue that: “An open, competitive, international [market] that encourage innovation, efficiency, and wealth creation are fundamental aspects of sustainable development” in accordance with the position taken by the World Business Council for Sustainable Development (WBCSD) in 2002. While it is true

that not all businesses will subscribe to an innovation being of immense value, there are several businesses that see innovation as a means towards sustainability. (Bansal, 2005).

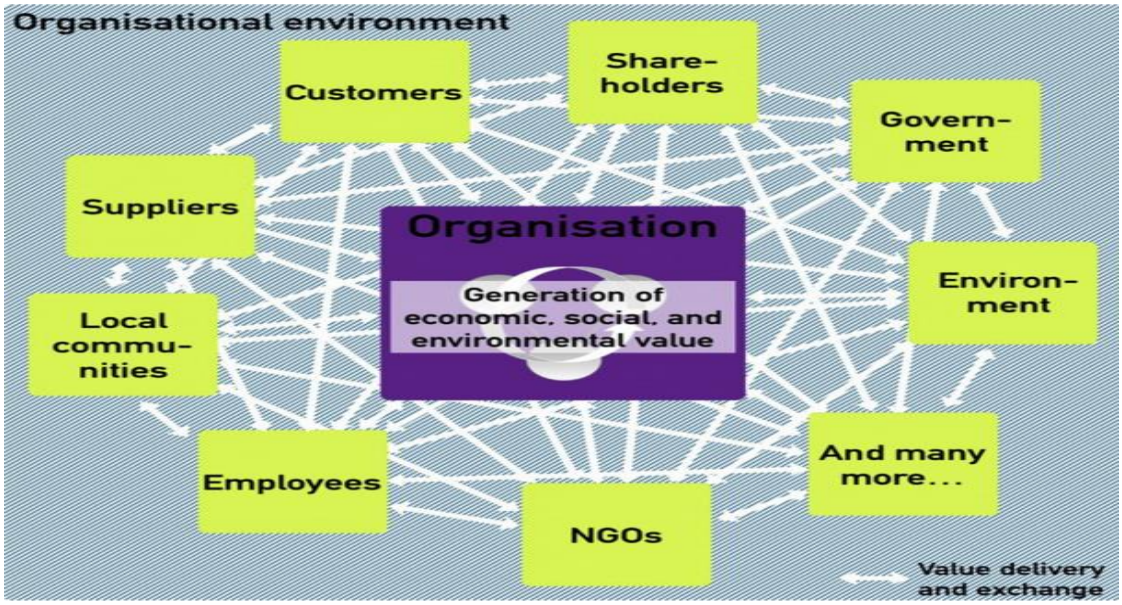
Sustainable innovation is a source of development for businesses (Chen, 2016); and a source of competitive advantage, which is delivered to an organisational unit through a business model innovation. (Nidumolu et al. 2009; Geissdoerfer, Savaget & Evans, 2017). The process of sustainability permeates businesses whole and entire in a way that affects the workforce, operations, coordination mechanisms, procedures (Aceleanu & Şerban, 2009); and it is driven by several elements of business model that cooperate with each other and interact with stakeholders to create, capture, deliver, and exchange sustainable value. (Geissdoerfer, Bocken & Hultink, 2016).

In the face of a fierce market competition, a business is only bound to exist and develop through a continuous innovation process, but sustainable innovation is predicated on three basic characteristics, viz. persistence, sustainable economic benefits and growth, and sustainable development in various fronts–economic power, technological power, and business size. (Chen, 2016). “The two key elements of sustainable business model innovation are the creation of economic, societal, and environmental value; and the collaboration with a wider range of stakeholders.” (Geissdoerfer, Bocken & Hultink, 2016, pp. 1218).

A sustainable business model aims at improving in every area–economic, environmental, and social effectiveness–which is achievable through operational efficiency (using technology), stepping up value generation capabilities, and performing effective stakeholder management. (Geissdoerfer et al., 2016).

"Adopting a sustainable business model can enable companies to better adapt to complex environments and achieve sustainable competitive advantages." (Geissdoerfer, Bocken & Hultink, 2016, p. 1219).

Figure 2.4d: **The sustainable business model concept.** (Geissdoerfer, Bocken & Hultink, 2016, p. 1219).



Geissdoerfer, Savaget & Evans (2017) argue that sustainability ambitions should go beyond the development of new products and technologies or above incremental refinements in the operation of businesses by encompassing a holistic value system change through business model innovation, resulting in sustainable business model (SBM). Frankenberger et al. (2013) assert that serial and successive success of any businesses in an industry is not solely founded on introducing new products or services, rather such breakthroughs are a function of novel ways of engaging in and conducting business affairs. The key attributes that drive sustainable value includes effectiveness, efficiency, and resilience.

(Geissdoerfer et al. 2016). However, Chen (2016, p. 2) issues a note of caution, arguing that there is "no consensus on the determinants of sustainable innovation."

2.5a Effective and Efficient Management

The views of Binns et al. (2015) is that the role of senior management is to build strategic processes, experimentation, and execution into the day-to-day fabric of the organisation.

Effectiveness, efficiency, dedication, resilience, and knowledge in managerial affairs as it relates to a specific trade, service and industry are essential in achieving good performance. Neilson, Martin & Powers (2008) argue that decision rights and information flow are central drivers of effectiveness, which is needed for successful structural reorganisation and business success.

EL-Annan (2013) reason that a leader with good individual traits that encompasses the vision, proactivity, and innovation, which is nurtured over a period, doubles as an inspiration for the management and a purveyor of problem-solving abilities. Having a vision and being proactive and innovative serves the management in anticipating and taking advantage of any new opportunities that would enhance business performance, including in the aspect of generating additional profits. (EL-Annan, 2013).

The mindset of businesses, managerial personnel should be cultured (in line with acceptable attitude, norms, values) and structural (with good policies, processes, and structure in mind) to achieve the following: Drive businesses on economic and ethical pathways, thereby abiding with the neoclassical economic perspective that a business entity's focus is dominated by the need to maximise

utility for the people and business. (Stubbs & Cocklin, 2008). Managers should be mentors, coaches, facilitators of learning, and be able to create a sound learning climate in a way that strikes a balance between knowledge generation and knowledge utilisation. (Aceleanu & Şerban, 2009, p. 53).

2.5a1 Employee Participation

When a business is engaged in implementing strategies and sustainable innovation, the process lies in the people. (Chen, 2016, p. 2). Chen (2016) argues that employee participation signifies that the workers can contribute to the process of formulating and implementing management decisions, communicate with managers, and help get the right results. Individual capability, which in this context is the integration of an employee's knowledge, skills, and capability, is essential in effective and efficient business operation and management.

Neilson, Martin, & Powers (2008, p. 83) outline some fundamental characteristics and elements of organisational effectiveness: (i) Everyone has a good idea of the decisions and actions for which he or she is responsible; (ii) Important information about the competitive environment gets to head office quicker: Once made, decisions are rarely second-guessed; information flows freely across organisational boundaries; (iii) Field and line employees usually have the information they need to understand the bottom-line impact of their day-to-day choices; (iv) Line managers have access to the metrics they need to measure the key drivers of their business; (v) Managers up the line get involved in operational decisions; (vi) Conflicting messages are rarely sent to the market; (vii) The

individual performance-appraisal process differentiates among high, adequate, and low performers; (viii) The ability to deliver on performance commitments strongly influences career advancement and compensation.

2.5a2 Prompt and Effective Decision-Making

When a business fails to make the right decisions and flops in executing any good decisions timely and consistently, it may lose ground and create circumstance that undermine its performance in general. (Rogers & Blenko, 2006; Chen, 2016). In other words, making quality decisions timely and ensuring efficiency in executing sound decisions are amongst the hallmarks of performing businesses. Having identified decision-making bottlenecks as a challenge, Rogers & Blenko (2006) argue that unclogging the factors that hinder decision-making is achievable through an approach called RAPID. The letters R-A-P-I-D is the acronym for five words, viz. **Recommend**, **Agree**, **Perform**, **Input**, and **Decide.**

Rogers & Blenko (2006, p. 134) put forward five important questions and answers: “Who should recommend a course of action on a key decision? Who must agree to a recommendation, before it can move forward? Who will perform the actions needed to implement the decision? Whose input is needed to determine the proposal’s feasibility? Who decides–brings the decision to a closure and commits the organisation to implement it?” The people, who recommend a course of action, bear the responsibility to make a proposal or offer alternatives. The recommendation cannot proceed further unless the people agree or disagree on whether they can go-ahead. People with input responsibilities are those

consulted about the recommendation. The decision-maker is the single point of accountability who must bring the decision to a closure and commit the organisation to act on it. (Rogers & Blenko, 2006, pp. 136-137).

2.5a3 Effective Execution of Quality Strategy

"A brilliant strategy, blockbuster product, or breakthrough technology can put you on the competitive map, but only solid execution can keep you there. You [should] be able to deliver on your intent." (Neilsen, Martin & Powers, 2008, p. 83).

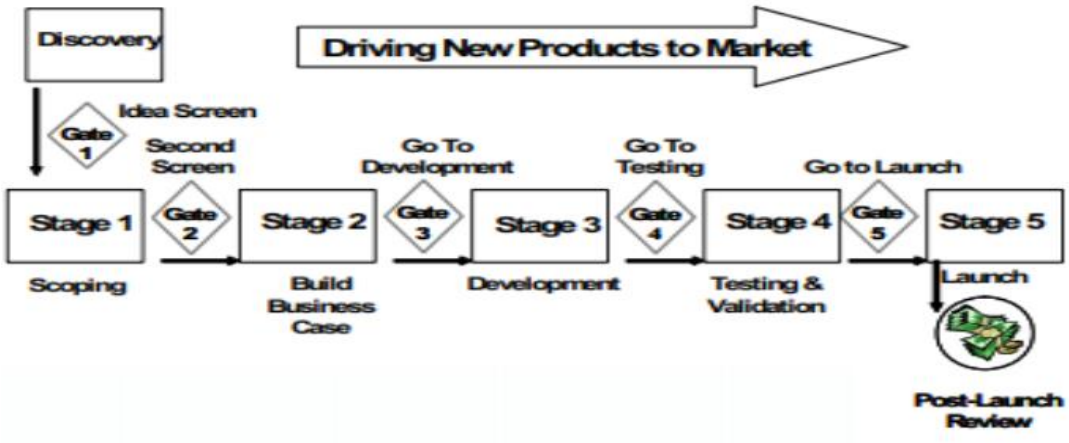
Mankins & Steele (2005) argue that avoiding instances of a strategy-to-performance gap, in a sense that the management of a business misconstrues poor execution as the weak link or sees unsound strategy as the bane in achieving its financial projection, would require observing seven rules and understanding the inextricable link between strategic planning, and execution. The seven rules, which Mankins and Steele (2015) believes would enable businesses to discern early warning signs and transform both the quality of strategies and the ability to deliver results and prevent performance shortfalls are: Rule 1: Keep it simple and make it concrete. Rule 2: Debate the assumptions, not forecasts. Rule 3: Use a rigorous framework and speak a common language. Rule 4: Discuss resource deployments early. Rule 5: Clearly identify priorities. Rule 6: Continuously monitor performance. Rule 7: Reward and develop execution capabilities. Mankins & Steele (2005) further argue that these seven rules do determine whether the weak spot stems from a bad strategy or poor

planning or failed execution or employees' infractions, or a combination of two or more of these problems.

2.5b Resources

Sustainable innovation capability is an indication that a business can bring together, synthesise, and efficiently utilise all the factors of production–human resources, financial resources, and material resources–to achieve sustainable competitive advantages and make business profits. (Chen, 2016). Bringing the resources together and getting the right mix may involve a standard approach or solution, such as, appointing an innovation team and implementing a stage-gate process. (Loewe & Dominiquini, 2006, p. 25).

Figure 2.5b: **The Stage-Gate process.** (Cooper et al, 2002, p. 2).



A stage-gate process, which is illustrated in Figure 2.5b, is "a conceptual and operational map for moving new product projects from idea to launch and beyond–a blueprint for managing the new product development (NPD) process to improve effectiveness and efficiency." (Cooper, 2008, p. 3).

2.5c Quality Ideas and Vision

There are three characteristics underlying a quality idea: (i) Applicable to a known problem at hand; (ii) Highly effective in solving specific problems; and (iii) Implementable. (Dean, Hender, Rodgers & Santanen, 2006). If ideas are not forthcoming and remain difficult to develop, one of the common approaches would be to hold a series of idea generation sessions on a regular basis. (Loewe & Dominiquini, 2006, p. 25). Stevanovic, Marjanovic & Storga (2015) advocate that organisational units follow a defined approach in the assessment and evaluation of ideas.

The dimensions of entrepreneurship include **vision**, **innovation**, **risk taking**, and **proactive personality**; and with vision comes innovative ideas and innovation, though when an idea is set up, one requires a proactive leadership to bring it to a successful execution. (EL-Annan, 2013). Collins & Porras (1996) believe that a well-conceived vision comprises of two key components, which are core ideology (values and purpose) and envisioned future. “Core ideology, the yin in our scheme, defines what we stand for and why we exist. The second primary component of the vision framework is envisioned future, which is what we aspire to become, to achieve, to create–something that will require significant change and progress to attain. Businesses that enjoy enduring success have core values and a core purpose that remain fixed while their business strategies and practices endlessly adapt to a changing world.” (Collins & Porras,1996, pp. 65-66).

The NABC method developed by the Stanford Research Institute comes to the fore as a valuable tool used for idea development, evaluation, and presentation. The letters N–A–B–C being an acronym for Need, Approach, Benefit, and

Competition. **Need** in this context underlies the craving or torrid urge for a new idea that would meet the desire of target customers. **Approach** serves to lay the processes and how a new idea can be delivered to solve the identified needs of customers or end users. **Benefit** is about knowing the advantages of a novel idea and in what ways it can improve people's life or make their life much better. **Competition** is about identifying how a new idea would compete with existing ones or be better than earlier ones considering the proponents knowledge of business and the related industries.

2.5d Risk Mitigation and Management

The account by Amit & Wernerfelt (1990) is that business risk has been central to the development and growth of organisations; and remain a factor for consideration in strategy-making. Amit and Wernerfelt (1990) also note that reducing business risk would enhance operational efficiency and create additional opportunities for businesses to fillip cash flows.

There is an element of risk in all business functions and in every kind of activity; so, being able to "know how to identify risks, attribute a value and a priority scale, design actions and mechanisms to minimise risk, and continuously monitor them, are essential to guarantee companies' survival and create sustainable value." (Verbano & Venturini, 2013, p. 186). "Effective controls [for mitigating] risks form an integral part of Business Continuity and Disaster Recovery (BC/DR) planning by minimising potential risks, preventing actual harm from occurring, detecting events that have the potential for negative impact, and fixing real problems before they become disasters." (The Free Library, 2015).

2.5e Knowledge (Training, Developing, and Learning)

Knowledge can be said to be the most important strategic resource; and the ability to acquire, integrate, store, share and apply it, the greater the capability for building and sustaining long-run competitive advantage. (Aceleanu & Şerban, 2009).

Christensen & Overdorf (2000) emphasise the salutary qualities of training and developing employees to make good decisions that are consistent with business values, business model, and strategic direction. Levinthal & March (1993, p. 106) note that learning, in part, enables competitive advantage and increases average performance. “More experienced and more extensively trained individuals or groups will generally do better than less experienced or less trained ones.” The talents of workers are essential for the success of businesses. (Loewe & Dominiquini, 2006).

2.5f Technology and Communication

Di Vaio, Boccia, Landriani & Palladino (2020, p. 8) found that “digital technologies can help to create sustainable business models (SBMs), increasing productivity, reducing production costs and emissions, decreasing the intensity of production process resources, improving correspondence in [the] markets." Argenti, Howell & Beck (2005, p. 63) rekindle the importance of strategic communication and information flow, which are integral in formulating and implementing corporate strategy, saying: “The framework for strategic communication comprises a wide variety of iterative loops, encompassing multiple connections with multiple constituencies on multiple strategic levels.”

Artificial Intelligence (AI) facilitates the development of sustainable business models as its connectivity with other digital technologies can promote digital communication and collaboration; and effectively achieve the social distance measures that became part of a "new normal" in tackling the COVID-19 pandemic. (Gregurec, Furjan & Tomičić-Pupek, 2021). Given that technology would continually develop and advance at an accelerated pace, it behoves on the management of any business to keep their ears on the ground for technology–related breakthroughs that signify the opportunities for business model innovations that complement or replace existing models. (Gassmann et al., 2014, p. 33).

"The promise of digital technologies is twofold. First, they offer businesses the opportunity to do what they already do more effectively. Online sales, for example, enable businesses to sell more of their products to a wider audience with no need for physical outlets. The second digital impact, however, is more profound. In some cases, these technologies are changing the very nature of what a business does. In the motor industry, for example, Ford is so convinced that technologies such as self-driving cars, smart cities and ride-sharing apps will change the way in which most people get from A to B, that it is moving away from 100 years of motor manufacturing to a focus on the broader mobility industry." (KPMG, 2018).

2.5g Corporate Strategic Principle

Strategic principle, “a memorable and actionable phrase that distils a company’s corporate strategy into its unique essence and communicates it throughout the organisation,” serves as a guide to business entities that seek to

achieve the following: (i) Maintain a strategic focus; empower the workforce to develop novel ideas, innovate and take measured risks; (ii) Seize fleeting opportunities that emerge; (iii) Create products and services that meet subtle shifts in customers' needs. (Gadiesh & Gilbert, 2001, p. 112). Further exposition by Gadiesh & Gilbert (2001) is that three attributes define a quality strategic principle: It drives trade-offs between competing resource demands; and tests the strategic soundness of all actions and decisions; and sets clear boundaries within which employees must operate while granting them latitude to conduct experiments.

2.5h Synergy

Stakeholder engagement and collaboration is a necessary condition for sustainable business modelling. (Stubbs & Cocklin, 2008). Stubbs & Cocklin also argue that the management team of a business entity can help drive change processes, initiate vital policies, and lead the stakeholders on sustainability initiatives. They stressed that management could facilitate stakeholder engagement by selling a sustainability agenda to the stakeholders' (the board, management, shareholders, local communities, suppliers, partners, employees, and customers) who are part of the key factors in implementing sustainability.

Hillman & Keim (2001) provide insight into a concept known as Corporate Social Performance (CSP) and its relevance in fostering synergy and interaction between the processes of social responsiveness, the principles of social responsibility, and the programs and policies designed by corporations to address social issues. Hillman & Keim (2001) argues that CSP is "a multidimensional

construct that involves economic responsibility to investors and consumers, legal responsibility to the government or the law, ethical responsibilities to [the] society, and discretionary responsibility to the community. CSP incorporates the interaction between the principles of social responsibility, the processes of social responsiveness, and the policies and programs designed by corporations to address social issues."

Hillman & Keim (2001) assert that separating CSP into two components, stakeholder management and social issue participation, unveils in greater detail its role in the value creation process of businesses. "Building better relations with primary stakeholders like employees, customers, suppliers, and communities could lead to an increased financial return by helping firms develop intangible but valuable assets which can be sources of competitive advantage. For example, investing in stakeholder relations may lead to a customer or supplier loyalty, reduced turnover among employees, or improved firm reputation." (Hillman & Keim, 2001, p. 126). Hillman & Keim (2001) further note that the stakeholders, especially the primary stakeholders, have taken a risk by investing their capital or something of value in the business and therefore play a role in the value creation process, which could lead to an increased financial return, improved shareholder value, and additional sources of competitive advantage.

Considering 'social issue participation', which Hillman & Keim (2001, p. 126-128) believe is one of the components of CSP and falls outside of the direct relationships with the primary stakeholders, there seems a strong connection between it (social issue participation) and the process of creating value. However, it appears that it has no direct ties to the dealings between a business and its

primary stakeholder and appears to be negatively related to the shareholders' value.

In a book entitled 'Capitalism and freedom' Milton Friedman calls into question the issue of social responsibility because he believes it could be fundamentally subversive. Friedman (1962, p. 133) argued that prevailing on businesses to commit resources into social responsibility "could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their shareholders as possible." (Carroll, 1979, p. 497).

2.5i Policy Surveillances and Market Monitoring

A sustainable innovation, which remains the fundamental task of businesses striving in a competitive and an unstable environment, requires “frequent policy surveillances” and the capabilities to adapt to fast changes. (Chen, 2016, p. 2). Businesses that aim to sustain long-term profitability would have to constantly carry out a market analysis to keep tabs on various competitors and notable rivals and be able to respond strategically to competition. (Porter, 2008a).

PART 2

IMPACT OF THE COVID-19 PANDEMIC

2.6 Introduction

The outbreak of COVID-19 has caused significant disruptions in people's way of life and created a lot of challenges for businesses and industries, resulting in businesses pursuing further innovation and people adjusting to the "new normal" in a battle for survival. (Riom & Valero, 2020). With COVID-19 prevalence and many regulatory authorities across the globe battling it and taking a series of measures to weaken its spread and damage, it seems there is hardly any country where businesses are immune to either a positive or negative impact of the COVID-19 pandemic.

Swift (2009) and Fernandes (2020) argue that, historically, pandemics usually have an impact on both the demand and supply of goods and services. The impact a pandemic may have on businesses is usually not uniform and varies among businesses and industries. "Not all organisations experience the same level of threat during a societal crisis." (Gopalakrishnan & Kovoor-Misra, 2021, p. 3). In the case of the COVID-19 pandemic, the economic impact is bi-directional considering noticeable supply and demand effects. (Ceylan, Ozkan & Mulazimogullari, 2020). "Some sectors have become more vulnerable than others during the COVID-19 pandemic. Travel, tourism, hotels, hospitality, aviation, restaurants, retail, public entertainment, education and sports were the sectors with the highest disruptions to business, while other sectors such as food, healthcare,

pharmaceuticals, and information technology seem to be less vulnerable." (Gregurec, Furjan & Tomičić-Pupek, 2021, pp. 8-9).

"[The] larger firms with more significant financial resources may be better able to survive shocks than [the] SMEs, which are often characterised as having limited resources and structural features that expose them to [the] risks that may be detrimental to their business." (Verbano & Venturini, 2013, p. 189). Start-ups and smaller businesses are confronted by more severe financial challenges even in advanced countries, but the situation with the larger businesses tell a different story with a lower probability of falling into arrears or being unable to cover their expenditure with cash-at-hand for a longer period. (Apedo-Amah et al., 2020). Sullivan-Taylor & Branicki (2011) argue that there are several businesses that do not hold the resources and technical systems often equated with resilience capabilities, and this calls for a more strategic and proactive approach in the management of threats and extreme events. "SMEs typically possesses limited resources, and there may be a need for tailored guidance and assistance with the execution of extreme event planning and response." (Sullivan-Taylor & Branicki, 2011, pp. 11-12).

2.6a Financial Losses, Liquidity Issues, and Bankruptcies

Some of the challenges that businesses are trying to tackle in this COVID-19 pandemic period include loss of income, liquidity, and possible bankruptcies. Apedo-Amah et al. (2020), Kuckertz et al. (2020), and the Organisation for Economic Co-operation and Development (2020) have observed that many businesses are facing immediate and tangible consequences of the COVID-19

pandemic, especially in the form of diminishing sales and unchanged fixed costs; and these sales and cost issues are major threats to the liquidity of businesses, thereby constituting enormous challenges in avoiding bankruptcy and remaining in business.

Some businesses that are relying on physical space and shops, such as, supermarkets, traditional food markets, restaurants, car dealers, theatres, gyms, and bars, have suffered losses due to the COVID-19 outbreak. (Turner & Akinremi, 2020). These losses could be linked to the temporal suspension of business activities either in a response to the policy mandate put in place by regulatory authorities, or in reaction to a downward demand shift. (Fairlie, 2020). In the US, many big businesses and popular household names, such as, NPC International Inc., Hertz Global Holdings, Inc., CMX Cinemas, Gold's Gym, Chesapeake Energy, Virgin Atlantic, Rubie's Costume Company, Brooks Brothers, J. Crew, J.C. Penney filed for bankruptcy due to the impact of the COVID-19 pandemic. (ValueWalk, 2021). In an article published by Forbes, it is argued that "arrogant inertia and inability to recognize the fast-changing trends and a refusal to adapt their business models accordingly" might be behind the failure of some businesses that have filed for bankruptcy. (Kelly, 2020).

2.6b Economic Activities and Production Capacities

Turner & Akinremi (2020, p. 6) argue that "government intervention to halt the spread of a virus affects supply chains, which in turn impacts upon international trade. The number of hours worked [fell] sharply due to people being unwell and fearful about infection, [thereby] reducing aggregate supply.

Lockdowns lead to a lower retail sales and drastically reduced leisure activities like a visit to a sporting event, restaurant, theatre, etc. Firms experiencing [diminishing] sales and [falling] production [does] experience falling profits due to a fixed short-term cost and fall in revenue. [The] effects are sectoral-specific: Hospitality and personal services are most adversely affected, whereas the pharmaceutical and medical-equipment sectors are likely to benefit most." The impact of the pandemic hurt several organisations, and those that have core technologies that requires their workforce to be "physically interdependent both in the manufacturing, or in the delivery of their products or services are most impacted by the crisis." (Gopalakrishnan & Kovoor-Misra, 2021, p. 3).

Bloom, Fletcher & Yeh (2021)–in research that culminated in one of the working papers of the National Bureau of Economic Research (NBER)–found that many businesses in the United States are experiencing a daunting and negative impact of the COVID-19 pandemic. Bloom et al. (2021) did observe the following: Average sales drop 29% over quarters 2 and 3 of 2020; circa 25% of the businesses that were studied lost more than a half of their normal average sales volume at the peak of the pandemic; More than 40% of the businesses recorded an impact; and 57% reported a negative effect. Turner & Akinremi (2020) aver that the lockdown measures and several other restrictions on businesses and business-related activities did lead to a lower retail sale and a significant fall in the leisure activities–visits to a sporting event, restaurant, theatre, etc.–that are known to be a fillip to the sales volume.

The impact of the COVID-19 pandemic on businesses, which includes the destruction of existing production capacities in some cases, could have a bigger

impact on the growth prospects of developed and developing economies, not only in the short-run but over the long-run, especially if the destruction affects the more productive businesses. (Apedo-Amah et al., 2020, p. 2). A surge in the COVID-19 pandemic did affect people's health and create fear, causing a sharp fall in the number of hours worked, thereby reducing aggregate supply. (Turner & Akinremi, 2020). Though the policy mandate–lockdown measures, curfews, quarantine, social isolation–set by various governments did serve to protect a numerous number of people from COVID-19 infection, it has spread anxiety, fear, and stress; and "there will be a huge micro-, meso-, and macroeconomic loss to many individuals, organisations, and countries." (Ganesan et al., 2021).

Relying on subjective probability distributions and statistical analysis of the data collected from more than one hundred thousand businesses across fifty-one countries, Apedo-Amah et al. (2020, pp. 6-7) in a policy research working paper of the World Bank Group, demonstrates the impacts of COVID-19 pandemic across three dimensions, viz. (i) **Operation status** (e.g., open, or temporary closed): The likelihood of a business being open at the peak of the COVID-19 pandemic and up to a 4-week period after the peak is under 30%, but it significantly increases by almost 75% or more barely 6 weeks after the peak (Apedo-Amah et al., 2020, p. 6); (ii) **Sales**: The COVID-19 pandemic has a large and widespread impact on sales. "About 84% of firms on average, across countries, have reported a reduction in sales", and "the cross-country average suggests a reduction in sales by about 49% compared to the same period in the last year" (Apedo-Amah et al., 2020, p. 7); and (iii) **Employment**: Due to the magnitude of the shock that the pandemic has caused, many businesses have laid-

off and are laying-off workers, reducing the working hours of their workforce, and granting a furlough or leave.

Kuckertz et al. (2020) argues that the infection control measures that many national authorities are enforcing to reduce the surge in COVID-19 infection rate may have caused an economic crisis by halting or obstructing a vast number of economic activities. “Moreover, while many other past crises have hit humanity at a specific point in time and regionally (e.g., hurricanes like Katrina in 2005) or developed over a longer period with global effects (e.g., the 2008 financial crisis), the COVID-19 pandemic has developed globally, and the necessary countermeasures put in place have hurt economies suddenly.” (Kuckertz et al. 2020, section 1, para. 1). Apedo-Amah et al. (2020) argue that the COVID-19 pandemic caused a fundamental shock on the global economy by creating uncertainties amongst economic actors. “The pandemic has caused severe global socioeconomic disruption by the postponement or cancellation of sporting, religious, political, and cultural events and [the] widespread shortages of supplies exacerbated by panic buying.” (Turner & Akinremi, 2020, p. 12).

2.6c Employment, Unemployment, Inactivity, and Labour Supply

“The COVID-19 pandemic is resulting in an unprecedented shock on the private sector, threatening the global progress in poverty reduction and shared prosperity made in recent years.” (Apedo-Amah et al., 2020, p. 2). If the lockdown measures are protracted, some of the likely impacts might be a worsened unemployment rate, stress, mental health issues, family problems, binge drinking,

worsening rate of substance use, and increase in crime or suicide rates. (Ganesan et al., 2021, p. 6).

In January 2021, the International Labour Organisation (ILO) did provide in detail the estimates and analysis of the 2020 labour market developments following the COVID-19 outbreak. Excerpts from the ILO report reads: "Globally, the decline in working hours in 2020 translated into both employment losses and a reduction in working hours for those who remained employed, with significant variation across regions. Employment losses were highest in the Americas, and lowest in Europe and Central Asia, where job retention schemes have supported the reduction in working hours, especially in Europe. In total, there were unprecedented global employment losses in 2020 of 114 million jobs relative to the 2019 figure. In relative terms, employment losses were higher for women (5.0 per cent) than for men, and for young workers (8.7 per cent) than for older workers. Employment losses in 2020 translated mainly into rising inactivity rather than unemployment. Accounting for 71 per cent of global employment losses, inactivity increased by 81 million, which resulted in a reduction of the global labour force participation rate by 2.2 percentage points in 2020 resulting in 58.7 per cent. Global unemployment increased by 33 million in 2020, with the unemployment rate rising by 1.1 percentage points to 6.5 per cent." (ILO, 2021, p. 2).

The foregoing ILO data, which illustrates the employment losses regarding the women and youth, seem to be depicting a gloomy outlook given the current make-up of the employment statistics provided by the International Council for Small Business (ICSB): “Micro, small and medium enterprises (MSMEs) are

important economic engines globally. Representing over 50% of all enterprises around the world, contributing more than 70% employment and 50% of GDP growth in developing countries. With the employment, income, and livelihood opportunities they provide, MSMEs possess strong potential to act as a catalyst towards the progress towards the Sustainable Development Goals (SDGs) in multiple areas, including poverty eradication, zero hunger, decent job creation and the stimulation of entrepreneurship and innovations among vulnerable groups, including women and youth." (International Council for Small Business, 2020, section 1, para. 1).

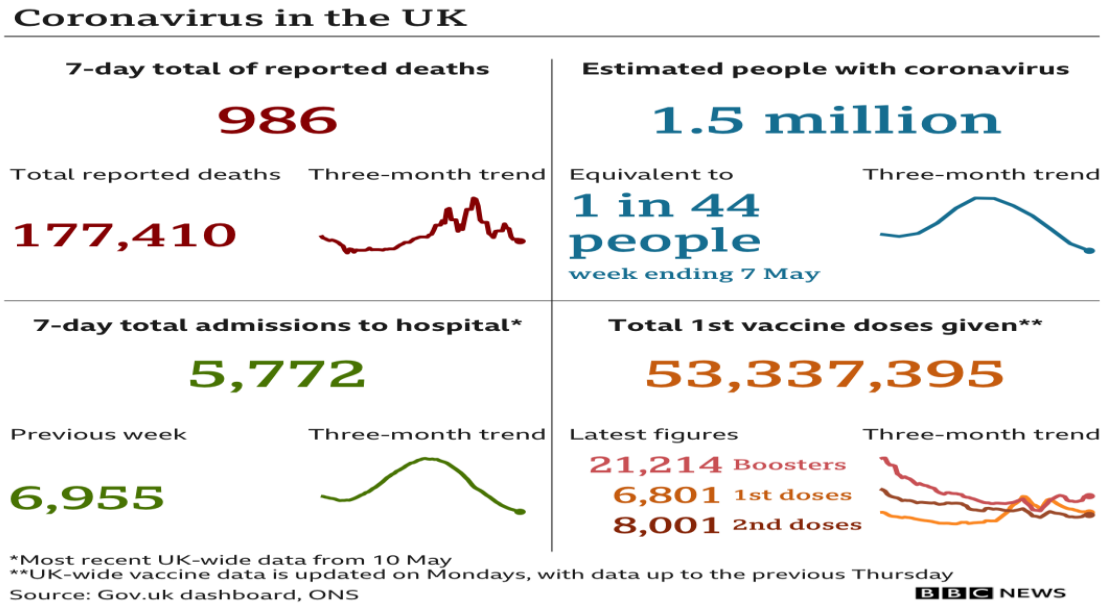
2.6d Early and Recent Data on COVID-19 Pandemic across Countries

In this subsection, the early and recent updates across 5 countries in 5 different continents, viz. United Kingdom (Europe), United States (North America), People's Republic of China (Asia), Rwanda (Africa), Commonwealth of Australia (Australia) are selected and provided herewith to give a concise view of how COVID-19 may have transitioned across a few boundaries.

In the UK, the first confirmed case of COVID-19 was reported on 31 January 2020. Cases in the UK initially peaked in 2020, precisely in April/May. After a few weeks of decline, there occurred the second and third waves leading to a surge in the number of cases above the figure recorded during the initial peak. In response to the COVID-19 pandemic, on 23 March, the UK government implemented a range of measures, including travel restrictions, social distancing measures, closures of entertainment, hospitality, non-essential shops and indoor premises, and increased testing. (IMF, 2021). A recent report by the UK's Office

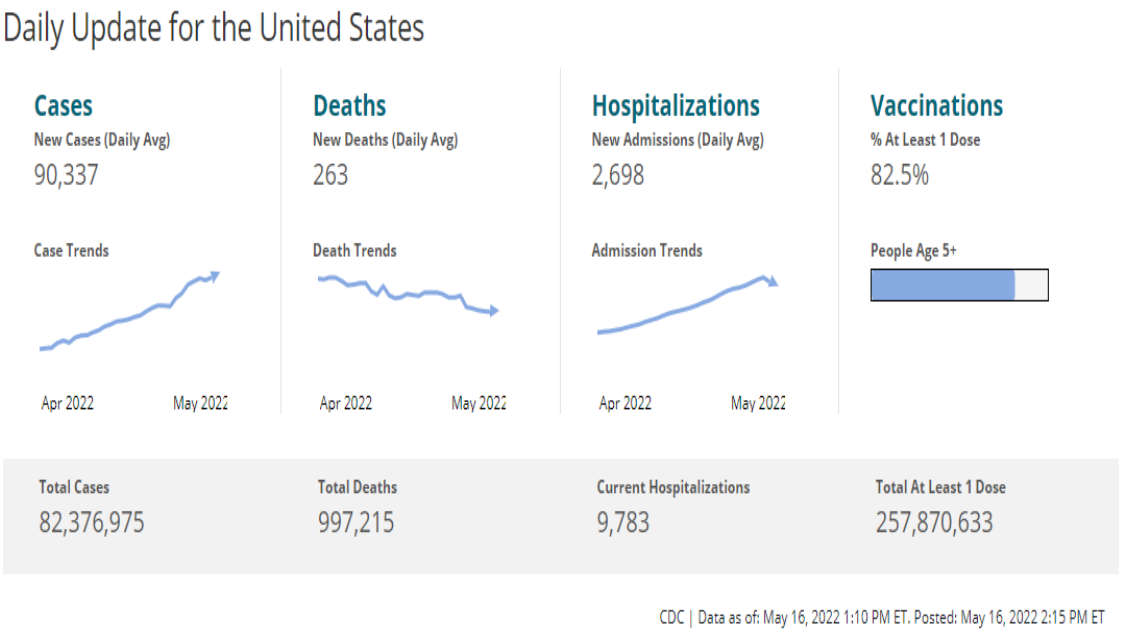
of National Statistics (ONS) for the week ending 7 May 2022 reads: "The percentage of people testing positive for coronavirus (COVID-19) continued to decrease in England, Wales, Northern Ireland and Scotland. In England, we estimate that the number of people testing positive for COVID-19 was 1,204,100 (95% credible interval: 1,142,200 to 1,269,800), equating to 2.21% of the population or around 1 in 45 people. In Wales, we estimate that the number of people testing positive for COVID-19 was 88,300 (95% credible interval: 72,800 to 105,300), equating to 2.91% of the population or around 1 in 35 people. In Northern Ireland, we estimate that the number of people testing positive for COVID-19 was 33,800 (95% credible interval: 24,600 to 43,900), equating to 1.84% of the population or around 1 in 55 people. In Scotland, we estimate that the number of people testing positive for COVID-19 was 158,200 (95% credible interval: 135,400 to 181,800), equating to 3.01% of the population or around 1 in 35 people." (UK Government, 13 May 2022). As shown in Figure 2.6d1, COVID-19 has led to about 177,410 deaths in the UK. (BBC News, 17 May 2022).

Figure 2.6d1: **Coronavirus in the UK.** (BBC News, 17 May 2022).



In the US, the first confirmed case of COVID-19 was reported in January 2020. There occurred a rapid spread of infection same year though in March/April prompting a range of containment actions by the US government. The containment measures varied by state and geographical area. Many states implemented mask mandates and placed restrictions on business and activities while promoting the vaccination program. (IMF, 2021). In first confirmed case to the 16 May 2022, circa 1 million human deaths have died from COVID-16 in the US as illustrated in Figure 2.6b2 by CDC, United States.

Figure 2.6d2: **Coronavirus Data: Daily Update for the United States** (Centers for Disease Control and Prevention, 17 May 2022).



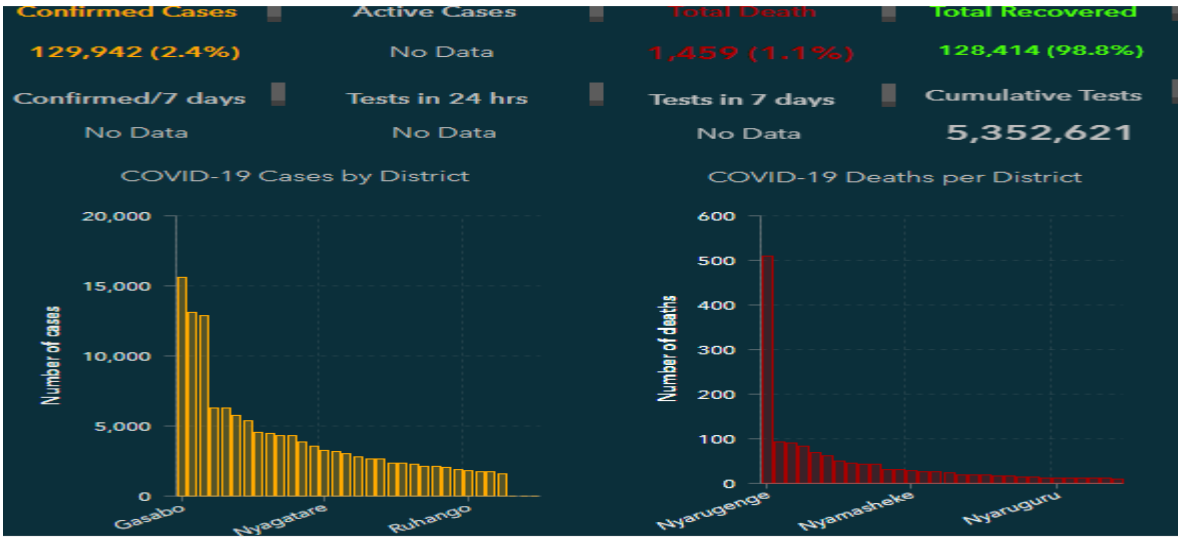
In the People's Republic of China, it was in January 2020 that the Chinese authorities found that a novel coronavirus is the cause of a pneumonia outbreak in Wuhan. The subsequent response was that the Chinese government rolled out

containment measures, viz. “The lockdown of Hubei province, large-scale mobility restrictions at the national level, social distancing, and a 14-day quarantine period for returning migrant workers. Reflecting these containment measures, the economy contracted by 6.8 percent (yoy) in 2020 Q1.” (IMF, 2021). In mid-February 2020, the Chinese government gradually removed several restrictions and prioritised essential service sectors, selected industries, and some population groups based on risk assessments. Most businesses and schools reopened, though social distancing rules remained in several places. There were localised movement restrictions, which included (though in no way limited to only the) foreigners being prevented from accessing new hot spots. In a recent report on China's COVID-19 data, published by China Daily and illustrated in Figure 2. 6d3, circa 5,022 people have already died from COVID-19 as of 29 April 2022. (China Daily, 30 April 2022).

Figure 2.6d3: **Latest Epidemic Data on Chinese Mainland by China’s National Health Commission.** (China Daily, 30 April 2022).

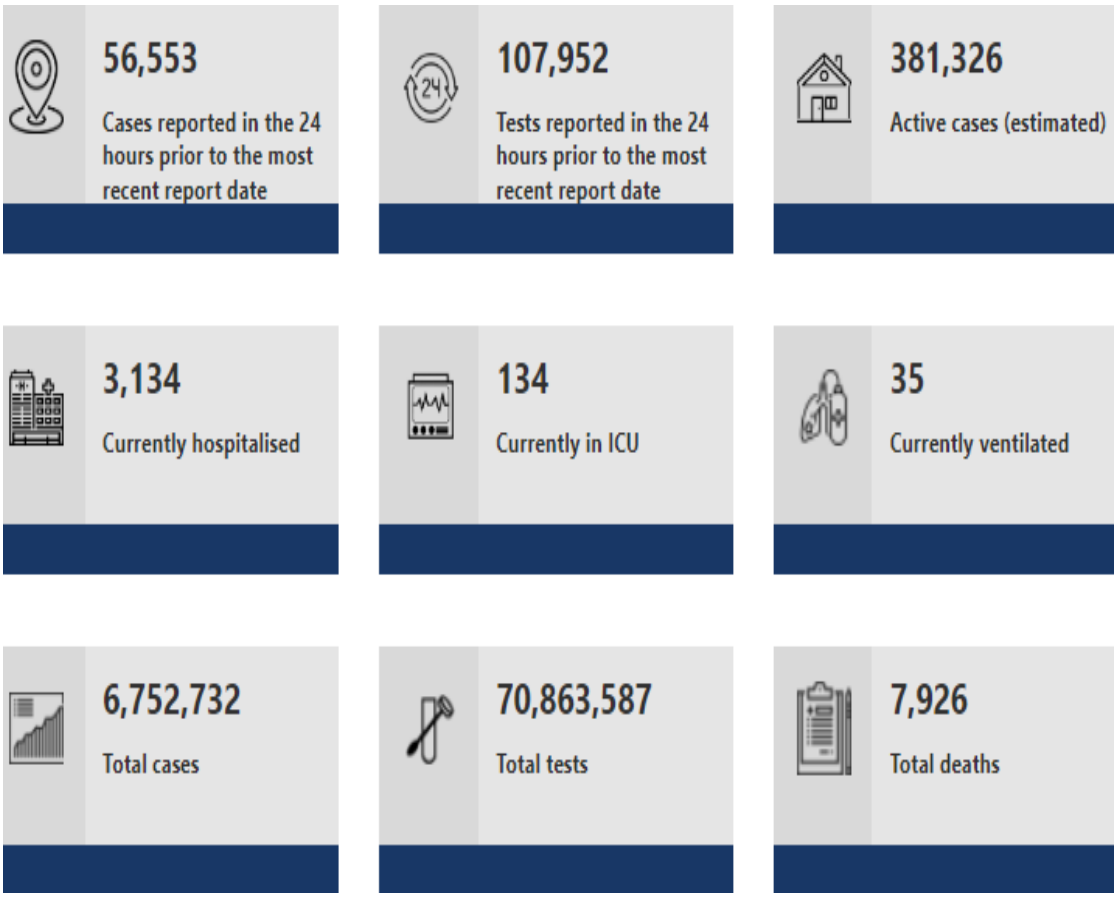
The first confirmed case of COVID-19 in Rwanda was reported on 14 March 2020. Hence the Rwandan government adopted a range of containment measures, “including border closure, suspension of domestic travel, cancellation of public gatherings, instituting teleworking, closure of schools, places of worship and non-essential businesses, and mandatory wearing of face masks.” (IMF, 2021). In early May 2020, the government of Rwanda started implementing a gradual easing of lockdown measures by allowing selected businesses to resume operations while adhering to strict health guidelines. Domestic travel and movement restrictions were partially relaxed. Physical distancing measures remained in force in several public places. Bars and schools were shuttered. The places of worship and selected outdoor sports activities were allowed to reopen. However, commercial flights did not resume until 1 August 2020. (IMF, 2021). As of 17 May 2022, 1,459 people have so far died from COVID-19 as shown in Figure 2.6d4.

Figure 2.6d4: **COVID-19 Confirmed Cases by District in Rwanda.** (Rwanda Biomedical Centre, 17 May 2022).



In Australia, the first COVID-19 case was announced in January 2020. The government rolled out containment measures like the social distancing measures and temporarily banning public gatherings of more than two people at any given time and suspending the operation of non-essential businesses. The containment measures were relaxed in May 2020. A few months later, in July, there occurred a resurgence of the disease. So, the government imposed a renewed lockdown and tightened restrictions is some areas. As of 18 May 2022, more that 95% of people aged 16 and over are fully vaccinated. (Commonwealth of Australia | Department of Health, 19 May 2022). In the Commonwealth of Australia, 7,926 people have died from COVID-19 as of 18 May 2022. See Figure 2.6d5.

Figure 2.6d5: **Coronavirus (COVID-19) Case Numbers and Statistics in Australia**. (Commonwealth of Australia | Department of Health, 19 May 2022).



PART 3

RESPONSES TO THE COVID-19 PANDEMIC

2.7 Introduction

COVID-19 created some crises. (Seetharaman, 2020). A crisis is "characterized by the threat to the survival and/or goals, uncertainty as to its causes, effects, and means of resolution, and there is urgency because losses can escalate, if it is not quickly contained." (Gopalakrishnan & Kovoor-Misra, 2021, p. 2).

The impact of the COVID-19 pandemic considering the surge in infection and mortality rates may not have fully unfolded (Soto-Acosta, 2020). Any identified impact of COVID-19 cannot be said to be proportionate across an economy or economies because in some sectors there are businesses that are able to enhance their value and benefit in financial terms while there are others that would suffer significant losses. (Turner & Akinremi, 2020).

Bloom, Fletcher & Yeh (2021) argue that the observable unevenness or wide dispersion of the economic impact of the COVID-19 pandemic can be explained in several ways by perusing the characteristics of and type of business, ascertaining the extent by which digital technology is deployed in the supply of products and service, and determining the degree of online or offline presence for business purposes. On one side, the pandemic creates crises and challenges for business organisations; while on another side it presents several opportunities for generating innovative ideas and creating new business models that would enable

businesses survive through the crises. (Seetharaman, 2020). Turner & Akinremi (2020) found that during a crisis new opportunities and new business models could emerge. In this context, the concept “disaster entrepreneurship”, which Linnenluecke and McKnight (2015) illustrate, comes to the fore and aids further understanding of businesses exploiting a crisis by unravelling more opportunities to create or maintain value, profit, and grow, despite a dire situation.

As the world battles the COVID-19 pandemic, many businesses across the globe are implementing response policies and strategies and continue to abide by several containment measures set by regulatory bodies aimed at tackling the pandemic and avoiding further escalation of the negative impacts of the pandemic on business activities. (Soto-Acosta, 2020). Many Small and Medium-sized Enterprises (SMEs) are rethinking their core competencies, seeking new opportunities, and redefining sustainable business models in a more intense and timely manner in a way that would address the observed impacts of COVID-19 pandemic. (Gregurec, Furjan & Tomičić-Pupek, 2021, p. 17). As businesses strive towards responding to the COVID-19 pandemic, they “innovate [by] either reducing the threat from the physical interdependence in their core technologies or buffer themselves from the risks associated with this interdependence” through a collaboration with another business or an in-house driven product and process innovation. (Gopalakrishnan & Kovoor-Misra, 2021, p. 5).

2.7a Product and Service Innovation

Product and service innovation can lead to developing new outputs. (Gopalakrishnan & Kovoor-Misra, 2021). Apedo-Amah et al. (2020) argues that

the COVID-19 pandemic is behind some of the reasons many businesses are carrying on with product innovations, either by introducing a new service or product, or by changing one or more service(s) or product(s). In the biomedical and pharmaceutical sector, several businesses have introduced new products to tackle COVID-19. In the WHO list of new products for emergency use there are new vaccines like Comirnaty COVID-19 mRNA vaccine manufactured by Pfizer/BioNTech; ChAdOx1-S (recombinant) made by AstraZeneca; COVID-19 vaccine Ad26.COV2.S developed by Janssen (Johnson & Johnson); mRNA-1273 vaccine created by Moderna. (World Health Organisation, 2021). Some of the other product innovations that, arguably, came into fruition due to the COVID-19 pandemic are as follows: 3D-printed swabs designed using artificial intelligence (AI); over the counter COVID-19 tests; and Docdot, a mobile app that uses artificial intelligence to enable clinicians to monitor vital signs remotely, which was developed by Italy-based SDG Group. (Jones, 2020).

Procter & Gamble (2020) modified its equipment to enable it produce hand sanitizers and non-medical face masks in many of its manufacturing sites; and the company has been leveraging on its research and development (R&D) capacity, engineering expertise, and manufacturing capability to make face shields. Ford Motor Company and GE Healthcare teamed up to design and produce a new version of both respirators and ventilators. (Ford Media Center, 2020).

2.7b Process Innovation

In a sample survey of UK-based businesses, which aims to determine the how several business organisations are responding to the COVID-19 pandemic,

Riom & Valero (2020) found that many businesses are reshaping their operations in a manner that appears to illustrate a process innovation. Christa and Kristinae (2021, p. 151) argue that several businesses are changing "the paradigm of business thinking and methods by making more innovative ideas" to improve performance following a decline in income due to the COVID-19 pandemic. With COVID-19 creating uncertainties and disruptions across sectors and industries, many businesses are adjusting their models and making changes on how to carry on engaging in their activities. (Priyono, Moin & Putri, 2020).

In other words, a process innovation, which basically encompasses new ways–activities, approaches, and methods–like new technologies being deployed and used in production is serving in mitigating the impact of the COVID-19 pandemic.

2.7b1 Digital Transformation

Part of the process innovative response strategy of businesses as the COVID-19 pandemic continue impacting on businesses across the globe is digital transformation. Digital transformation involves creating new business models or making significant changes that complement existing ones and drive significant changes in the business model. (Soto-Acosta, 2020).

As various authorities tackled the surge in the COVID-19 infection rate through containment measures, including restricting on-site (in person) sales, the digitalisation drive may have deepened. Several businesses are adopting a digital replacement or improvement that safely delivers their

products and services with minimal physical contact to avert a plunge in sales revenue. (Seetharaman, 2020; Gregurec et al., 2021). Many businesses that are impacted by the COVID-19 pandemic, such as, entertainment, retail food chains are implementing or reinforcing digitalisation to avert major losses. (Soto-Acosta, 2020). “SMEs have had to seek and find opportunities to reinvent themselves or their services, and develop new business strategies, and deliver remote operations by digitising business activities.” (Gregurec, Furjan and Tomičić-Pupek, 2021, p. 9). Some SMEs are implementing a techno-economic paradigm, which features robotisation, digitalisation, and the formation of smart businesses. (Gregurec et al., 2021).

Since the outbreak of COVID-19, many businesses have been embracing new practices–including innovative technologies and new management procedures–and these changes are attributed to the battle for survival in this pandemic period. (Riom & Valero, 2020). Video conferencing and network communication are being deployed by businesses and institutions in a larger scale in the face of COVID-19. (Gopalakrishnan & Kovoor-Misra, 2021). Given the impact of COVID-19, many businesses are utilising digital technologies, learning new skills, and acquiring the knowledge needed to operate in this emerging new digital-oriented environment and maintain survival. (Gregurec, Furjan & Tomičić-Pupek, 2021). Soto-Acosta (2020) notes that in several industries, there are businesses recording accelerated digital transformation of their operations with Zoom, an online audio/video/telephony communication package,

emerging as one of the most frequently used. For example, many traditional educational organisations are continuing with their activities in response to the new normal despite restrictions in the form of lockdown and social distancing. Soto-Acosta also argues that “many traditional restaurants have launched online delivery services by either joining digital food delivery platforms, creating their own apps or digitally enabled means to connect with customers and receive orders.” (Soto-Acosta, 2020, p. 262).

A remarkable shift towards online environment is evident as the consumers’ purchasing behaviour have been changing considering the containment measures, including the restrictions on movement. (Gregurec, Furjan & Tomičić-Pupek, 2021). With the lockdown period declared in various countries to tackle COVID-19, the data on digitalisation, especially those relating to the online purchases and home delivery, are illustrating an unprecedented rise in the business volume of several businesses. (Soto-Acosta, 2020).

Turner and Akinremi (2020) believe that the idea of responding to the COVID-19 pandemic by improving on online and digital-driven transactions has been a boost considering sales volume. In fact, the current data depict how online-powered businesses, local convenience stores, and healthcare firms and institutions are experiencing an upsurge in demand for their products and services despite the COVID-19 protocol and containment measures by regulatory bodies and government. (Turner and Akinremi, 2020). Many SMEs are embracing virtual operations in the hope

that it would sustain competitiveness, productivity, and business performance. (Gregurec, Furjan & Tomičić-Pupek, 2021, p. 10). "Universities are introducing blended-learning courses that combine both traditional face-to-face learning and e-learning. Similarly, in responding to the COVID-19 pandemic, artists [have added] online live performances together with less crowded traditional performances." (Soto-Acosta, 2020, p. 262).

With the short-term impact of COVID-19, many businesses are adopting a widened scale and speed of digital transformation in addition to expanding the use of digital platforms–the Internet, social media–to achieve the following: (i) Bridge the technology gaps with competitors; (ii) Respond to the various regulatory bodies restriction on economic activities; (iii) Circumvent depressed demand; (iv) Overcome the restrictions on businesses ability to engage in on-site or in person sales; and (v) Conform with the supposedly new normal like employees working remotely or from their homes due to several restrictions on mobility and social gathering. (Apedo-Amah et al., 2020 & Priyono et al. 2020).

Soto-Acosta (2020) argues that COVID-19 has accelerated digital transformation, swaying many entities to take measures that could help sustain their businesses. Seetharaman (2020, p. 4) believes that the measures that facilitate digital replacements or unravel ways of safely delivering products and services with minimal physical contact has "presented opportunities for firms to be innovative in redesigning their existing products; designing alternative digital products and services;

[rethinking] their product and service delivery channels and mechanisms; and [looking] for strategic positions and partners in the new ecosystem who can help them achieve these."

2.7b2 Collaboration and Partnership

Magretta (2002) & Rüb et al. (2017, June) emphasise that relationships and alliances are at the core of innovative business models. The forging of partnerships may be influenced by three motivations, which are, optimisation and economy of scale, reduction of risk and uncertainty, and acquisition of resources and activities. (Osterwalder & Pigneur, 2010).

Given the challenges posed by the COVID-19 pandemic, many hospitals are partnering with technology firms in the hope that they would gain access into a range of tech tools, such as, online symptom checkers and virtual visit that facilitate the delivery of remote services. (Gopalakrishnan & Kovoor-Misra, 2021).

Many health systems are turning towards self-triaging tools to help people to check for symptoms before asking to be put through to a doctor. (Padmanabhan, 2020, section 1, para. 1). "Digital health solutions were also in high demand on the COVID-19 frontline... Remote patient monitoring devices were deployed to monitor patients' vital signs from a distance, allowing for a significant reduction in close contact between patients and healthcare workers." (Health Europa, 2020, section 3, para. 1).

Ford Motor Company is working with 3M to manufacture at scale Powered Air-Purifying Respirators (PAPRs); and collaborates with GE

Healthcare in a making ventilator design; and cooperates with the United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) on making plastic face shields. (Ford Media Center, 2020). In one of the measures taken to support their drivers in the wake of the COVID-19 outbreak, UBER, a transport service business, "partnered with third parties such as Ocado and Adecco to provide alternative earnings opportunities during these difficult times." (UBER, 2021). Some hospitals are partnering with various technology companies to adopt innovations that “partially reduce their interdependence with their infected patients.” (Gopalakrishnan & Kovoor-Misra, 2021, p. 4).

2.7b3 Work Bubbles

Haislop (2020) said that the National Basketball Association (NBA) figured it could get players, teams, teams’ coaches, and the Basketball league’s personnel into one place provided the participants have taken the COVID-19 test and have proof of a negative result. The NBA also considered instituting certain measures and restrictions that would shield participants against contracting in a bubble and how best it could preserve the health and safety for all involved during games. (Haislop, 2020). Thereafter, the NBA operated a "bubble campus" at the Walt Disney World Resort in Orlando, Florida, thereby making it possible for teams to play a total of 171 games that helped the league to overturn a potential loss of $1.5 billion in expected revenue. (Beer, 2020). Inside the NBA-organised bubble is a tap-to-cheer app and video technology that makes it possible for

the faces of fans and other members of the public to watch games from the comfort of their various. (Asmelash, 2020).

"In addition to working from home protocols for office staff, Bombardier also implemented physical distancing practices through the use of “work bubbles” for essential employees supporting the continuing manufacture and customer delivery of business aircraft. Other measures included extensive training, testing trailers set up at all of its manufacturing sites, physical distancing protocols, tool disinfecting stations, and personal protective equipment (PPE) requirements among others–all of which ensured the safety and well-being of Bombardier’s employees and operations." (Bombardier, 2021). Bombardier, a renowned brand in jet manufacturing business, did receive the 2021 Health and Safety Mercure award for its innovative health and safety program–a range of preventive safety measures–to protect its workers and operations.

“Despite some challenges, work bubbles offer benefits, including reducing the reproduction number of the disease; increasing efficiency of contact tracing; protecting employees from contracting severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) at work; increasing employee confidence in workplace safety; and allowing for business to continue in the case of positive cases.” (News-Medical.net, 2020).

2.7b4 Furlough

Many businesses signed up to the furlough scheme by placing part or all their workers on paid temporary leave to minimise physical contact

and help to reduce the spread of the disease. The furlough scheme is part of the containment measures adopted in Israel, Peru, Poland, Slovenia, United Kingdom, Ukraine, Barbados, and Brazil to tackle COVID-19. (IMF, 2021).

In a study of UK businesses conducted in July 2020, Riom & Valero (2020, p. 4) found that "75% had transitioned to remote working, partially or in full. While over 70% had furloughed staff, a quarter of surveyed firms had already made staff redundancies in response to the COVID-19 pandemic." Also in the UK, "approximately two in five businesses [are] furloughing staff in January, according to [the] Business Insights and Conditions Survey (BICS) furlough and Coronavirus Job Retention Scheme (CJRS) statistics' provisional estimates." (ONS, 2021, section 1, para. 2). So, there are several businesses in the UK that are putting their workers on temporary leave or furlough, thereby taking advantage of the Government's Coronavirus Job Retention Scheme (CJRS) which runs until 30 Sept. 2021. In Ukraine, "employers are [being] compensated for wages paid to [the] partially furloughed employees." (IMF, 2021).

2.7b5 Safety Measures in Workplaces

Several measures taken by Emirates Airlines to minimise the scathing impact of the COVID-19 pandemic on its business operations, workers, passengers, and operational tools include the following: On-site rapid COVID-19 tests; Application of social distancing guidelines;

Installation of protective barriers in its area of operation; Compulsory use of gloves, masks, and hand sanitizers by Emirate employees and passengers at the airport and on board the company's aircraft. (Emirates Airlines, 2020).

In the UK, several businesses have signed up to the COVID-19 workplace test programme, which is designed to detect asymptomatic cases, thereby protecting workers, operations, and workplaces against the disease by ensuring immediate isolation in cases of a positive result. "The hope is that asymptomatic cases can be detected quickly, thereby preventing workplace outbreaks because a rapid Covid-19 testing provides results in less than 30 minutes, helping people to "isolate immediately." (BBC, 2021, para. 4-5).

2.7b6 Vaccination and COVID-19 Booster Vaccine

In U.S., the Government initiated Operation Warp Speed (OWS), a public-private partnership. The OWS goal being "to produce and deliver 300 million doses of safe and effective vaccines with the initial doses available by January 2021, as part of a broader strategy to accelerate the development, manufacturing and distribution of COVID-19 vaccines, therapeutics, and diagnostics (collectively known as countermeasures)." (U.S. Department of Health & Human Services, 2020). OWS is yielding positive results with the manufacture of the first COVID-19 vaccine by two multinational corporations: Pfizer Inc., an American pharmaceutical company, and BioNTech SE, a German biotechnology company.

The rapid vaccination programme to tackle the COVID-19 pandemic started in early December 2020 following WHO's listing of Pfizer/BioNtech Comirnaty vaccine for emergency use on 31 December 2020. The next vaccine approved for use is the SII/Covishield and AstraZeneca/AZD1222 vaccines (developed by AstraZeneca/Oxford and manufactured by Serum Institute of India and SK Bio respectively), which were given WHO's Emergency Use Listing (EUL) on 16 February 2021. Thereafter came the Janssen/Ad26.COV 2.S developed by Johnson & Johnson and listed for EUL on 12 March 2021; the Moderna COVID-19 vaccine (mRNA 1273) listed for EUL on 30 April 2021; the Sinopharm COVID-19 vaccine listed for EUL on 7 May 2021 and the Sinovac-CoronaVac was listed for EUL on 1 June 2021. (WHO, 2021).

COVID-19 booster vaccines have been accepted by several governments across the globe, including the US, UK, Germany, Austria, Belgium, Sweden, France, Lithuania, Hungary, and many others. (Politico, 2020). In the UK, the Government says it relied on the independent Joint Committee on Vaccination and Immunisation (JCVI) to reach a conclusion that the booster vaccines are essential. In a statement, the UK government said: "The programme will be rolled out to the same priority groups as previously. This means care home residents, health and social care workers, people aged over 50, those aged 16 to 49 years with underlying health conditions that put them at higher risk of severe COVID-19, adult carers, and adult household contacts of immunosuppressed individuals will be prioritised." (UK Government, 2021).

2.7b7 Insurance and Financial Support Scheme by UK and U.S.

A report by the Organisation for Economic Co-operation and Development (OECD) notes that the COVID-19 outbreak has led to a slowdown of economic activities and the implementation of containment guidelines by some state actors, thereby creating enormous challenges for companies striving to meet their financial obligations. (OECD, 2020, p. 1). The OECD also said: "Many of the fixed costs, such as rents and interest payments, remain due while the cash flow destined to meet these obligations has vanished. As a result, many otherwise sound companies are facing acute liquidity constraints that eventually might become solvency problems."

In the US, to avoid or minimise losses, liquidity issues, and bankruptcies, several businesses keyed into business loans and other assistance scheme provided by the government. Some of the assistance schemes are: (i) The Paycheck Protection Program (PPP) "offers loans to help small businesses and non-profits keep their workers employed" though there is a possibility that the loans may be forgiven and businesses might be eligible for a second draw even after taken one; (ii) An Economic Injury Disaster Loan (EIDL), which "helps small businesses and non-profits that are losing money during the coronavirus pandemic and that need funds for financial obligations and operating expenses"; (iii) SBA's Debt Relief Program helps businesses to "pay the principal, interest, and fees for six months for 7(a), 504, and Microloans disbursed before September 27, 2020"; and (iv) Shuttered Venue Operators Grant, a

grant worth 45% of one's gross earned revenue set aside for talent representative or someone who runs a theatre, museum, or a live performing arts or event venue. (USAGov, 2021, section 2).

In the UK, the self-employed individuals are benefiting from Self Employment Income Support Scheme (SEISS). While businesses signed up to the Coronavirus Job Retention Scheme (CJRS) to support their workers. There are deferred tax payments and tax holidays for many. In addition to the (CJRS), businesses have signed-up with several other UK Government support initiatives, viz. Coronavirus Business Interruption Loan Scheme (CBILS) for SMEs, Coronavirus Large Business Interruption Loan for bigger businesses, Bounce Back Loan Scheme (BBLS), tax relief and cash grants, and a scheme that makes self-employed people eligible for a taxable grant covering 80% of trading profits in some circumstances. (UK Government, 2021a). In a report, the International Monetary Fund (IMF) said that many UK-based businesses are benefiting from the deferred VAT payment scheme of the Government. (IMF, 2021). The UK also strengthened "the social safety net to support vulnerable people (£8 billion) by increasing payments under the Universal Credit scheme as well as expanding other benefits." (IMF, 2021). The UK Government in collaboration with some insurers started a Trade Credit Reinsurance scheme to ensure that trade credit insurance coverage and credit limits are not disrupted during this pandemic, thereby boosting the confidence of businesses, and helping to maintain normal trade. (UK Government, 2020).

2.7b8 Monetary and Macro-Financial Interventions by UK and U.S.

In the UK, some of the key measures that weaken the impact of the rising contagions and COVID-19 on businesses include: (i) Activating a Contingent Term Repo Facility (CTRF) that complements the Bank of England's existing sterling liquidity facilities; and collaborating with the central banks of other countries–U.S., Japan, Canada, Switzerland–to promote liquidity through the US dollar liquidity swap line; (ii) Introducing a new mortgage guarantee scheme for borrowers with a deposit of just 5 percent on homes; (iii) Temporary stamp duty land tax (SDLT) exemption. (IMF, 2021).

In the US, the Federal Reserve introduced several facilities to support the flow of credit. In some cases, the facilities are backed by the Treasury by using the funds appropriated under the CARES Act. Some of the facilities are:

(i) Commercial Paper Funding Facility
(ii) Primary Dealer Credit Facility
(iii) Money Market Mutual Fund Liquidity Facility (MMLF)
(iv) Primary Market Corporate Credit Facility
(v) Secondary Market Corporate Credit Facility
(vi) Term Asset-Backed Securities Loan Facility
(vii) Paycheck Protection Program Liquidity Facility (PPPLF)
(viii) Main Street Lending Program
(ix) Municipal Liquidity Facility. (IMF, 2021)

Also reported by the IMF is that the US banking supervisors urged depository institutions to use liquidity buffers and capital to lend, and work constructively with borrowers affected by COVID-19 on the understanding

that COVID-19 related loan modifications would not be classified as troubled debt restructuring.

2.7b9 Keeping up with the Customers

Some restaurants and eateries that hitherto adopted the traditionally dine-in [on-site and in-person service] have rejigged their hitherto operation style in a response to the COVID-19 pandemic by producing, packaging, and delivering food items that can be delivered to the doorsteps of consumers. (BBC, 2020). “Unsurprisingly, restaurants with high off-premises sales prior to the crisis are faring better than those that relied more on dine-in sales.” (McKinsey & Company, 2020).

2.7b10 Off-Site Operations

White (2020, para. 2) argues that COVID-19 outbreak “forced strategic business pivots and the immediate invention of new ways to make money when much of the economy shut down in March”. White (2020, para. 3) adds that “work was done in backyards, cramped lofts, even cars. Good lighting, plentiful space and ergonomically correct surroundings became a vague memory.”

2.7b11 Vaccine Mandate and Vaccine Passport

In many countries, there are debates on whether mandatory vaccination should be part of the containment measures to tackle COVID-19. The argument of the proponents of a compulsory vaccination regime is

that it could suppress, weaken, and halt the spread of COVID-19 cum its variants–like the B.1.617.2 (Delta) variant; promote the COVID-19 vaccines and vaccination schemes to protect the people from getting either infected or severely ill; significantly reduce both hospitalization and mortality rate. (The White House, 2021, September 9; UK Government, 2021, September 9).

In a statement on 13 October 2021, Timothy P. Broglio, the Archbishop for the Military Services, USA, said: “No one should be forced to receive a COVID-19 vaccine if it would violate the sanctity of his or her conscience.” Archbishop Broglio notes a famous quote of St. Paul VI, which read: “In all his activity a man is bound to follow his conscience in order that he may come to [our] God, the end and purpose of life. It follows that he is not to be forced to act in a manner contrary to his conscience. Nor, on the other hand, is he to be restrained from acting in accordance with his conscience, especially in matters religious.”

In the UK, the government announced September 2021 the opening of public consultations on making COVID-19 vaccination a condition for deploying people to work in healthcare settings. Before the consultations, the government had declared that COVID-19 vaccination is a prerequisite for people entering any of the registered adult care home, unless exempt. In the U.S., President Biden, inked an Executive Order (Executive Order on Requiring Coronavirus Disease 2019 Vaccination for Federal Employees) on 9 September 2021, saying: “It is necessary to require COVID-19 vaccination for all Federal employees, subject to such exceptions as

required by law." However, it should be noted that the WHO did issue what appear to be a statement of caution. In a 2021 policy brief entitled 'COVID-19 and mandatory vaccination: Ethical considerations and caveats,' the World Health Organisation notes that it is not unusual for state actors and institutions to mandate certain actions or types of behaviour to protect the wellbeing of individuals or communities. Such mandates could be ethically justified if it serves to protect the health and wellbeing of the public, the WHO argued. "Mandatory vaccination should be considered only if it is necessary for, and proportionate to, the achievement of an important public health goal (including socioeconomic goals) identified by a legitimate public health authority. If such public health goal (e.g., herd immunity for protecting the most vulnerable and safeguarding the capacity of the acute health care system) can be achieved with less coercive or intrusive policy interventions (e.g., public education), a mandate would not be ethically justified, as achieving public health goals with less restriction of individual liberty and autonomy yields a more favourable risk-benefit ratio." (WHO 2021, April 13, pp.1-2)

To mitigate the COVID-19 crisis and encourage vaccination, several countries have embarked on vaccination campaigns and have considered issuing vaccine passports to all the vaccinated persons to restrict the unvaccinated from accessing several facilities and places and serve as a condition of entry into a venue or event. (Grover, 2021).

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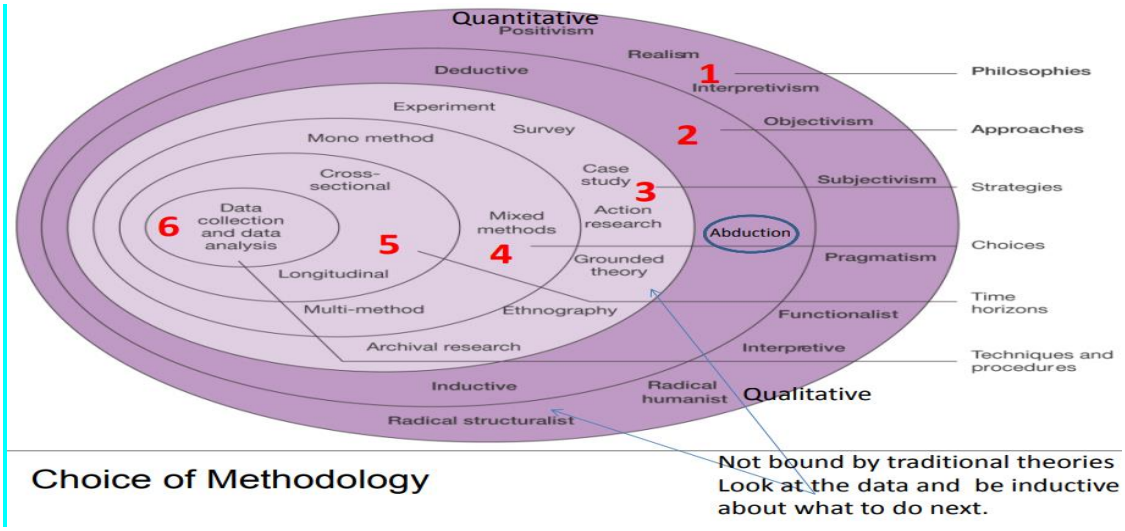
CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Method and Methodology

Research method is a "technique or way to gather evidence about a phenomenon. Methods are the specific research tools we use in research projects to gain fuller understanding of phenomena. These methods or tools can be used in many different approaches in research." (deMarrais and Lapan, 2004, p. 4). While research methodology encompasses research philosophy, methods of data collection and analysis, research design, sampling, research approach. (Dudovskiy, 2018). The term methodology is much more than the methods or tools of research because it incorporates the entire approach in research. (deMarrais & Lapan, 2004).

Figure 3.1a: **"Research Onion adapted from ref: Saunders, Lewis & Thornhill (2012)."** (Mitchell, 2018, p. 104).



3.1a Research Philosophy

Quantitative research mainly underlies this research. The quantitative method encompasses the collection of numerical data, which is the core ingredient for carrying out mathematical based research. (Creswell, 1994) and (Sukamolson, 2007). A quantitative approach is compatible with random sampling and structured format in data collection. (Dudovskiy, 2018; Sukamolson, 2007). A quantitative research method enables a researcher to report statistical analysis as though data collected for the purposes of the research are run through a 'black box'. (Marsh & Stoker, 2002).

The various classifications of the quantitative research are survey research, correlational research, experimental research, and causal-comparative research; and each of these types has unique characteristics. (Sukamolson, 2007).

3.1b Research Approach

Dudovskiy (2018) posits that the approaches for research can be divided into three types: Abductive, Deductive, and Inductive. This research would follow a deductive approach, which is compatible with the quantitative research strategy.

3.1c Research Strategy

In survey research, a questionnaire and a scientific sampling approach are often used to collect data and statistically measure the characteristics of the population under study. (Hutchinson, 2004; and Sukamolson, 2007). Sukamolson adds that "survey research is the systematic gathering of information from respondents for the purpose of understanding and or predicting some aspects of the

behaviour of the population of interest." Hutchinson's 2004 exposition in which a reference is made to a work by Bateson entitled '*Data construction in social surveys,'* includes that one of the overriding assumptions that drive survey research is that "survey responses reflect the reality of the respondent to the greatest extent possible. Specifically, survey research assumes that **'**if we ask someone about his world, we can expect that under normal conditions, he will tell it as it is.**'** (Bateson, 1984, p. 11)." (Hutchinson, 2004, p. 287).

Based on the foregoing submission, the survey research, which is one of the classifications of quantitative research, would be maintained in this work because it is a key research strategy that is applicable to this study.

3.1d Sampling

The population for this research is arguably large. Good samples that are representatives of the population and have the characteristics of the population are key in this work. In adopting the sampling technique, due consideration of some explanations on what is sampling becomes necessary. One of such valuable explanation is that "sampling is the statistical process of selecting a subset (called a "sample") of a population of interest for purposes of making observations and statistical inferences about that population." (Bhattacherjee, 2012, p. 65). Under the probability sampling technique, the simple random sampling is one of the options that makes it possible for each member of the population having the chance of being chosen as part of the sample. (Dudovskiy, 2018).

Sampling is compatible with the quantitative research strategy. The respondents would be chosen by random sampling.

3.1e Data Collection

Research design encompasses all the plan that serves to answer a research question. (Dudovskiy, 2018). “Research design is a comprehensive plan for data collection in an empirical research project. It is a “blueprint” for empirical research aimed at answering specific research questions or testing specific hypotheses; and must specify at least three processes: (i) The data collection process; (ii) The instrument development process; and (iii) The sampling process.” (Bhattacherjee, 2012, p. 35).

In this context, further pivotal argument expressed by Bhattacherjee (2012) are: A structured survey questionnaire can be used to collect quantitative data, and a researcher may use open-ended questions to collect qualitative data that may generate information not otherwise available from a quantitative data alone; “answers obtained through closed-ended questions with multiple choice answer options are analysed using quantitative methods and they involve pie-charts, bar-charts, and percentages” (p. 98); and research questions are “specific questions about a behaviour, event or phenomena of interest that you wish to seek answers for in your research.” (p. 21). Bhattacherjee (2012) caution against narrowly crafted research questions that end with a binary yes or no answer because such series of research questions are less useful and less suitable to comprehend the, perhaps, often subtle nuances of social phenomena. Close-ended questions are a feature of quantitative method and helps to answer the questions of why, what, or how using a questionnaire. (Dudovskiy, 2018).

In research, the survey method seems very compatible with the use of close-ended questionnaires–the primary data collection tool for this research. This

study, to a large extent, is predicated on ‘survey research,’ which Sukamolson (2007) describes as a quantitative-based and compatible with sampling and close-ended questionnaire. The Questionnaire Design for the research is attached herein and marked ‘Appendix A – PhD Research Questionnaire.’

Boone and Boone (2012) aver that the Likert scale is a commonly adopted technique used by social scientists and “extension professionals” for research purposes. The scaling technique, Likert, “is a very popular rating scale for measuring ordinal data in social science research. This scale includes Likert items that are simply worded statements to which respondents can indicate their extent of agreement or disagreement on a five or seven-point scale ranging from ‘strongly disagree’ to ‘strongly agree’.” (Bhattacherjee, 2012).

Likert technique facilitates the collection of numeric data that can be statistically analysed by making a provision for the research respondents to choose only a single answer from multiple choice, for example, strongly agree (1), agree (2), not sure (3), disagree (4), and strongly disagree (5). The Likert scale creates room for the respondents in research to “show their level of agreement (from strongly disagree to strongly agree) with the given statement (items) on a metric scale.” (Joshi et al., 2015, p. 397). With the Likert rating scale, data that are not naturally available as numbers could still be measured numerically. (Sukamolson, 2007).

One of the important characteristics of the Likert-type scale is that it enables a questionnaire respondent to select from a list of multiple-choice answer options by choosing only one answer when solving a particular question. (Heiberger and Robbins, 2014).

"**A** survey scale represents a set of answer options—either numeric or verbal—that cover a range of opinions on a topic. It's always part of a closed-ended question (a question that presents the respondents with pre-populated answer choices). So, what is a Likert scale survey question? It is a question that uses a 5 or 7-point scale, sometimes referred to as a satisfaction scale, that ranges from one extreme attitude and moves into another. Typically, the Likert survey question includes a moderate or [a] neutral option in its scale." (Survey Monkey, 2020). Considering the foregoing exposition, the key attributes of a Likert scale survey seem highly compatible with the research method and methodology adopted in the research.

The research would be carried out using a standardised (survey) questionnaire that is designed with closed-ended questions and multiple-choice answer options. The estimated sample size is two hundred persons; and all the respondents would be individuals, whose job level where they work is either entry or intermediate or management level. Each of the respondents would be randomly picked.

3.1f Data Analysis Technique

Data analysis plays an important role in the research and involves "critical analysis and interpretation of figures and numbers; and attempts to find rationale behind the emergence of [the] main findings." (Dudovskiy, 2018, p. 152). The analysis of data may take a quantitative or qualitative form, however, "answers obtained through closed-ended questions with multiple answer options are analysed using quantitative methods and they may involve pie-charts, bar-charts,

and percentages." (Dudovskiy, 2018, p. 98). The data collected through survey research can be analysed via a variety of numerical or statistical methods, such as, basic forms of descriptive statistics and SPSS, the Statistical Product and Service Solutions. (Hutchinson, 2004).

Based on the research methodology for this research, the data collected through a survey would be analysed by converting the raw (excel) data file emanating from the survey into SPSS (Statistical Product and Service Solutions).

The UCLA (University of California, Los Angeles) notes that Cronbach's alpha is both "a measure of internal consistency, that is, how closely related a set of items are as a group" and "a measure of scale reliability" would be conducted. Where applicable, there would be re-coding of answer choices into numerical values when there is a need to use variables for proper analyses. There would be independent samples t-tests. Where applicable, a one-way ANOVA, which "helps in finding out if the results of the research are significant or not" and "incorporates comparing and finding variance in the means of two or more independent datasets" (Ingram, 2021) would be conducted. Also applicable to this research are Cohen's d, Levene's test for Equality of Variances, Tukey Post Hoc Test, Multicollinearity, Correlation, Skewness and Kurtosis.

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Appendix

PhD Research Questionnaire (An Assessment of the Impact of Business Plans in the COVID-19 Pandemic Period)

1. Is your company or the company where you work located in the United Kingdom?
    - Yes: _____
    - No: _____

2. Does the company have customers or clients?
    - Yes: _____
    - No: _____

3. What is your job level in the company?
    - Entry level
    - Intermediate level
    - Management level

4. Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?
    - Yes: _____
    - No: _____

5. Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?
    - Yes: _____
    - No: _____

6. Did the company's sales drop due to the impact of COVID-19 pandemic?

    - Decline in sales by up to 20%
    - Decline in sales between 20% and 50%
    - Decline in sales by more than 50%
    - Not applicable - No decline in sales

7. If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales is due to the changes or modifications in the company's business strategy or business model?

    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

8. Did the company's sales increase due to the impact of COVID-19 pandemic?

    - Sales increased by more than 50%
    - Sales increased between 20% and 50%
    - Sales increased by up to 20%
    - Not applicable - no increase in sales

9. If there has been a sales increase at any time in the COVID-19 period, would you agree or disagree that the increase in sales volume is connected to the changes or modifications in the company's business strategy or business model?

    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

10. Did the company's profit drop due to the COVID-19 pandemic?

    - Profit dropped by up to 20%
    - Profit dropped between 20% and 50%
    - Profit dropped by more than 50%
    - Not applicable - Profit did not drop

11. If there has been a drop in profit at any time during the COVID-19 pandemic, would you agree or disagree that a change or modification in the company's business strategy or business model would have reduced the impact on profit or completely prevented a drop in profit?

    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

12. Did the company record a rise in profit due to the COVID-19 pandemic?

    - Profit increased by up to 20%
    - Profit increased between 20% and 50%
    - Profit increased by more than 50%
    - Not applicable - Profit did not increase

13. If there has been a rise in profit at any time during the COVID-19 pandemic, would you agree or disagree that such a rise in profit is due to a change or modification in the company's business strategy or business model?

    - Strongly agree
    - Agree
    - Neither agree nor disagree
    - Disagree
    - Strongly disagree

CHAPTER 4

RAW DATA & STATISTICAL ANALYSIS

4.1 Introduction

In Part 1 of this Chapter 4 the focus is on the Raw Data collected from the 223 respondents, who filled a 13-question survey questionnaire. So, the thirteen questions used in the survey are reintroduced for discussion and explanation of the reasons behind some of the key questions.

"In statistics, raw data refers to [any] data that has been collected directly from a primary source and has not been processed in any way. In any type of data analysis project, the first step is gathering raw data. Once this data has been gathered, it can then be cleaned, transformed, summarized, and visualized." (Bobbitt, 2021b). "Raw data (sometimes called source data, atomic data or primary data) is data that has not been processed for use. A distinction is sometimes made between data and information to the effect that information is the product of [the] data processing. Raw data that have undergone processing is sometimes referred to as cooked data." (Wrighty, n.d.).

The illustrations that follow in subsequent sections in Part 1 are based on the feedbacks from respondents. The Tables and Figures are illustrating the actual results of the raw (unorganised) data before cleaning, analysing, and summarising by using applicable statistical packages.

PART 1

RAW DATA

4.2 Survey Questions and Respondents

A survey questionnaire entitled '*An Assessment of the Impact of Business Plans in the COVID-19 Pandemic Period*' has been designed to probe the links between the performance of businesses and the effectiveness of business plans–model and strategy–at a time the impact of COVID-19 on businesses is a concern for many.

On the survey questionnaire, which is attached herewith and marked Appendix B, all the thirteen questions used in the survey focuses on achieving the research objectives and proffering unambiguous answers to the three research questions. The thirteen survey questions:

i. Is your company or the company where you work located in the UK?

ii. Does the company have customers or clients?

iii. What is your job level in the company?

iv. Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?

v. Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?

vi. Did the company's sales drop due to the impact of COVID-19 pandemic?

vii. If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales is due to the changes or modifications in the company’s business strategy or business model?

viii. Did the company's sales increase due to the impact of COVID-19 pandemic?

ix. If there has been a sales increase at any time in the COVID-19 period, would you agree or disagree that the increase in sales volume is connected to the changes or modifications in the company's business strategy or business model?

x. Did the company's profit drop due to the COVID-19 pandemic?

xi. If there has been a drop in profit at any time during the COVID-19 pandemic, would you agree or disagree that a change or modification in the company's business strategy or business model would have reduced the impact on profit or completely prevented a drop in profit?

xii. Did the company record a rise in profit due to the COVID-19 pandemic?

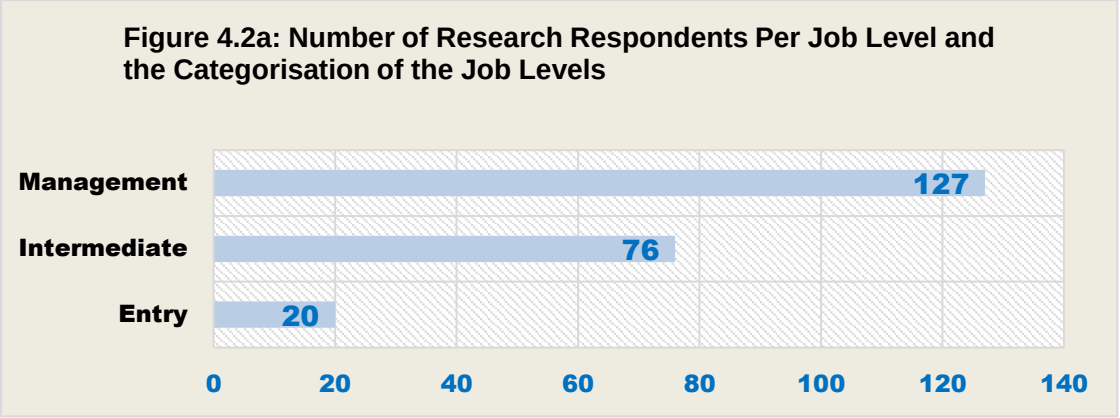
xiii. If there has been a rise in profit at any time during the COVID-19 pandemic, would you agree or disagree that such a rise in profit is due to a change or modification in the company's business strategy or business model?

In August 2021, Smart Survey, a reputable UK-based digital survey firm, facilitated the delivery of the survey questionnaires to the 223 respondents. The firm, Smart Survey, also handled the collection of responses from the respondents, and thereafter issued a report stating the survey results.

The respondents are drawn randomly from people working in the United Kingdom. See Table 4.2 and Figure 4.2 for the job level of survey respondents.

Table 4.2a: Job Level of the Research Respondents

Job Level		Frequency	Frequency (%)
1	Entry	20	(20 ÷ 223) x 100 = 8.97%
2	Intermediate	76	(76 ÷ 223) x 100 = 34.08%
3	Management	127	(127 ÷ 223) x 100 = 56.95%
Total		**223**	**100%**



4.3 Survey Report

Subsections 4.3a, 4.3b, 4.3c, 4.3d, 4.3e, 4.3f, 4.3g, 4.3h, 4.3i, 4.3j, 4.3k, 4.3l, 4.3m shows the thirteen survey questions, the research respondents' answer choices, number of research respondents, response frequency expressed in

percentages using tables and figures. Each subsection highlights and discusses only one of the survey questions and states the raw data collected. In some subsections, the relevance of the survey question is emphasised.

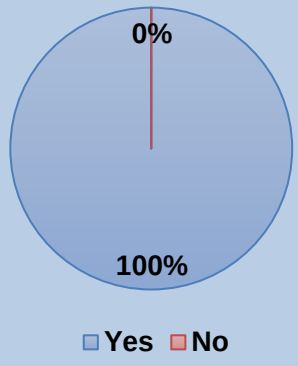
4.3a SQ1: Is your company or the company where you work located in UK?

Table 4.3a and Figure 4.3a illustrate that 223 respondents participated in the survey. All the respondents are human working in UK-based businesses. The UK is the geographical location of the survey and the demographics being employees of UK-based businesses denotes that the survey outcome provides insight into the UK situation.

Table 4.3a: Is your company or the company where you work located in UK?

Answer Choices		Frequency	Frequency (%)
1	Yes	223	100.00%
2	No	0	-
Total		**223**	**100%**

Fig. 4.3a: Is your company or the company where you work located in the UK?



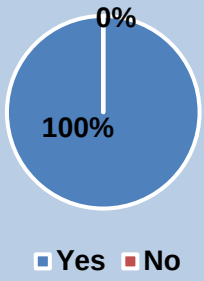
4.3b SQ2: Does the company have customers or clients?

The replies from respondents regarding SQ2 (the second survey question) seem to illustrate that most of the survey respondents are indeed people working with labour employers engaged in providing services. It also appears to highlight the possibility that some of the respondents are likely to observe or notice (if any) whatever changes to the company's performance, customers spending, and shopping behaviour of customers during the COVID-19 pandemic.

Table 4.3b: Does the company have customers or clients?

Answer Choices		Frequency	Frequency (%)
1	Yes	216	96.86%
2	No	7	3.14%
Total		**223**	**100%**

Figure 4.3b: Does the company have customers or clients?



4.3c SQ3: What is your job level in the company?

Dorling (2019) identifies three major job levels, namely Entry, Intermediate, and Management; and argues that the management level is further

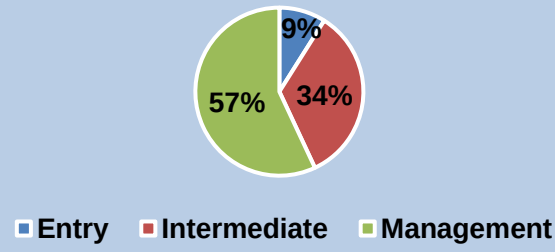
categorised into three, viz. First-Level Management, Middle-Level Management, and Top-Level Management.

Section 4.3c is illustrating that the workers at the managerial job level are 57% of the total survey respondents, which appears to demonstrate that most of the respondents belong to the category of people making the key decisions in the entities where they work. The replies from respondents regarding SQ3 could further imply that 57% of the respondents are mostly people who are engaged in carrying out strategic work and making some key decisions in their workplaces considering Dorling (2019) scholarly assertion: The management team in an organisation carries out supervisory roles, "set organisational goals, make major corporate decisions" and are responsible for the overall performance. It seems appropriate reasoning or arguing that most of the replies received from survey respondents are the input of persons, who are very likely to have the requisite knowledge of the company where they work, the company's performance and how their employer has been responding to the COVID-19 pandemic.

Table 4.3c: What is your job level in the company?

Answer Choices		Frequency	Frequency (%)
1	Entry	20	9%
2	Intermediate	76	34%
3	Management	127	57%
Total		**223**	**100%**

Figure 4.3c: What is your job level in the company?



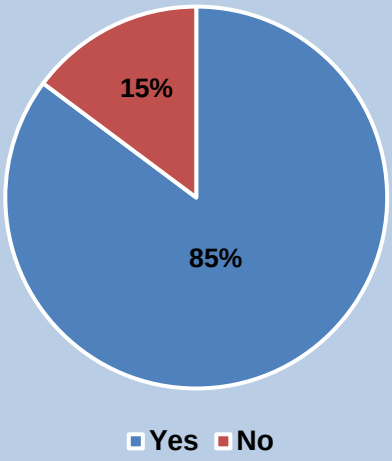
4.3d SQ4: Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?

At circa 85%, as illustrated in Table 4.3d and Figure 4.3d, a clear majority of the respondents could be said to have overwhelmingly affirmed that a definitive business strategy or business model is operational in the company where they work. With such a high frequency, 85% of 223 survey respondents, another vital pathway towards determining (via statistical analysis) whether business plans–strategies or models–are having a major impact on the performance of businesses in a COVID-19 pandemic period seems evident.

Table 4.3d: Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?

Answer Choices		Frequency	Frequency (%)
1	Yes	190	85%
2	No	33	15%
Total		**223**	**100%**

Figure 4.3d: Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?



Štefan & Branislav (2016) relates the link, dependency and measurable relationship between a business model and a business strategy, laying bare their connection and interwovenness. Štefan & Branislav further make a defining remark by citing a book entitled 'Business models and strategic management' by Newth (2012, p. 92), in which, Newth said: "Strategies complete the business model which helps to decide which strategy variant is the best for the company. Competitive strategy and performance increase when business models and strategies are complementary." (Štefan & Branislav, 2016, p. 83). "A business model is a company's core strategy for profitably doing business." (Kopp, 2020).

Based on the foregoing scholarly thought, it seems fair to argue that a business strategy and business model are more likely to be complementary to promote a strategic synergy that drives and sustains overall business performance when along with the resources available they are put to a maximum level of effectiveness. So, for the purposes of this work, a business plan refers to a model or strategy, or a combination of both model and strategy.

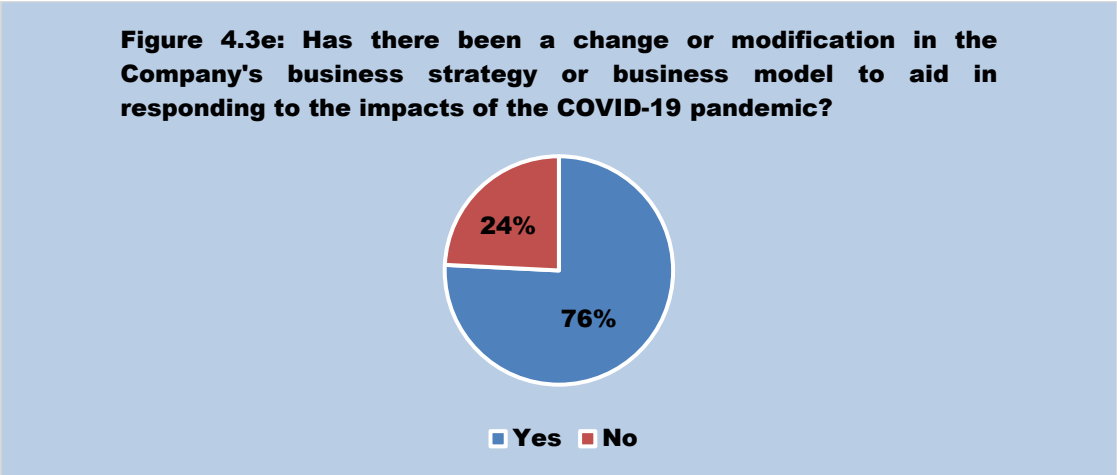
4.3e SQ5: Has there been a change or modification in the company's business strategy or business model to aid in responding to the impact of the COVID-19 pandemic?

Table 4.3e and Figure 4.3e are demonstrating that businesses are contriving ways to counter the impact of COVID-19 by changing or modifying their modus operandi. This result does not necessarily mean that any change(s) or shift in business plan is hindering the impact of COVID-19 on businesses. Rather, this survey result could be illustrating that the surge in COVID-19 may have caused a

significant disruption, thereby forcing businesses to respond and take some measures. However, whether a change or modification in business plan has been beneficial to businesses during this COVID-19 pandemic is still subject tests and statistical analysis.

Table 4.3e: Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of the COVID-19 pandemic?

Answer Choices		Frequency	Frequency (%)
1	Yes	169	76%
2	No	54	24%
Total		**223**	**100%**



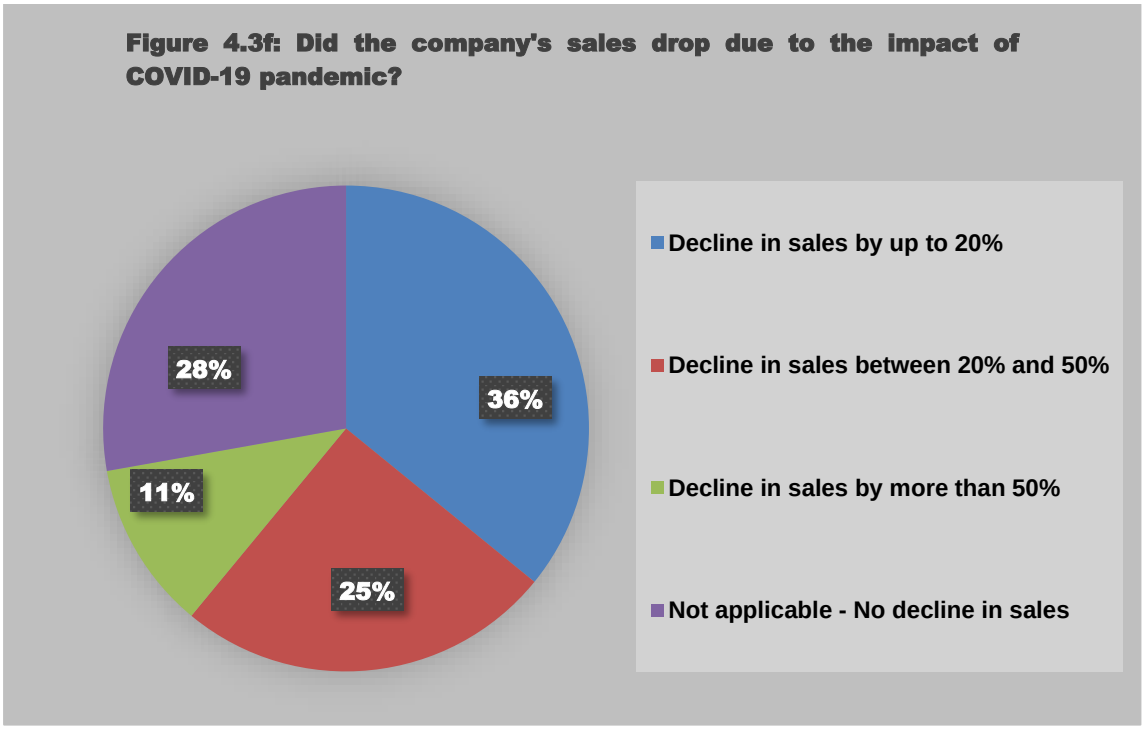
4.3f SQ6: Did the company's sales drop because of the impact of COVID-19 pandemic?

In Table 4.3f it is shown that a total of 72% (36% + 25% + 11%) of respondents hold the view that a drop in sales over a certain period is connected to the impact of the COVID-19 pandemic. Also, 61% (36% + 25%) of respondents

contend that a sales decline has occurred on a scale greater than 0% but not more than 50%. While 11% of the respondents are of the view that the decline in sales is more than 50%. There are 28% of respondents opining that the impact of COVID-19 has not created a drop in sales.

Table 4.3f: Did the company's sales drop due to the impact of COVID-19 pandemic?

Answer Choices		Frequency	Frequency (%)
1	Decline in sales by up to 20%	80	36%
2	Decline in sales between 20% and 50%	56	25%
3	Decline in sales by more than 50%	25	11%
4	Not applicable - No decline in sales	62	28%
Total		**223**	**100%**



As demonstrated in Part 2 of the Literature Review, there is considerable literature arguing that the COVID-19 pandemic is having a serious impact on global demand, worldwide supply of services and goods, and human and economic costs. However, for the purposes of Section 4.3f, it seems necessary to emphasise with more references the likelihood of a pandemic disease having an impact on the economy. In a report '*Anatomy of a pandemic'*, Daszak (2012) notes the impact of diseases of a pandemic scale and that some diseases can have "a substantial effect on our social, cultural, and economic development."

Jones et al. (2008) also echoes the impact of pandemics in a report *'Global trends in emerging infectious diseases*,' arguing that "the emergence of these pathogens and their subsequent spread have caused an extremely significant impact on global health and economies;" and "emerging infectious diseases (EIDs) are a significant burden on global economies."

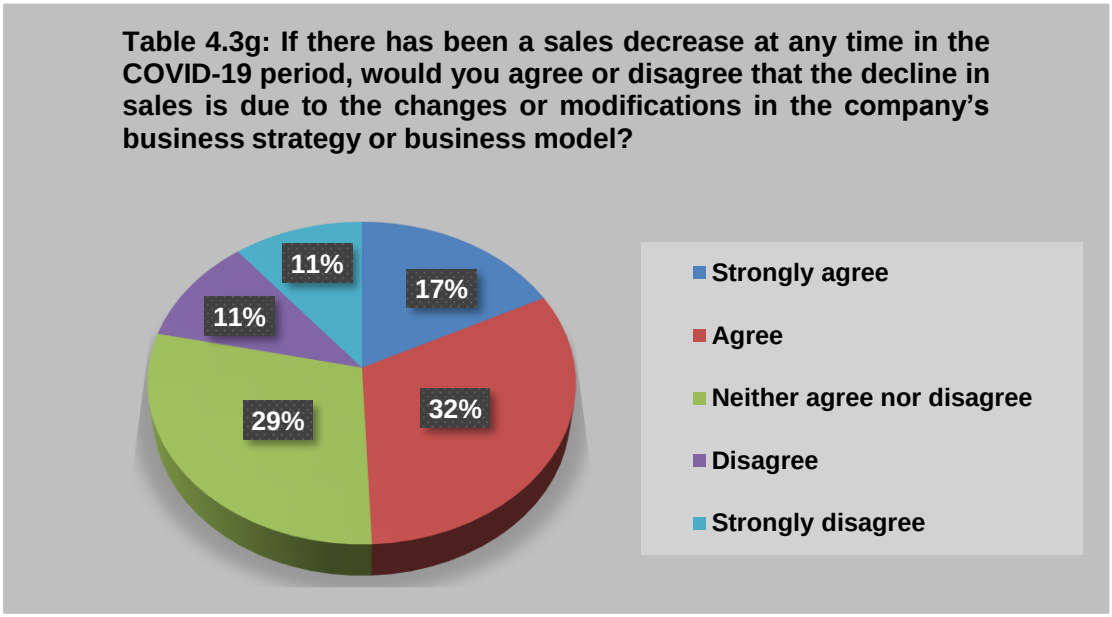
4.3g SQ7: If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales is due to the changes or modifications in business strategy or business model?

In this Section 4.3g, Table 4.3g is illustrating that 49% of respondents (17% + 32%) seem to avow there is a connection between a sales drop and changes or modifications in business plans (strategies or models) at certain times in the COVID-19 pandemic period. Also, Table 4.3g is demonstrating that 22% (11% + 11%) of respondents appear to hold the opinion that the decline in sales at a given time during the pandemic period are not some ramifications caused by any revision of business plans (strategies or models). 29% of respondents are neutral

regarding SQ7 because they neither avow or disavow that sales decline in the COVID-19 pandemic period relates to any modifications and changes in the business plan. However, there is a possibility that changing or modifying a business plan may influence business performance, though the overall effect in this case, positive or negative or neutral, might be dependent on several other factors; and this gives further credence on the relevance of conducting a statistical analysis for more clarity.

Table 4.3g: If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales is due to the changes or modifications in the company's business strategy or business model?

Answer Choices		Frequency	Frequency (%)
1	Strongly agree	39	17%
2	Agree	71	32%
3	Neither agree nor disagree	65	29%
4	Disagree	24	11%
5	Strongly disagree	24	11%
Total		**223**	**100%**



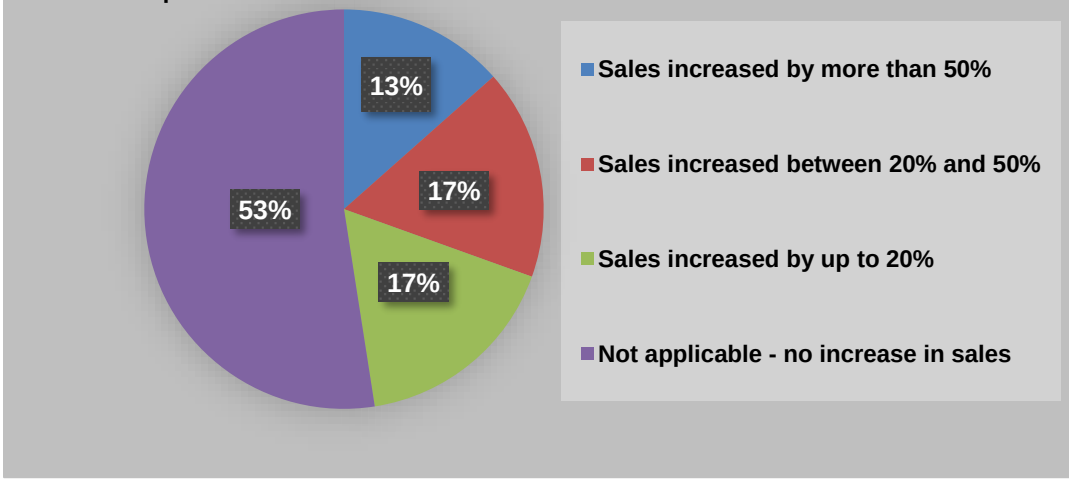
4.3h SQ8: Did the company's sales increase due to the impact of the COVID-19 pandemic?

47.5% (13.5% + 17% + 17%) of respondents are imputing a measure of sales increase to the impact of the COVID-19 pandemic while 52.5% believe that this pandemic did not necessarily create sales increase. The foregoing brings to the fore Part 2 (Impact of COVID-19) in the Literature Review that notes that the impact of COVID-19 pandemic on businesses appears sectoral-specific. (Turner & Akinremi, 2020).

Table 4.3h: Did the company's sales increase due to the impact of the COVID-19 pandemic?

Answer Choices		Frequency	Frequency (%)
1	Sales increased by more than 50%	30	13.50%
2	Sales increased between 20% & 50%	38	17%
3	Sales increased by up to 20%	38	17%
4	Not applicable - no increase in sales	117	52.5%
Total		**223**	**100%**

Figure 4.3h: Did the company's sales increase due to the impact of the COVID-19 pandemic?

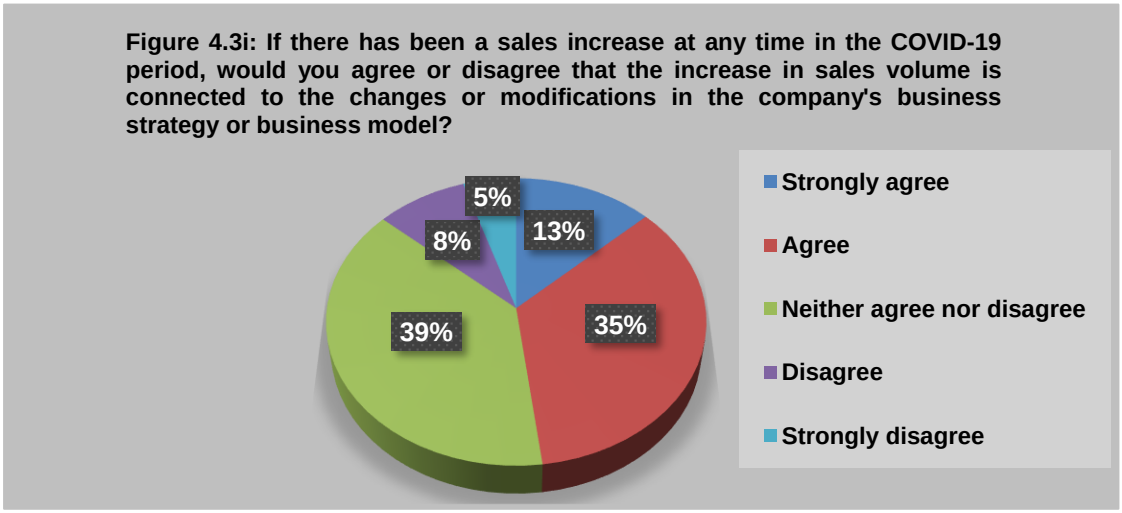


4.3i SQ9: If there has been a sales increase at any time in the COVID-19 period, would you agree or disagree that the increase in sales volume is connected to the changes or modifications in the company's business strategy or business model?

Table 4.3i and Figure 4.3i illustrate that 48% (13% + 35%) of respondents agree that a rise in sales recorded in their workplaces during this COVID-19 pandemic could be linked with adjustments in the business plan (strategy or model). While 13% (8% + 5%) report that the sales increase is not connected with changes in the business plan. 39% could neither agree nor disagree that there is a connection between a sales increase and changes in the business plan.

Table 4.3i: If there has been a sales increase at any time in the COVID-19 period, would you agree or disagree that the increase in sales volume is connected to the changes or modifications in the company's business strategy or business model?

Answer Choices		Frequency	Frequency (%)
1	Strongly agree	29	13%
2	Agree	78	35%
3	Neither agree nor disagree	86	39%
4	Disagree	19	8%
5	Strongly disagree	11	5%
Total		**223**	**100%**



In Chapter 2, it is highlighted that Turner & Akinremi (2020) affirm that some containment measures introduced by several national authorities to tackle the impact of the COVID-19 pandemic are impacting on sales. This is apparently evident by considering the significant sales decline reported by several businesses in leisure-related services, cinema, hospitality, eatery, and several others that rely on physical spaces and shops to operate their businesses.

Fairlie (2020) found the temporal suspension of business activities in accordance with some measures instituted by governments round the globe to be impacting on sales, causing losses, and in some cases creating a decline in business profits. However, Flood (2021) notes the estimate issued by Nielsen BookScan, an official book sales monitor, arguing that "despite the coronavirus pandemic causing a series of lockdowns around the country–bookshops in England were closed from 23 March until 15 June, and then again from 5 November until 2 December, with differing lockdowns in place around the rest of the UK–Nielsen has estimated that the volume of print books sold did grow by 5.2% compared to the 2019 figure. This equates to the 202 million books being sold in the UK last year and was worth £1.76bn, up 5.5% on 2019…"

4.3j SQ10: Did the company's profit drop due to the COVID-19 pandemic?

Regarding SQ10 (survey question ten), 72% (32% + 28% + 12%) of respondents are reporting that the business profits diminished due to the COVID-19 pandemic. While the reply of 28% of respondents is that profit did not fall.

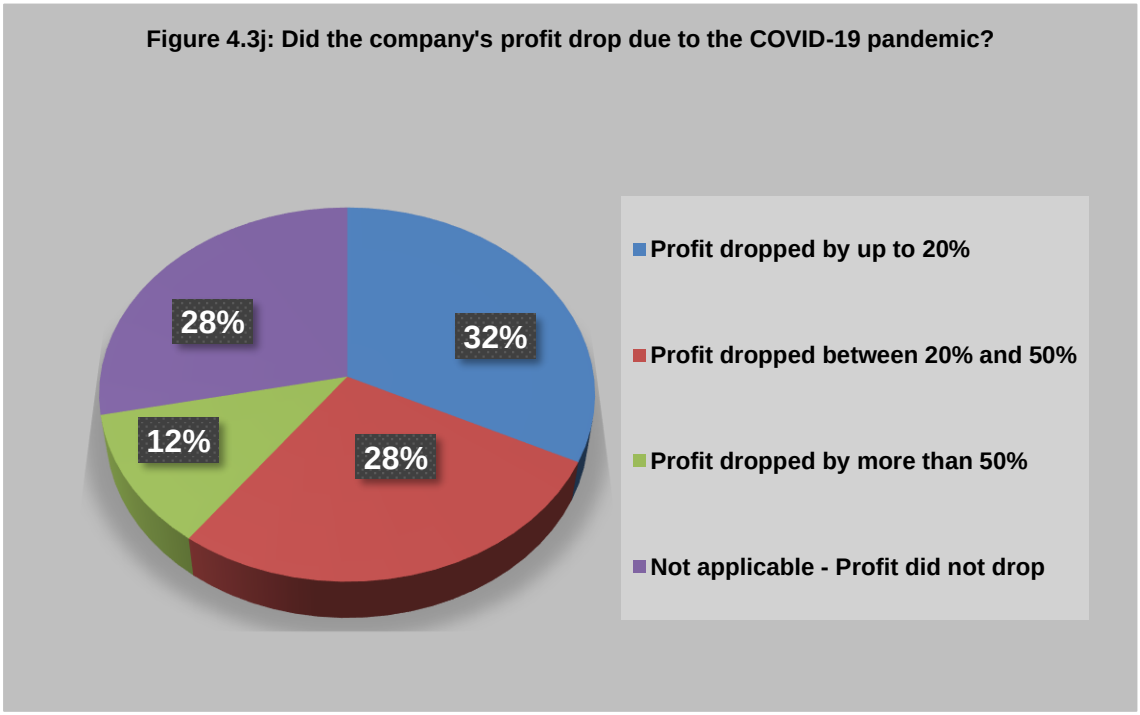
It should be noted that a report *'Coronavirus and its impact on UK hospitality: January 2020 to June 2021'* in which the UK Office of National

Statistics (ONS) perused the hospitality sector concluded that business losses in the pandemic period is impacting both the licensed and unlicensed restaurants, pubs, bars, cafes, and takeaways. Fairlie (2020) argues that some containment measures like lockdowns and the temporary closure of businesses are impeding profitability and causing losses.

By the foregoing scholarly exposition, the preliminary (not conclusive) finding through survey that is illustrated in Table 4.3j and Figure 4.3j, though subject to a statistical analysis, may not be off the reality.

Table 4.3j: Did the company's profit drop due to the COVID-19 pandemic?

Answer Choices		Frequency	Frequency (%)
1	Profit dropped by up to 20%	72	32%
2	Profit dropped between 20% and 50%	62	28%
3	Profit dropped by more than 50%	26	12%
4	Not applicable - Profit did not drop	63	28%
Total		223	100%



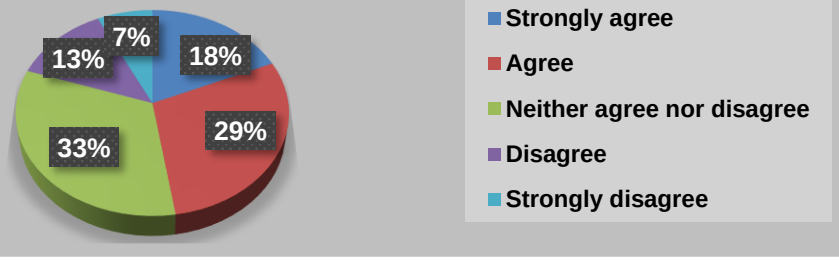
4.3k SQ11: If there has been a drop in profit at any time during the COVID-19 pandemic, would you agree or disagree that a change or modification in the company's business strategy or business model would have reduced the impact on profit or completely prevented a drop in profit?

The raw data in respect of Section 4.3k illustrate that 47% (18% + 29%) did agree that a change or modification in the business plan (strategy or model) as a measure to tackle the impact of the COVID-19 pandemic on businesses would weaken a decline in profit by either reducing the volume of profit fall or circumventing entirely a drop in profit. While 20% (13% + 7%) did not agree that a change or modification in business plan would reduce profit decline or prevent a fall in profit.

Table 4.3k: If there has been a drop in profit at any time during the COVID-19 pandemic, would you agree or disagree that a change or modification in the company's business strategy or business model would have reduced the impact on profit or completely prevented a drop in profit?

Answer Choices		Frequency	Frequency (%)
1	Strongly agree	41	18%
2	Agree	65	29%
3	Neither agree nor disagree	73	33%
4	Disagree	28	13%
5	Strongly disagree	16	7%
Total		**223**	**100%**

Figure 4.3k: If there has been a drop in profit at any time during the COVID-19 pandemic, would you agree or disagree that a change or modification in the Company's business strategy or business model would have reduced the impact on profit or completely.



A modification or change impacting on a business plan could either improve the situation, have zero impact, or make matters worse. So, it may be crucial for businesses to have a flexible and dynamic approach that allows responses and proactive measures to tackle the disruption that a pandemic in the mould and virulence of COVID-19 creates.

4.3l SQ12: Did the company record a rise in profit due to the COVID-19 pandemic?

Table 4.3l shows that the majority (54%) of respondents believe that the COVID-19 pandemic has not impacted in a way that has galvanized a rise in business profit while the minority (46%, which is 17% + 19% + 10%) responded that the pandemic did lead to a profit rise.

Table 4.3l: Did the company record a rise in profit due to the COVID-19 pandemic?

Answer Choices		Frequency	Frequency (%)
1	Profit increased by up to 20%	38	17%
2	Profit increased between 20% and 50%	42	19%
3	Profit increased by more than 50%	23	10%
4	Not applicable - Profit did not increase	120	54%
Total		**223**	**100%**

Figure 4.3l: Did the Company record a rise in profit due to the COVID-19 pandemic?

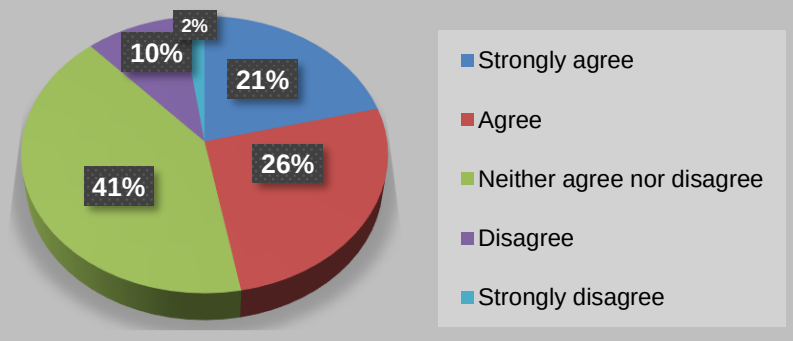
4.3m SQ13: If there has been a rise in profit at any time during the COVID-19 pandemic, would you agree or disagree that such a rise in profit is due to a change or modification in the company's business strategy or business model?

In this case, the raw data illustrate that 47% (21% + 26%) of respondents did agree that changing or modifying the business plan has contributed to a rise in business profit in the COVID-19 period, but the views of 12% (10% + 2%) are divergent. 41% neither agree nor disagree that a rise in profit in this instance is influenced by a modification or change in the business plan.

Table 4.3m: If there has been a rise in profit at any time during the COVID-19 pandemic, would you agree or disagree that such a rise in profit is due to a change or modification in the company's business strategy or business model?

Answer Choices		Frequency	Frequency (%)
1	Strongly agree	47	21%
2	Agree	58	26%
3	Neither agree nor disagree	92	41%
4	Disagree	21	10%
5	Strongly disagree	5	2%
Total		**223**	**100%**

Figure 4.3m: If there has been a rise in profit at any time during the COVID-19 pandemic, would you agree or disagree that such a rise in profit is due to a change or modification in the Company's business strategy or business model?



PART 2

STATISTICAL ANALYSIS

4.4 Introduction

Statistical Analysis is illustrated using 216 (not 223) respondents following the exclusion of 7 respondents, whose answer in respect of Survey Question 2 (Does the company have customers or clients?) is No. The analysis framework presented in this chapter follows a line that aims to broaden what we know about business plans–strategies and models–impacting (or not) in one way or another on business performance in the COVID-19 pandemic period. Amongst the thirteen survey questions, the primary focus is on six survey questions, viz. SQ4, SQ5, SQ7, SQ9, SQ11, and SQ13. These six questions are the lenses through which the three research questions are engaged, analysed, and dissected. The raw data is analysed by converting the raw (excel) data file into SPSS (Statistical Product and Service Solutions) to identify trends, similarities, differences, relationships, convergences, and patterns.

Several calculations and tests have been conducted, including Cronbach's Alpha, Mean, Standard Deviation, Weighted Mean (also known as weighted average), T-test, Cohen's d, Levene's Test for Equality of Variances, Analysis of Variance (ANOVA), Tukey Post Hoc Test, Multicollinearity, Correlation, Skewness and Kurtosis.

The reliability statistics is conducted using Cronbach's Alpha, which measures the internal consistency and checks scale reliability. Bartkus &

Aghababyan (2020) cites a 1978 book, Psychometric theory (2nd Ed.), by Jum C. Nunnally, in which, 0.7 threshold and above indicates internal consistency: “What a satisfactory level of reliability [would be] depends on how a measure is being used. In the early stages of research on predictor tests or hypothesized measures of a construct, one saves time and energy by working with instruments that have only modest reliability, for which purpose reliabilities of 0.7 or higher will suffice,” Nunnally said. In this research, the statistical analysis adopts the position of Nunnally on the 0.7 alpha value being the threshold. An alpha value of 0.7 or more will be accepted as desirable.

“The T-test is a popular and useful tool for hypothesis testing in statistics, which can be used to determine [whether] there is a significant difference in the means of the two groups. This means you can use the T-test to compare the average values of two data sets and check if they come from the same population.” (Htoon, 2020).

For Independent Samples T-test, Cohen's d (Effect Size for T-test) involves calculating the difference between two means in the two different groups, then dividing the result by the pooled standard deviation. (Geert van den Berg, n.d.; Social Science Statistics, 2022). "Cohen’s d is an effect size for comparing the means of two different groups. Effect size measures the strength of association between two different variables on a scale. For the T-test, Cohens d is calculated when the researcher wants to measure two groups’ differences. Cohen interpreted d figures into three different groups (0.2, 0.5, and 0.8), which means small, medium, and large, respectively. Cohens d can be used, for example, to emphasize the result of the T-test. If the value of Cohens d is 0.90 it tells us that the mean

[between the two groups] differ by a 0.90 standard deviation." (Assignment Ghost Writers, n.d). Bobbitt (2021a), Social Science Statistics (2022) & Geert van den Berg (n.d.) agree that rule of thumb when interpreting Cohen's d is as follows: 0.2 represents a small effect size; 0.5 represents a medium effect size; and 0.8 represents a large effect size. "Cohen suggested that d = 0.2 be considered a 'small' effect size, 0.5 represents a 'medium' effect size and 0.8 a 'large' effect size. This means that if the difference between two groups' means is less than 0.2 standard deviations, the difference is negligible, even if it is statistically significant." (McLeod, 2019).

$$\textbf{Cohen's d} = (M2 - M1) / SDpooled$$

$$\boldsymbol{SD}_{\textbf{pooled}} = \sqrt{((SD_1^2 + SD_2^2) / 2)}$$

There is the Levene's Test, which Htoon (2020) describes as "an equal variance test. It can be used to check if our data sets fulfil the homogeneity of variance assumption before we perform the T-test or [conduct the] Analysis of Variance (ANOVA)." Htoon (2020) adds that the homogeneity of variance (also known as homoscedasticity) occurs when two simple random samples are independent of each other, have the same (not different) scatter, and have equal variances.

"In statistics, Levene's Test is an inferential statistic used to assess the equality of variances in different samples. Some common statistical procedures assume that [the] variances of the populations from which different samples are drawn are equal. Levene's Test assesses this assumption. It tests the null

hypothesis that the population variances are equal (called Homogeneity of Variance). If the resulting p-value of Levene's Test is less than some critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling. Thus, the null hypothesis of equal variances is rejected, and it is concluded that there is a difference between the variances in the population." (Crifo, 2011).

There's a connection between the Homogeneity of Variance Test and the Levene's Test. The purpose of Homogeneity of Variance Test stems from the fact that in some statistical procedures it is assumed that the variances of the populations from which different samples are drawn are equal; and Levene's Test serves to assess this assumption by testing the null hypothesis that the population variances are equal (called Homogeneity of Variance or Homoscedasticity). (Sonalsart.com LLC, 2022). “If we want to compare 2(+) groups on a quantitative variable, we usually want to know if they have equal mean scores. For finding out if that's the case, we often use an Independent Samples T-test for 2 groups or a one-way ANOVA for 3+ groups. Both tests require the homogeneity assumption: The population variances of the dependent variable must equal for all groups. You can safely ignore this assumption if you've roughly equal sample sizes for all groups you're comparing. However, if you've sharply different sample sizes, then you need to make sure that homogeneity is met.” (Geert van den Berg, n.d.).

A multicollinearity test has been conducted. "Multicollinearity occurs when two exploratory variables in a linear regression model are found to be correlated." (Corporate Finance Institute, n.d.). "Multicollinearity in regression analysis occurs when two or more predictor variables are highly correlated to each other, such

that, they do not provide unique or independent information in the regression model." (Jain & Chetty, 2020).

Multicollinearity is generally detected [in] a standard of tolerance; and "the tolerance is usually calculated about the variance inflation factor, and if it is 10 or above, it is considered a problematic relationship between the two variables." (Corporate Finance Institute, n.d.). However, Bobbitt (2019) writes that the most common way to detect multicollinearity is by using the Variance Inflation Factor (VIF), which measures the correlation and strength of correlation between the predictor variables in a regression model. The value for VIF starts at 1 and has no upper limit, though as a rule of thumb, interpreting VIF is as follows: "A value of 1 indicates there is no correlation between a given predictor variable and any other predictor variables in the model. A value between 1 and 5 indicates moderate correlation between a given predictor variable and other predictor variables in the model… A value greater than 5 indicates potentially severe correlation between a given predictor variable and other predictor variables in the model. In this case, the coefficient estimates and p-values in the regression output are likely unreliable." (Bobbitt, 2019).

Multicollinearity in a dataset could be problematic because it is inclined to create the following: (i) Increased variability in the dataset, (ii) A dataset that is extremely sensitive to a minor change, (iii) Instability in the regression model, and (iv) Skewed and unreliable results. (Jain & Chetty, 2020).

Analysts use ANOVA to determine the influence of independent variables on the dependent variable. (Kento, 2021). "A one-way ANOVA is used to determine whether or not there is a statistically significant difference between the

means of three or more independent groups. When reporting the results of a one-way ANOVA, we always use the following general structure: A brief description of the independent and dependent variable; the overall F-value of the ANOVA and the corresponding p-value; and the results of the post-hoc comparisons (if the p-value was statistically significant)." (Zach, 2021).

“A requirement for the ANOVA test is that the variances of each comparison group are equal.” (EZ SPSS Tutorials, 2022). EZ SPSS Tutorials (2022) further argues that a Levene’s Test serves to determine whether the variances are equal by calculating the significance value to know whether the value is significant or insignificant by interpreting the outcome in line with the practical rule: When the significance value is greater than .05, the interpretation is that the result is not significant, which means the requirement of homogeneity of variance is met. (EZ SPSS Tutorials, 2022).

Minitab Ltd. notes a significance level (denoted as alpha, α,) of 0.05 indicates a 5% risk of concluding that a difference exists when there is no actual difference. "P-value ≤ α [indicates that] the differences between some of the means are statistically significant: If the p-value is less than or equal to the significance level, you reject the null hypothesis and conclude that not all of population means are equal. P-value > α [signifies that] the differences between the means are not statistically significant: If the p-value is greater than the significance level, you do not have enough evidence to reject the null hypothesis that the population means are all equal." (Minitab Ltd., 2022). As a rule of thumb, we conclude that the population variances are not equal if “Sig.” or $p < 0.05$. (Geert van den Berg, n.d.).

So, if ANOVA's p-value is less than or equal to the usually acceptable significance level of 0.05, the result would mean that some of the group means are different; and there would be a need for grouping and testing. A grouping and testing to determine whether the mean difference between any of the pairs of groups is statistically significant and make an estimate of the degree of disparity can be conducted by using the Tukey Post Hoc Test (also called Tukey's Honest Significant Difference Test).

The Tukey HSD Test ("Honestly Significant Difference" or "Honest Significant Difference") is used to determine whether the relationship between two sets of data is statistically significant. (Beck, 2018). "Tukey HSD Test is a way to test an experimental hypothesis. Tukey Test is invoked to determine if the interaction among three or more variables is mutually statistically significant." (Beck, 2018). In other words, (Beck, 2018) is saying that this statistical tool is helpful in discerning the presence or otherwise of a strong chance that an observed numerical change in one value is causally related to an observed change in another value.

4.5 Composite Creation and Coding of Items

With the impact of the COVID-19 pandemic in mind, the Survey Question 7 (SQ7) centres on sales decrease, Survey Question 9 (SQ9) is about sales increase, Survey Question 11 (SQ11) concentrates on profit fall, and Survey Question 13 (SQ13) focuses on profit rise.

4.5a Coding of Items

Option A: Four items (SQ7, SQ9, SQ11, and SQ13) are coded such that those assigned a higher value, for example 5, indicates “strongly agree” with the statement.

Option B: SQ7, which centres on sales decrease, is coded such that higher numbers indicates “strongly disagree” that a business plan is related to a decrease in sales. SQ9, SQ11, and SQ13 are coded such that a higher value reflects agreement that a business plan is positively related to the sales increase, could have prevented a drop in sales, and is connected to a profit rise.

4.5b Measuring of Internal consistency

The reliability statistics is conducted using Cronbach’s Alpha. Cronbach’s Alpha is used to “assess the reliability or internal consistency of a set of scale or test items. (Goforth, 2015). Cronbach’s Alpha is:

$$\alpha=(k\times\bar{c}) \div (\bar{v}+(k-1)\bar{c})$$

Where k refers to the number of scale items; $\bar{c}$ refers to the average of all covariances between items; and $\bar{v}$ refers to the average variance of each item. (Goforth, 2015). "The resulting α coefficient of reliability ranges from 0 to 1 in providing this overall assessment of a measure’s reliability. Although the standards for what makes a “good” α coefficient are entirely arbitrary and depend on your theoretical knowledge of the scale in question, many methodologists recommend a minimum α coefficient between 0.65 and 0.8 (or higher in many

cases)." (Goforth, 2015). A reliability coefficient of .70 or higher is acceptable in social science research. (Bartkus & Aghababyan, 2020; UCLA, n.d.).

4.5b1 Option A and Cronbach's Alpha

Regarding Option A, the reliability statistics show 0.739 as the alpha value, which illustrates scale reliability and internal consistency between the four items (SQ7, SQ9, SQ11, and SQ13). See Table 4.5b1 and Appendix (Reliability Statistics).

Table 4.5b1: Item-Total Statistics - Cronbach's Alpha for Option A

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item is deleted
SQ7_A	10.3843	6.107	0.515	0.693
SQ9_A	10.2963	6.944	0.529	0.683
SQ11_A	10.3611	6.176	0.549	0.669
SQ13_A	10.2083	6.761	0.545	0.673
			Alpha Value	**0.739**

2

4.5b2 Option B and Cronbach's Alpha

Using Option B, the results shown in Table 4.5b2 and Appendix (Reliability Statistics) is that the Cronbach's Alpha is -0.073, which violates reliability and shows a negative average covariance among the four items. This negative alpha value does not meet the 0.7 threshold for internal consistency and scale reliability.

Table 4.5b2: Item-Total Statistics - Cronbach's Alpha for Option B

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item is deleted
SQ7_B	10.3843	6.107	-0.515	0.693
SQ9_B	9.6296	3.062	0.028	-0.175
SQ11_B	9.5648	2.452	0.354	-0.814
SQ13_B	9.4769	2.102	0.473	-1.159
			Alpha Value	**-0.073**

4.5c Correlation (Coding Option A)

Correlation is performed using four items (SQ7, SQ9, SQ11, and SQ13) as this helps to look at pairs of items based on Option A that has a desirable alpha value of 0.739. The correlation results in Table 4.5c illustrate that all the items are positively related; and the strongest relationship among the items is between SQ9/SQ13. Based on these results, coding option A is used to form the composite for all analyses where higher numbers indicated more agreement that a business plan has impacted a business during the COVID-19 pandemic.

Table 4.5c: Correlation with Coding Option A

Item		SQ9-A	SQ11-A	SQ13-A
SQ7-A	*R*	0.348	0.546	0.304
	P	<.001	<.001	<.001
	Df	214	214	214
SQ9-A	*R*	-	0.314	0.610
	P		<.001	<.001
	Df		214	214
SQ11-A	*R*		-	0.397
	P			<.001
	Df			214

4.5d Descriptive for Impact Composite

Of the 216 survey participants used in this statistical analysis, the majority is in management level positions (n = 123; 56.9%). Circa 87% reported that their company had a business plan (strategy or model). 77.3% said that their business plan has been modified in response to the COVID-19 pandemic. Table 4.5d1 illustrates the frequencies of the three demographic variables, viz. level, business, plan, and business plan change.

Table 4.5d1: Frequencies of Demographic Variables

Variable		N	%
SQ3 (Level)	Entry level	20	9.3
	Intermediate level	73	33.8
	Management level	123	56.9
	Total	**216**	**100%**
SQ4 (Business Plan)	No	28	13
	Yes	188	87
	Total	**216**	**100%**
SQ5 (Business Plan Change)	No	49	22.7
	Yes	167	77.3
	Total	**216**	**100%**

The variable 'Level' is driven by the SQ3 (What is your job level in the company?). The variable 'Business Plan' relates to the SQ4 (Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?). The variable, Business Plan Change, has links to the SQ5 (Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?).

"A fundamental task in many statistical analyses is to characterise the location and variability of a data set" and one of the ways to make an estimate of a location parameter, which is basically to determine a central (or typical) value that best describes the data, is to calculate the mean (also known as average). (NIST/SEMATECH, 2013). Vedantu (2022) notes that the weighted mean is:

$$\bar{x} = (w1x1+w2x2+\ldots wnxn) \div (w1+w2+...wn)$$

Where $\bar{x}$ represents the weighted mean; w represents the number of occurrences of y weights; and x represents the repeating values.

As illustrated in Table 4.5d2, the weighted mean of the impact composite is 3.4375 while the standard deviation is 0.81492. This weighted mean is based on a single test that combines the impact by plan of the various plans, viz. Yes plan, Yes change; Yes plan, No change; No plan, Yes change; and No plan, No change.

Table 4.5d2: Means and Standard Deviation of Impact by Plan

Plan	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
Yes plan, Yes change	155	3.55	0.79282	0.064	3.4242	3.6758	1.25
Yes plan, No change	33	3.2879	0.76577	0.133	3.0163	3.5594	1.5
No plan, Yes change	12	3.0417	0.98184	0.283	2.4178	3.6655	1
No plan, No change	16	2.9531	0.74285	0.186	2.5573	3.349	1
	216	**3.4375**	0.81492	0.055	3.3282	3.5468	1

A further descriptive or characterisation of data includes calculating skewness and kurtosis. (NIST/SEMATECH, 2013). Skewness is "the degree of distortion from the symmetrical bell curve or the normal distribution. It measures the lack of symmetry in data distribution; Kurtosis is all about the tails of the distribution, not the peakedness or flatness. It is used to describe the extreme values in one versus the other tail. It is the measure of outliers present in the distribution." (Dugar, 2018).

R4DN (2020) & Sonalsart (n.d.) reiterate the position of Hair et al. (2010) and Bryne (2010) that a good skewness falls within -2/+2 cutoff range while an acceptable kurtosis is between -7/+7 cutoff range. In the illustration in Table

4.5d3, both the skewness value -0.277 and kurtosis value 0.114 falls within the acceptable cutoff range. The distribution is not normal, rather it is described as negatively skewed at -0.277, which means, the tail lies on the negative (left) side of the central value.

Table 4.5d3: Measures of Skewness & Kurtosis

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness		Kurtosis Statistic	Kurtosis Std. Error
						Statistic	Std. Error		
Impact	216	1	5	3.4375	0.81492	-0.277	0.166	0.114	0.330
Valid N (listwise)	216								

4.6 Research Question 1 (RQ1)

Did companies implementing business plans (strategies or models) have an impact on business performance during the COVID-19 pandemic?

4.6a Null Hypothesis for Research Question 1

Null Hypothesis: There is no difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

4.6b Alternative Hypothesis for Research Question 1

Alternative Hypothesis: There is a significant difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

4.6c Analysis of Research Question 1

An Independent Samples T-test is performed, in which, the impact composite is the dependent variable while SQ4 *(Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?)* is the grouping variable.

Levene's Test for Equality of Variances, which is used to examine whether variance in the dependent variables is equal in both groups, demonstrates that the assumption of homogeneity of variances was not violated (p =0.588). This also implies that correlation is not necessarily needed.

The survey participants, who worked at companies that had business plans (strategy or model), have reported higher agreement that business plans are related to the impact COVID-19 is having on the business (M = 3.504, SD = 0.792) compared to the participants working in companies that did not have a business plan (M = 2.99, SD = 0.837; $t(214)$ = 3.172, p = 0.002, Cohen's d = 0.643. See Table 4.6c1, Table 4.6c2, and Table 4.6c3.

Table 4.6c1: Group Statistics for SQ4

	SQ4	N	Mean	Std. Deviation	Std. Error Mean
Impact	Yes	188	**3.504**	0.79246	0.0578
	No	28	2.9911	0.83744	0.15826

Table 4.6c2: Independent Samples Effect Sizes

Impact				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
	Cohen's	0.79827	**0.643**	0.24	1.043
	Hedge's correction	0.80109	0.64	0.239	1.04
	Glass's delta	0.83744	0.612	0.179	1.037

Table 4.6c3: Independent Samples Test (I)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Impact	Equal variances assumed	0.295	0.588	3.172	214	**0.002**	0.51292	0.1617	0.19418	0.83165
	Equal variances not assumed			3.044	34.593	0.004	0.51292	0.16848	0.17073	0.8551

4.7 Research Question 2 (RQ2)

During the COVID-19 pandemic, has there been an impact on business performance following a change or modification in the business plan (strategy or model)?

4.7a Null Hypothesis for Research Question 2

There is no difference between the companies that changed their business plan compared to the companies that did not have a plan in any area of company performance during the COVID-19 pandemic.

4.7b Alternative Hypothesis for Research Question 2

There is a significant difference between the companies that changed their business plan compared to the companies that did not have a plan in any area of company performance during the COVID-19 pandemic.

4.7c Analysis of Research Question 2

An Independent Samples T-test has been performed using the impact composite as the dependent variable, while SQ5 *(Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?)* is the grouping variable.

What the Levene's Test for Equality of Variances, which has been conducted to examine whether variances in the dependent variables were equal in both groups, illustrates is that the assumption of homogeneity of variances is not violated (p = 0.362). Therefore, correlation is not applicable in this case.

Table 4.7c1, Table 4.7c2, and Table 4.7c3 illustrates the following: The participants working in companies where the business plan–strategy or model–has been modified in response to the COVID-19 pandemic are reporting a higher agreement on the impact composite (M = **3.514**, SD = **0.81508**) compared to the survey participants who work in companies where there has not been a change or modification in business plan in responding to the impact of COVID-19 (M = 3.179, SD = 0.767; $t(214) = 2.562$, p = 0.011, Cohen's d = 0.416.

Table 4.7c1: Group Statistics for SQ5

	SQ5	N	Mean	Std. Deviation	Std. Error Mean
Impact	**Yes**	167	**3.514**	**0.81508**	0.06307
	No	49	3.179	0.76716	0.10959

Table 4.7c2: Independent Samples Effect Sizes

		Standardizer	Point Estimate	95% Confidence Interval	
				Lower	Upper
Impact	Cohen's	.80458	**.416**	.095	.737
	Hedge's correction	.80741	.415	.095	.734
	Glass's delta	.76716	.437	.104	.765

Table 4.7c3: Independent Samples Test (II)

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Impact	Equal variances assumed	0.834	0.362	2.562	214	**0.011**	0.3349	0.13072	0.07724	0.59256
	Equal variances not assumed			2.649	82.446	0.01	0.3349	0.12645	0.08338	0.58643

4.8 Research Question 3 (RQ3)

Did the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic modify due to a change in the business plan (strategy or model)?

4.8a Null Hypothesis for Research Question 3

There is no moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.

4.8b Alternative Hypothesis for Research Question 3

There is a significant moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.

4.8c Analysis of Research Question 3

A Test of Multicollinearity, Levene's Test, Tests of Homogeneity of Variance, Analysis of Variance (ANOVA), and Tukey Post Hoc Test have been performed. In the process of conducting these key tests, the impact composite is the dependent variable while a variable combining SQ4 and SQ5 is the independent variable.

Table 4.8c1, the impact by plan, illustrates that survey participants who reported that their companies had a business plan that changed had higher impact scores (M = 3.550, SD = 0.79282) compared to the participants from companies lacked both a business plan driving value for customers and a business plan that did not change in response to the COVID-19 pandemic (M = 2.953, SD = 0.743).

Table 4.8c1: Means and Standard Deviation of Impact by Plan

Plan	N	Mean	Std. Deviation	Std. Error
Yes plan, Yes change	155	**3.55**	**0.79282**	0.06368
Yes plan, No change	33	3.2879	0.76577	0.1333
No plan, Yes change	12	3.0417	0.98184	0.28343
No plan, No change	16	2.9531	0.74285	0.18571
	216	**3.4375**	**0.81492**	**0.05545**

The result of a multicollinearity test in Table 4.8c2 demonstrates that the tolerance scores are below the acceptable 0.1 threshold while the VIF (Variance Inflation Factor) scores is above 10, indicating that there is too much multicollinearity. “The tolerance is usually calculated about the variance inflation factor, and if it is 10 or above, it is considered a problematic relationship between the two variables.” (Corporate Finance Institute, n.d.).

Table 4.8c2: Multicollinearity

Coefficients								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	4.494	0.627		7.165	0		
	SQ4	-0.682	0.535	-0.282	-1.274	0.204	0.091	**11.014**
	SQ5	-0.436	0.431	-0.224	-1.011	0.313	0.09	**11.094**
	SQ4SQ5	0.174	0.34	0.177	0.51	0.611	0.037	**27.198**

The Levene's tests in Table 4.8c3 illustrates that the variances between the four groups are equal (p = 0.300). Perusing both the Levene's test and Analysis of Variance (ANOVA), the overall test indicates that at least two of the groups were different from each other on impact score ANOVA (F(3, 212) = 4.381, p = 0.005).

Table 4.8c3: Tests of Homogeneity of Variances

		Levene's Statistic	df1	df2	Sig.
Impact	**Based on Mean**	1.228	3	212	**0.300**
	Based on Median	0.988	3	212	0.399
	Based on Median and with adjusted df	0.988	3	188.147	0.399
	Based on trimmed mean	1.28	3	212	0.282

A one-way ANOVA (Analysis of Variance) test shown in Table 4.8c4 is conducted with a new variable combining SQ4 and SQ5 as the independent variable and impact score as the dependent variable is conducted. The new variable with four groups for each combination of SQ4 and SQ5 responses are: Yes, a company had a business plan and it changed; Yes, a company had a

business plan, but it did not change; No, a company had no business plan, but there is a change; and No, a company had no business plan and there is no change.

Table 4.8c4: One-Way ANOVA (Analysis of Variance)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Between Groups	8.335	**3**	2.778	**4.381**	**.005**
	Within Groups	134.447	**212**	0.634		
	Total	142.782	215			

Table 4.8c5: Tukey Post Hoc Test

(I) plan	(J) plan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Yes plan, Yes change	Yes plan, No change	0.26212	0.15267	0.317	-0.1332	0.6575
	No plan, Yes change	0.50833	0.23862	0.147	-0.1096	1.1262
	No plan, No change	.59687*	0.20911	0.024	0.0554	1.1384
Yes plan, No change	Yes plan, Yes change	-0.26212	0.15267	0.317	-0.6575	0.1332
	No plan, Yes change	0.24621	0.26845	0.796	-0.4489	0.9414
	No plan, No change	0.33475	0.2426	0.513	-0.2935	0.963
No plan, Yes change	Yes plan, Yes change	-0.50833	0.23862	0.147	-1.1262	0.1096
	Yes plan, No change	-0.24621	0.26845	0.796	-0.9414	0.4489
	No plan, No change	0.08854	0.30411	0.991	-0.699	0.8761
No plan, No change	**Yes plan, Yes change**	**-.59687***	**0.20911**	**0.024**	**-1.1384**	**-0.0554**
	Yes plan, No change	-0.33475	0.2426	0.513	-0.963	0.2935
	No plan, Yes change	-0.08854	0.30411	0.991	-0.8761	0.699

N.B.: The mean difference is significant at the 0.05 level. The higher the P-value the less significance

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Appendix

AN ASSESSMENT OF THE IMPACT OF BUSINESS MODELS IN COVID-19 PANDEMIC PERIOD

1. Page 1

1. Is your Company or the Company where you work located in the United Kingdom?

	Answer Choices	Response Percent	Response Total
1	Yes	100.00%	223
2	No	0.00%	0
		answered	223
		skipped	0

2. Does the Company have customers or clients?

	Answer Choices	Response Percent	Response Total
1	Yes	96.86%	216
2	No	3.14%	7
		answered	223
		skipped	0

3. What is your job level in the Company?

	Answer Choices	Response Percent	Response Total
1	Entry level	8.97%	20
2	Intermediate level	34.08%	76
3	Management level	56.95%	127
		answered	223
		skipped	0

4. Does the Company have a business strategy or business model that drives the creation of value for its customers and stakeholders?			
Answer Choices		Response Percent	Response Total
1	Yes	85.20%	190

4. Does the Company have a business strategy or business model that drives the creation of value for its customers and stakeholders?			
2	No	14.80%	33
		answered	223
		skipped	0

5. Has there been a change or modification in the Company@SQ@s business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?			
Answer Choices		Response Percent	Response Total
1	Yes	75.78%	169
2	No	24.22%	54
		answered	223
		skipped	0

6. Did the Company@SQ@s sales drop due to the impact of COVID-19 pandemic?

	Answer Choices	Response Percent	Response Total
1	Decline in sales by up to 20%	35.87%	80
2	Decline in sales between 20% and 50%	25.11%	56
3	Decline in sales by more than 50%	11.21%	25
4	Not applicable - No decline in sales	27.80%	62
		answered	223
		skipped	0

7. If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales are due to changes or modifications in the Company@SQ@s business strategy or business model?

	Answer Choices	Response Percent	Response Total
1	Strongly agree	17.49%	39
2	Agree	31.84%	71
3	Neither agree nor disagree	29.15%	65
4	Disagree	10.76%	24
5	Strongly disagree	10.76%	24

7. If there has been a sales decrease at any time in the COVID-19 period, would you agree or disagree that the decline in sales are due to changes or modifications in the Company@SQ@s business strategy or business model?

	answered	223
	skipped	0

8. Did the Company@SQ@s sales increase due to the impact of COVID-19 pandemic?

	Answer Choices	Response Percent	Response Total
1	Sales increased by more than 50%	13.45%	30
2	Sales increased between 20% and 50%	17.04%	38
3	Sales increased by up to 20%	17.04%	38
4	Not applicable - no increase in sales	52.47%	117
		answered	223
		skipped	0

9. If there has been a sales increase at any time in the COVID-19 period, would you agree or disagree that the increase in sales volume are connected to changes or modifications in the Company@SQ@s business strategy or business model?

	Answer Choices	Response Percent	Response Total
1	Strongly agree	13.00%	29
2	Agree	34.98%	78
3	Neither agree nor disagree	38.57%	86
4	Disagree	8.52%	19
5	Strongly disagree	4.93%	11
		answered	223
		skipped	0

10. Did the Company@SQ@s profit drop due to the COVID-19 pandemic?			
Answer Choices		**Response Percent**	**Response Total**
1	Profit dropped by up to 20%	32.29%	72
2	Profit dropped between 20% and 50%	27.80%	62

10. Did the Company@SQ@s profit drop due to the COVID-19 pandemic?			
3	Profit dropped by more than 50%	11.66%	26
4	Not applicable - Profit did not drop	28.25%	63
		answered	223
		skipped	0

11. If there has been a drop in profit at any time during the COVID-19 period, would you agree or disagree that a change or modification in the Company@SQ@s business strategy or business model would have reduced the impact on profit or completely prevented a drop in profit?			
Answer Choices		**Response Percent**	**Response Total**
1	Strongly agree	18.39%	41
2	Agree	29.15%	65
3	Neither agree nor disagree	32.74%	73
4	Disagree	12.56%	28
5	Strongly disagree	7.17%	16
		answered	223
		skipped	0

12. Did the Company record a rise in profit due to the COVID-19 pandemic?

	Answer Choices	Response Percent	Response Total
1	Profit increased by up to 20%	17.04%	38
2	Profit increased between 20% and 50%	18.83%	42
3	Profit increased by more than 50%	10.31%	23
4	Not applicable - Profit did not increase	53.81%	120
		answered	223
		skipped	0

13. If there has been a rise in profit at any time during the COVID-19 period, would you agree or disagree that such a rise in profit is due to a change or modification in the Company@SQ@s business strategy or business model?

	Answer Choices	Response Percent	Response Total
1	Strongly agree	21.08%	47
2	Agree	26.01%	58
3	Neither agree nor disagree	41.26%	92
4	Disagree	9.42%	21
5	Strongly disagree	2.24%	5
		answered	223
		skipped	0

SPSS Data

Reliability

Notes

Output Created		07-MAR-2022 11:22:58
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES= Q71 Q91 Q111 Q131 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	216	100.0
	Excluded[a]	0	.0
	Total	216	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.739	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q71	10.3843	6.107	.515	.693
q91	10.2963	6.944	.529	.683
Q111	10.3611	6.176	.549	.669
Q131	10.2083	6.761	.545	.673

Reliability

Notes

Output Created		07-MAR-2022 11:23:05
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q72 Q112 Q92 Q132 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /SUMMARY=TOTAL.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	216	100.0
	Excluded[a]	0	.0
	Total	216	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha[a]	N of Items
-.073	4

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q72	10.3843	6.107	-.515	.693
Q112	9.6296	3.062	.028	-.175[a]
Q92	9.5648	2.452	.354	-.814[a]
Q132	9.4769	2.102	.473	-1.159[a]

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Correlations

Notes

Output Created		07-MAR-2022 11:23:09
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=Q71 q91 Q111 Q131 /PRINT=TWOTAIL NOSIG FULL /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.00

Correlations

		Q71	q91	Q111	Q131
Q71	Pearson Correlation	1	.348**	.546**	.304**
	Sig. (2-tailed)		.000	.000	.000
	N	216	216	216	216
q91	Pearson Correlation	.348**	1	.314**	.610**
	Sig. (2-tailed)	.000		.000	.000
	N	216	216	216	216
Q111	Pearson Correlation	.546**	.314**	1	.397**
	Sig. (2-tailed)	.000	.000		.000
	N	216	216	216	216
Q131	Pearson Correlation	.304**	.610**	.397**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	216	216	216	216

**. Correlation is significant at the 0.01 level (2-tailed).

Frequencies

Notes

Output Created		07-MAR-2022 11:23:16
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q3 Q4 Q5 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

Statistics

		Q3	Q4	Q5
N	Valid	216	216	216
	Missing	0	0	0

Frequency Table

Q3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Entry level	20	9.3	9.3	9.3
	Intermediate level	73	33.8	33.8	43.1
	Management level	123	56.9	56.9	100.0
	Total	216	100.0	100.0	

Frequency Table

Q4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	28	13.0	13.0	13.0
	Yes	188	87.0	87.0	100.0
	Total	216	100.0	100.0	

Frequency Table

Q5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	49	22.7	22.7	22.7
	Yes	167	77.3	77.3	100.0
	Total	216	100.0	100.0	

Descriptives

Notes

Output Created		07-MAR-2022 11:23:16
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=impact /STATISTICS=MEAN STDDEV MIN MAX SKEWNESS KURTOSIS.
Resources	Processor Time	00:00:00.01
	Elapsed Time	00:00:00.00

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
impact	216	1.00	5.00	3.4375	.81492	-.277	.166	.114	.330
Valid N (listwise)	216								

T-Test

Notes

Output Created		07-MAR-2022 11:23:19
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Q4n(1 2) /MISSING=ANALYSIS /VARIABLES=impact /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.00

Group Statistics

	Q4n	N	Mean	Std. Deviation	Std. Error Mean
impact	Yes	188	3.5040	.79246	.05780
	No	28	2.9911	.83744	.15826

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
impact	Equal variances assumed	.295	.588	3.172	214	.002	.51292	.16170	.19418	.83165
	Equal variances not assumed			3.044	34.593	.004	.51292	.16848	.17073	.85510

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
impact	Cohen's d	.79827	.643	.240	1.043
	Hedges' correction	.80109	.640	.239	1.040
	Glass's delta	.83744	.612	.179	1.037

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

T-Test

Notes

Output Created		07-MAR-2022 11:23:21
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Q5n(1 2) /MISSING=ANALYSIS /VARIABLES=impact /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.00

Group Statistics

	Q5n	N	Mean	Std. Deviation	Std. Error Mean
Impact	Yes	167	3.5135	.81508	.06307
	no	49	3.1786	.76716	.10959

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
impact	Equal variances assumed	.834	.362	2.562	214	.011	.33490	.13072	.07724	.59256
	Equal variances not assumed			2.649	82.446	.010	.33490	.12645	.08338	.58643

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
impact	Cohen's d	.80458	.416	.095	.737
	Hedges' correction	.80741	.415	.095	.734
	Glass's delta	.76716	.437	.104	.765

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Regression

Notes

Output Created		07-MAR-2022 11:23:26
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA COLLIN TOL CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT impact /METHOD=ENTER Q4n q5n q45 /SAVE PRED ZRESID.
Resources	Processor Time	00:00:00.04
	Elapsed Time	00:00:00.00
	Memory Required	6832 bytes
	Additional Memory Required for Residual Plots	0 bytes
Variables Created or Modified	PRE_2	Unstandardized Predicted Value
	ZRE_2	Standardized Residual

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	q45, Q4n, Q5n[b]	.	Enter

a. Dependent Variable: impact

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.242[a]	.058	.045	.79636	.058	4.381	3	212	.005

a. Predictors: (Constant), q45, Q4n, Q5n

b. Dependent Variable: impact

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.335	3	2.778	4.381	.005[b]
	Residual	134.447	212	.634		
	Total	142.781	215			

a. Dependent Variable: impact

b. Predictors: (Constant), q45, Q4n, Q5n

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.494	.627		7.165	.000		
	Q4n	-.682	.535	-.282	-1.274	.204	.091	11.014
	Q5n	-.436	.431	-.224	-1.011	.313	.090	11.094
	q45	.174	.340	.177	.510	.611	.037	27.198

a. Dependent Variable: impact

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Q4n	Q5n	q45
1	1	3.799	1.000	.00	.00	.00	.00
	2	.136	5.279	.03	.00	.00	.04
	3	.063	7.778	.00	.05	.08	.00
	4	.002	41.813	.97	.95	.92	.96

a. Dependent Variable: impact

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.9531	3.5500	3.4375	.19689	216
Residual	-2.30000	1.54688	.00000	.79078	216
Std. Predicted Value	-2.460	.571	.000	1.000	216
Std. Residual	-2.888	1.942	.000	.993	216

a. Dependent Variable: impact

One-way

Notes

Output Created		07-MAR-2022 11:23:32
Comments		
Input	Data	/Users/ciy9588/Desktop/Consulting/DE Stats/2022/2:3_Kevin_Proposal Plan/Kevin_SPSSData.sav
	Active Dataset	DataSet1
	Filter	filter_$
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	216
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY impact BY plan /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /CRITERIA=CILEVEL(0.95) /POSTHOC=TUKEY ALPHA(0.05).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.00

Descriptives

impact

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Yes plan, Yes change	155	3.5500	.79282	.06368	3.4242	3.6758	1.25	5.00
Yes plan, No change	33	3.2879	.76577	.13330	3.0163	3.5594	1.50	4.75
No plan, Yes change	12	3.0417	.98184	.28343	2.4178	3.6655	1.00	4.00
No plan, No change	16	2.9531	.74285	.18571	2.5573	3.3490	1.00	4.50
Total	216	3.4375	.81492	.05545	3.3282	3.5468	1.00	5.00

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
impact	Based on Mean	1.228	3	212	.300
	Based on Median	.988	3	212	.399
	Based on Median and with adjusted df	.988	3	188.147	.399
	Based on trimmed mean	1.280	3	212	.282

ANOVA

impact

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8.335	3	2.778	4.381	.005
Within Groups	134.447	212	.634		
Total	142.781	215			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: impact

Tukey HSD

(I) plan	(J) plan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Yes plan, Yes change	Yes plan, No change	.26212	.15267	.317	-.1332	.6575
	No plan, Yes change	.50833	.23862	.147	-.1096	1.1262
	No plan, No change	.59687*	.20911	.024	.0554	1.1384
Yes plan, No change	Yes plan, Yes change	-.26212	.15267	.317	-.6575	.1332
	No plan, Yes change	.24621	.26845	.796	-.4489	.9414
	No plan, No change	.33475	.24260	.513	-.2935	.9630
No plan, Yes change	Yes plan, Yes change	-.50833	.23862	.147	-1.1262	.1096
	Yes plan, No change	-.24621	.26845	.796	-.9414	.4489
	No plan, No change	.08854	.30411	.991	-.6990	.8761
No plan, No change	Yes plan, Yes change	-.59687*	.20911	.024	-1.1384	-.0554
	Yes plan, No change	-.33475	.24260	.513	-.9630	.2935
	No plan, Yes change	-.08854	.30411	.991	-.8761	.6990

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Impact

Tukey HSD[a,b]

plan	N	Subset for alpha = 0.05 1
No plan, No change	16	2.9531
No plan, Yes change	12	3.0417
Yes plan, No change	33	3.2879
Yes plan, Yes change	155	3.5500
Sig.		.066

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 21.907.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

CHAPTER 5

CONCLUSION

&

RECOMMENDED FUTURE STUDY

5.1 Introduction

Chapter 5 sets out to present a recap that encompasses the following: The research questions and the objectives of the research; The inferences being made based on rational thought; the statistical analysis of survey data; The contribution of this research to the knowledge industry; and Recommendations on the areas of studies in the future.

5.2 Recap of Research Objectives and Questions

5.2a Recap of Research Objectives

It was on 30 January 2020 that the WHO declared a disease, COVID-19, a Public Health Emergency of International Concern (PHEIC) in view of the virulence, casualty rate, infection rate, and pandemic scale of the disease. When COVID-19 begun spreading across countries and continents round the globe, many individuals, businesses, organisations, and institutions that appeared seriously threatened or are having concerns over the impact of this infectious disease begun adopting proactive steps and containment measures. The proactive steps and containment measures, which are highlighted in the preceding chapters, are in response to the COVID-19 pandemic (arguably) creating bout of anxieties,

hindering the routine activities of people and entities, disrupting normal ways of life, and causing widespread destruction. The measures adopted included the mapping of new plans or rejigging subsisting arrangement to address the current realities and cope with the new challenges.

Given the impact of COVID-19 and its disruption of activities across the globe, the need for researchers to gather a broader detail on how individuals and entities are responding or have responded or are coping with what appears to be a "new normal" to ensure survival and continuity became a matter of time.

Given the foregoing, the reasons behind this research is underscored and the research objectives included the following: (i) Assessing the impact business plans (models and strategies) on the performance of businesses at a time COVID-19 has sired perceptible disruptions and uncertainties; (ii) Identifying the commonalities in the approach of businesses that are taking measures to defray the impact of the COVID-19 pandemic; (iii) Ascertaining the links (if any) to the business plan of businesses being modified or changed outright as part of measures towards survive and continue as a going concern.

There are three key research questions, 3 null hypotheses, and 3 alternative hypotheses. Each of the three questions has 1 null hypothesis and 1 alternative hypothesis as shown in Sections 5.2b, 5.2c, and 5.2d.

5.2b Recap of Research Question 1 and Hypotheses

Research Question 1 (RQ1)

Did companies implementing business plans (strategies or models) have an impact on business performance during the COVID-19 pandemic?

Null Hypothesis for RQ1

There is no difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

Alternative Hypothesis for RQ1

There is a significant difference between companies that had a business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in any area of business performance during the COVID-19 pandemic.

5.2c Recap of Research Question 2 and Hypotheses

Research Question 2 (RQ2)

During the COVID-19 pandemic, has there been an impact on business performance following a change or modification in the business plan (strategy or model)?

Null Hypothesis

There is no difference between the companies that changed their business plan (strategy or model) compared to the companies that did not have a business plan (strategy or model) in in any area of business performance during the COVID-19 pandemic.

Alternative Hypothesis

There is a significant difference between the companies that changed their business plan (strategy or model compared to the companies that did not have a business plan (strategy or model) in in any area of business performance during the COVID-19 pandemic.

5.2d Recap of Research Question 3 and Hypotheses

Research Question 3 (RQ3)

Did the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic modify due to a change in the business plan (strategy or model)?

Null Hypothesis

There is no moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.

Alternative Hypothesis

There is a significant moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic.

5.3 Links between Business Plan and Performance in COVID-19 Period

5.3a Key Findings on RQ1

RQ1: Did companies implementing business plans (strategies or models) have an impact on business performance during the COVID-19 pandemic?

In addressing RQ1 the key tests conducted includes the Levene's Test for Equality of Variances, Independent Samples T-test, and Cohen's d (Effect Size for T-Test). The impact composite is the dependent variable. While SQ4 (Does the company have a business strategy or business model that drives the creation of value for its customers and stakeholders?) is the grouping variable when conducting the Independent Samples T-Test.

There's also the Group Statistics for SQ4, which is shown in Table 4.6c1 to display descriptive information, such as, sample size, mean, standard deviation, and standard error. The Group Statistics, which are shown in Table 4.6c1, illustrates that most survey participants, who worked in companies where there is a business plan, are reporting higher agreement that the business plan that has been adopted is related to the impact of COVID-19 (M = 3.504, SD = 0.792) compared to the participants working in companies that did not have a business plan (M = 2.99, SD = 0.837).

The rule of thumb is that 0.2 represents a small effect size, 0.5 signifies a medium effect size, and 0.8 indicates a large effect size when interpreting Cohen's d. The point estimates which peak at **.643** as shown in Table 4.6c2 (Independent Samples Effect Sizes) is viewed as being pivotal, significant, and indicating a

medium effect. So, the means of the two different groups differ by a 0.643 standard deviation, indicating that the strength of association between two different variables on a scale is not trivial because it falls within the medium effect size.

In the illustration through the Levene's Test shown in Table 4.6c3, **.002** is the Sig(2-tailed) item in the output, which is the two-tailed p-value of the test. The calculated two-tailed p-value, .002, being less than the .05 threshold or significance level serves as the evidence of inapplicability of the null hypothesis regarding RQ1. "P-value ≤ α [indicates that] the differences between some of the means are statistically significant: If the p-value is less than or equal to the significance level, you reject the null hypothesis and conclude that not all of population means are equal." (Minitab Ltd., 2022). Based on the rule of thumb, we could conclude that the population variances are not equal if "Sig." or $p < 0.05$. (Geert van den Berg, n.d.).

The null hypothesis for RQ1 is inapplicable considering the generally accepted rule: "If the resulting p-value of Levene's test is less than some critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling. Thus, the null hypothesis of equal variances is rejected, and it is concluded that there is a difference between the variances in the population." (Crifo, 2011). Rather, the above results make a strong case on the applicability and validity of the alternative hypothesis, which reads: In terms of company performance during COVID-19 pandemic, there is a significant difference between the companies that adopted a business plan and those that did not have a plan.

5.3b Key Findings on RQ2

RQ2: During the COVID-19 pandemic, has there been an impact on business performance following a change or modification in the business plan (strategy or model)?

The process to solve RQ2 involves conducting some tests, namely Levene's Test for Equality of Variances, Independent Samples T-test, and Cohen's d (Effect Size for T-Test). The Independent Samples T-Test is conducted with SQ5 (Has there been a change or modification in the company's business strategy or business model to aid in responding to the impacts of COVID-19 pandemic?) as the grouping variable while the impact composite is the dependent variable.

There is a Group Statistics on SQ5, which is presented in Table 4.7c1 to illustrate the following: The majority of survey participants, who work in companies where the business plan–strategy or model–has been modified in response to the COVID-19 pandemic, are reporting a higher agreement on the impact composite (M = 3.514, SD = 0.815) compared to the participants, who work in companies where there is no change or modification in business plan in responding to the impact of COVID-19 (M = 3.179, SD = 0.767).

Reading the results of Cohen's d, which is presented in Table 4.7c2, the point estimate is **.416**, showing an effect that is neither negligible nor trivial. "Cohen suggested that d = 0.2 be considered a 'small' effect size, 0.5 represents a 'medium' effect size and 0.8 a 'large' effect size. This means

that if the difference between two groups' means is less than 0.2 standard deviations, the difference is negligible, even if it is statistically significant." (McLeod, 2019).

A perusal of the Levene's Test, which is demonstrated in Table 4.7c3, leads to the observation that **.011** is the Sig(2-tailed), the two-tailed p-value of the test. At this point, which is .011, the p-value is less than the .05 required to be significant.

Given the .011 two-tailed p-value, it is argued and submitted for the purposes of this research and its conclusion that the null hypothesis in RQ2 does not hold and therefore rejected based on the generally accepted rule: "If the resulting p-value of Levene's test is less than some critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling. Thus, the null hypothesis of equal variances is rejected, and it is concluded that there is a difference between the variances in the population." (Crifo, 2011).

5.3c Key Findings on RQ3

RQ3: Did the relationship between having a business plan (strategy or model) and business performance during the COVID-19 pandemic modify due to a change in the business plan (strategy or model)?

The tests conducted for the purpose of finding reliable answers regarding RQ3 include the Test of Multicollinearity, Levene's Test, Tests

of Homogeneity of Variance, Analysis of Variance (ANOVA), and Tukey Post Hoc Test. In the process of conducting these key tests, the impact composite is the dependent variable. While a variable combining SQ4 and SQ5 is the independent variable.

In interpreting the result of the Test of Multicollinearity shown in Table 4.8c2, part of what comes to the fore is the rule of thumb as argued by Brown (2021), Corporate Finance Institute Education Inc. (n.d.), & Schreiber-Gregory & Jackson (2017), which read: Whenever the Variance Inflation Factor (VIF) score is greater than 10 or the Tolerance score is lower than 0.1, there is significant multicollinearity between the independent variables that needs attention.

Table 4.8c2 demonstrates that the Tolerance scores (0.091, 0.09, and 0.037) are less than 0.1 and the VIF scores (11.014, 11.094, and 27.198) are greater than 10, implying that neither the VIF nor Tolerance is within the acceptable threshold. These scores indicate that the level of multicollinearity between the independent variables is significant, which further implies that a new variable is an option to conduct a one-way ANOVA using four groups for each combination of SQ4 and SQ5 responses because more than two groups are now needed considering the multicollinearity result.

Before conducting an ANOVA test, a Levene's test of Homogeneity of Variances is performed. In conducting the Levene's Test, the primary focus is on whether the significance value is greater than .05. The outcome of the Levene's test illustrates, as shown in Table 4.8c3 (Tests of

Homogeneity of Variances), that the variances between the four groups are equal **(F(3, 212) = 1.228, *p* = .300)**. This result further demonstrates that the assumption of homogeneity of variances is not violated considering the rule of thumb that the population variances are not equal if "Sig." or p-value < 0.05, whereas in this instance p-value is 0.300 (that's > 0.05). Some analysts use a comparison of medians in interpreting the Levene's Statistics. Using a comparison of medians, the result of the Levene's Test illustrated in Table 4.8c3 still shows that the significance value based on a comparison of medians is **.399**. This is not a significant result, which means the requirement of homogeneity of variance is met, and the result of ANOVA test is more likely to be robust.

Regarding a one-way ANOVA conducted to determine whether there are differences between any pair of the four groups, it serves to note that in interpreting the ANOVA results, the focus is on the value of F that appears in the 'Between Groups' to determine whether this reaches significance. (EZ SPSS Tutorials, 2022). "A requirement for the ANOVA test is that the variances of each comparison group are equal;" and a Levene's Test serves to determine whether the variances are equal by calculating the significance value to know if the value is significant or insignificant by interpreting the outcome in line with the practical rule: When the significance value is greater than .05, the interpretation is that the result is not significant, which means the requirement of homogeneity of variance is met, and ANOVA test is considered to be robust. (EZ SPSS Tutorials, 2022).

Having determined the existence of equal variances (also known as the homogeneity of variances), the next step is to look at the one-way ANOVA test, which is conducted with a new variable combining SQ4 and SQ5 as the independent variable. In interpreting the ANOVA test, which is illustrated in Table 4.8c4, the focus is on the value of F that appears in the Between Groups to see whether the value reaches significance.

As shown in Table 4.8c4, the value of F is **4.381**, which reaches significance with a **p-value of .005** (also known as the Stata output). The result of a one-way **ANOVA (F(3, 212) = 4.381, p = .005)** explains that there is a statistically significant difference in the mean productivity between at least two of the four groups of the independent variable means. The result further signifies that some of the means are statistically significant considering the rule of thumb that p-value ≤ 0.05 indicates that some of the means are statistically significant. In other words, the ANOVA result seems to provide strong grounds to reject the null hypothesis. Though the result **(F(3, 212) = 4.381, p = .005)** of a one-way ANOVA indicates there is a statistically significant difference between the means of at least two of the four groups of the independent variable, the various pairs of means between which the difference is significant is not yet known. Therefore, a further statistical test, specifically, a Tukey Post Hoc Test, is conducted to make a comparison of the means with equal variance to identify which of the groups differed from each other and know what the degree of disparity is.

Tukey Post Hoc Test (also called Tukey's Honest Significant Difference test) serves to find out whether the mean difference between any of the pairs of groups is statistically significant and make an estimate of the degree of disparity. A "The Tukey HSD ("Honestly Significant Difference" or "Honest Significant Difference"), which determines if the interaction among three or more variables is mutually statistically significant, also demonstrates whether the relationship between two sets of data is statistically significant. (Beck, 2018).

Tukey Post Hoc Test, which is presented in Table 4.8c5, shows that it is only the Mean difference between the "Yes Plan, Yes Change" and "No Plan, No Change" that reaches significance. Also, the **p-value is .024**, which is less than the standard .05 alpha level. The Tukey's HSD Test for multiple comparisons as illustrated in Table 4.8c5 found that the mean value of dependent variable (impact score) was significantly different between the plan 'No Plan, No Change' and the plan 'Yes Plan, Yes Change' **(p = 0.024, 95% C.I. = [-1.1384, -0.0554])**. There was no statistically significant difference in mean value of dependent variable (impact scores) between the following plans: 'No plan, No change' and 'Yes plan, No change' (p=0.513); 'No plan, No change' and 'No plan, Yes change' (p=0.991); 'Yes plan, Yes change' and 'Yes plan, No change' (p=0.317); 'Yes plan, Yes change' and 'No plan, Yes change' (p=0.147); 'Yes plan, No change' and 'No plan, Yes change (p=0.796).

Therefore, it is submitted that the relationship between having a business plan (strategy or model) and company performance during the

COVID-19 pandemic modifies due to a change in the business plan. In other words, the alternative hypothesis for RQ3 ‘there is a significant moderating effect of a company changing their business plan (strategy or model) on the relationship between having a business plan (strategy or model) and company performance during the COVID-19’ holds.

5.4 Research Relevance and Contribution

In this research, what is being presented has covered a wide range of areas and issues, including: (i) Disinterring that in the battle towards navigating away from the thorny situation and events that followed the outbreak of COVID-19, the businesses that have sound plans (strategy or model) are better placed and have significantly influenced their business performances compared to the ones that do not have a strategy or model; (ii) Discerning that a majority of businesses undertaking proactive measures by modifying business plans in response to the ramifications of COVID-19 outbreak have created favourable opportunities and indeed significantly enhanced their business performances compared to the businesses that did not restructure business plans; (iii) Understanding that the businesses with sound novel plans (for protection against COVID-19 and sustaining its engagements) could help in creating a significant moderating effect on the relationship between business performance and business strategy or model.

Based on this research, further submission is as follows: (i) sound and well managed business plans (strategies or models) can drive resilience

and serve as a bulwark sustaining businesses in times of crises, widespread disruptions, dangers, economic uncertainties, and significant changes in trade and service supply; (ii) the ability of businesses to cope in times of unforeseen debilitating events, unanticipated dangers, and major crisis (including COVID-19 pandemic) would depend in part on the vulnerability or otherwise of business plans; (iii) well packaged and efficiently run business plan serves to create favourable business ambience that enhance business performance; (iv) business plans should not remain stasis, rather it has to be adaptive and prone to modifications in light of the dynamic nature of business and events that could impact on businesses; (v) sound business plans contribute to and creates room for continuity and sustenance of the going concern assumption.

In summation, it is submitted that sound business plans that are efficiently directed do have a significant positive impact on the sustainability of businesses during a crisis or crises as evident in this research that focuses on the COVID-19 pandemic. In other words, companies that abdicate or suspend business plans of best practices and standards are creating the grounds for negative effects on business performance, resilience ability, and sustainability.

5.5 Limitation of the Research, Future Study, and Closing Remarks

The aim of the research is not to present a literature or research outcome that is driven by or based on situations and happenings across the entirety of the globe. So, though the limitation of this research is not

unconnected with eliciting survey data from a specific country, which in this instance is the United Kingdom, it is strongly argued that the outcome of this study is a reliable guide that offers many lessons for businesses operating in and beyond the shores of the UK. The survey during this research has been affected by meagre resources considering the cost of digital-based distribution and collection of responses from more than two hundred persons. However, it is argued that the sample, 223 survey respondents, appears to be considerable and representative.

The survey data and subsequent statistical analyses are based on the experiences during the ongoing COVID-19 pandemic. So, this research has not envisaged what the post-pandemic situation would be or look like. There is a strong ground to advocate a post-COVID-19 pandemic study to determine the following: (i) Whether the COVID-19 era business plans (strategies and models) have a significant impact on business performance after the pandemic; (ii) Any links or interrelationships between the degree of impact of business plans on business performance during the COVID-19 pandemic compared to the business performance post-COVID-19.

This research has found that a sound business plan under efficient administration is likely to have a significant positive impact on the sustainability of businesses during this COVID-19 pandemic. Most likely, there is a difference between what has happened during this pandemic when businesses adopted several plans to tackle the challenges and what the post-pandemic situation would be.

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