

Final Project 2

PMG 497

Project Template

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leverage of Business continuity project on Financial Companies in Riyadh

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Final Project - 2

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Acknowledgment

Dedication

Abstract

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1. Chapter 1:

Introduction

The idea of Business continuity project has grown up during the recent years and it is considered to be the key for the survival of any organization that facing a crisis and challenges in the business (Sawalha, 2013). Many companies at the present time rethink on crises management and being ready for facing them using proper management techniques. Hence, Business continuity project observed from many edges by various analysts for the purpose of developing business performance (Maier et al., 2014). The Business continuity project technique focuses on the personnel of the organization as well as the processes that are vital to business survival (Shaw & Harrauld, 2006), assuring the continuity of critical functions inside companies. Hence, with the tough competition in the market, every organization should adopt a business continuity project that companies need (Alharthi & Khalifa, 2019) however, securing the flow of resources as inputs to production is the most crucial aspect of Business continuity project (Mohamed, 2019) Indeed, any type of business disruption has the potential to be enormously harmful to a company, not just in terms of monetary losses but also in terms of intangible effects on corporate reputation and confidence (Tammineedi, 2010). As a result, establishing a working strategy to ensure that important business processes are restarted as effectively and soon as feasible in the case of an unplanned disruption is a critical business necessity (Wong, 2009).

1.1. Research Background

The early studies that concentrated on the critical role of argued that Business continuity project could turn into an expert of the aggressive choice for companies but these studies did not deliberate ultimately on how business continuity project can lead to company performance specifically (Herbane et al., 2004), In extension, Sawalha (2013) further pointed out that the act of business continuity project in increasing company performance suffers infrequently been consulted or indeed focused on in the continuing studies. Hence, recognizing the possible advances of business continuity project on the company performance is necessary to provide

accurate value to the business continuity project powers and attract consideration and afterward, realizing adequate assistance from the senior management. Taking into account the important perspective of business continuity project, this study attempts to fill the theoretical and practical gaps in public companies in the Kingdom of Saudi Arabia. The empirical evidences that will come out from the quantitative analysis will show business continuity project and company performance is correlated, the main theoretical gaps in the performing literature complied with in this research lies in the inadequate studies which have examined this relationship in financial sector in KSA. The general objective of this study is to evaluate the relationship between business continuity project and company performance of public organization in KSA.

1.2. Research Problem

There are challenges faced by the Business continuity project professionals in developing and maintaining the business continuity project's infrastructure and activities (Bakar et al., 2015) Peterson (2009) argued that one of the reasons many companies fail to implement effective business continuity project is due to lack of financial support as great prudence in expenditures is exercised by many senior managements and the board of directors.

The problem statement of this study is how business continuity project's components influence company performance in financial sector companies as stated by Peterson (2009). In addition, that many companies are not aware of business continuity project and failed to implement effective business continuity project, this is due to the lack of resources that the organization have not managed as well as required, these resource could be manpower, finance, etc. This could be in line for that there is no straight financial advantage or profit from the investment is seen from the implementation of business continuity project in the organization. In order to successfully implement business continuity project in the organization in secure funding, business continuity project's professionals in any organization should pay attention with the business authority to predict and evaluate the prospective loss due to service idle time, this could be done by identify the likelihood of risks, define the best rescue objectives and indicate the most cost-effective clarification and knowledge about business continuity project (Belaouras,

2009). Another demand and challenges are using business continuity project in companies which cut across several business groups or completing it on a collective business-wide support (Belaouras, 2009). These conditions indicate the usefulness of old management responsibility and regulation to command the preference of business continuity project actions across all organization members. In order to discuss these issues, recognizing the possible advances of business continuity project on the company performance is necessary to provide accurate value to the business continuity project powers and attract consideration and afterward, realizing adequate assistance from the senior management.

1.2.1. Theoretical Gaps

Theoretical gaps in business continuity research refer to areas where there is a lack of comprehensive understanding or conceptual framework related to BCM. This can include factors like management support, plan reviews, and organizational performance. The goal is to fill these gaps to improve the overall effectiveness of business continuity management systems.

1.2.2. Practical Gaps

Implementation and Execution: There is a gap between the development of business continuity plans and their actual implementation. Research focusing on the practical challenges and best practices for executing these plans is needed.

Integration with Risk Management: There is a need for research on integrating business continuity planning with overall risk management strategies to ensure a more holistic approach to organizational resilience.

Small and Medium-Sized Enterprises (SMEs): Many existing studies focus on business continuity in large organizations, leaving a gap in understanding the specific challenges and needs of SMEs in implementing effective continuity plans.

Human Factors: Research on the human aspects of business continuity, such as employee training, awareness, and behavior during crises, is essential for developing practical and effective continuity strategies.

Supply Chain Resilience: More research is needed to understand how businesses can effectively manage and ensure continuity within complex supply chains, especially in the face of global disruptions.

1.3. Research Significance

Companies often underestimate the importance of a business continuity project. No one ever notices its absence – until disaster strikes. Any unplanned interruption of normal business processes can create immense hurdles and costly setbacks. Operations suffer. Revenue may suffer even more. Unplanned interruptions take many forms. It can be something as simple as a power outage. It could be a major hurricane. Ultimately, a disaster can be anything that disrupts normal business operations. Regardless of the cause, unplanned means unexpected.

1.3.1. At the theoretical level

At the theoretical level, business continuity research focuses on developing and refining conceptual frameworks, models, and theories to understand the underlying principles and dynamics of business continuity management (BCM). This includes studying the factors that influence organizational resilience, the impact of disruptions on business operations, the role of leadership and culture in BCM, and the effectiveness of different strategies for mitigating and managing risks.

Theoretical research in business continuity also delves into areas such as organizational learning from crises, decision-making processes during disruptions, and the integration of BCM with broader organizational strategies. Additionally, it explores the relationship between business continuity and related fields, such as risk management, crisis management, and disaster recovery.

By advancing theoretical understanding, business continuity research aims to provide a solid foundation for practical applications and contribute to the development of effective BCM practices and strategies.

1.3.2. At the practical level

At a practical level, business continuity research focuses on identifying and addressing real-world challenges and opportunities related to the implementation, management, and effectiveness of business continuity strategies. This includes studying the practical aspects of developing and maintaining business continuity plans, assessing the impact of disruptions on organizations, and evaluating the practical implications of different BCM approaches.

Practical business continuity research also examines issues such as resource allocation for continuity planning, the integration of technology into continuity strategies, the role of communication in crisis management, and the best practices for testing and exercising continuity plans. Additionally, it explores the practical implications of regulatory requirements, industry standards, and certifications related to business continuity.

By addressing practical challenges and providing actionable insights, business continuity research at the practical level aims to help organizations improve their resilience and preparedness for potential disruptions, ultimately contributing to more effective and sustainable continuity management practices.

1.4. Research Questions

What are the most effective strategies for ensuring business continuity in the face of disruptive events?

What are the key components of a successful Business Continuity Project?

How can companies effectively assess and mitigate risks to their business continuity?

What role does technology play in enabling business continuity?

How can companies ensure the resilience of their supply chains?

What are the best practices for training employees and building a culture of resilience within an organization?

1.5. Research Objectives

- To identify the key elements of successful business continuity plans.
- To evaluate the role of technology in enabling efficient business continuity.
- To assess the impact of different risk assessment and mitigation strategies on company resilience.
- To examine the effectiveness of supply chain resilience measures in ensuring business continuity.
- To explore company culture and employee preparedness as factors influencing business continuity management effectiveness.

1.6. Research Hypotheses

The relationship between business continuity project and company performance has been investigated in the literature and reveals significant association between them. Sawalha (2013) indicates that the adoption of business continuity project on company performance is considerable since business continuity project is one of the principal initiative elements for increasing a company's competence to resist its flexibility, as well as continuity under severe domestic and external pressures. During this fast-developing threats that hit the market in recent years, companies that do not have a business continuity plan have suffered business and financial losses and struggle to get back into business again, which showed the importance of business continuity to sustain company performance. Companies utilize business continuity project to support sustained performance of systems on which their core activities are based the indication behind this study was based on the certainty that business continuity project can contribute significantly to the optimization of company performance. The understanding the potential benefits of business continuity project on the company performance is important to give a proper merit to the business continuity project efforts and draw attention and subsequently, obtaining full support from the senior management claimed that company performance and business continuity management are linked to each other. Likewise, found a significant association between business continuity project and company performance. In

particular, business continuity project provides the operational and strategic framework to both review and where appropriate redesign the way an organization provides its product and services whilst improving its resistance to disruption, failure or loss (Elliott et al., 2010). Based on these facts, it is undeniable that an effective business continuity project plays a very crucial role in ensuring an organization's survivability and to remain competitive. Thus, business continuity project has been evolved as an effective tool for ensuring the delivery of organization's key products/services in the presence of various disruptions.

business continuity project factors (Management support, external requirements, organization preparedness, risk management) have significant effects on the company performance of public entities in KSA ” In conclusion, based on an analysis of the business continuity project in literature, the four factors of business continuity project namely: Management support, external requirements, organization preparedness, risk management assumed to have a direct impact on company performance as shown in Figure-1.

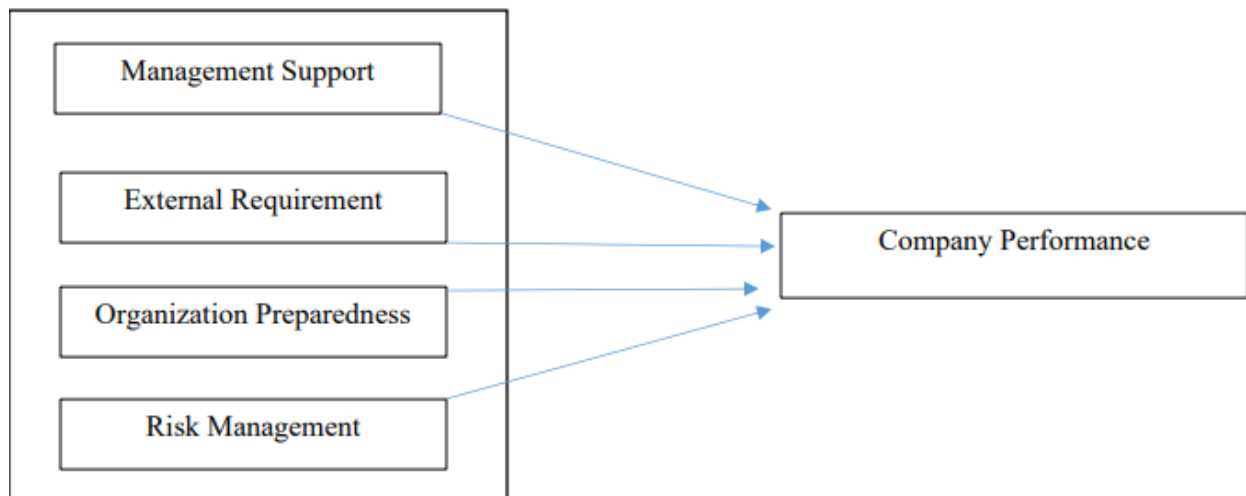


Figure 1: The Impact of Business continuity project Factors on Company Performance

1.7. Research Model

In this section, a multiple linear regression is used to examined the direct relationships between the business continuity project factors on company performance. The evaluation of relationships is made through a multiple regression analysis. The resulting data indicated

in **Table-3** indicates the strength of direct relationships between business continuity project factors and company performance.

Table 1 Regression Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	0.681	0.463	0.450	0.44646
a. Predictors: (Constant), Risk Management, External Requirements, Management support, Organization preparedness				

The initial assessment to the output in the summary **Table-2** explains the degree of which as regression model predicts the variability between each independent variable business continuity project factors and company performance. It is found the magnitude of $R^2=0.463$. These values show the percentage of total variation in company performance which can be explained by all business continuity project factors. In other words, the change in business continuity project factors explains (46.30%) of the change in company performance. To examine the significance of relationship between business continuity project factors and company performance, unstandardized coefficients is used to report that direct relationships between them is statistically significant ($p\text{-value} \leq 0.05$) as shown in **Table-2**. In addition to that, the strength of each relationship in regression model is examined using Standardized coefficients (Beta).

Table 2 Summary of Multiple Linear Regressions Between the Variables					
Regression Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig
(Constant)	0.712	0.224		3.187	0.002
Management support	0.175	0.050	0.228	3.538	0.001
External Requirements	0.130	0.036	0.212	3.616	0.000
Organization preparedness	0.117	0.049	0.164	2.402	0.017
Risk Management	0.308	0.060	0.380	5.129	0.000
a. Dependent Variable: Company performance					

Reading the output data in Table-4 reveals that all relationships between business continuity project factors and company performance (dependent variable) are significant (≤ 0.05). While the

magnitudes of standardized coefficients are moderate. The strongest relationship is found between risk management and company performance ($\text{Beta}=0.380$). Therefore, the causal relationships exist between business continuity project factors (Management support, external requirements, organization preparedness, risk management) and the performance of public companies in KSA .

1.8. Scope of The Study

Several researchers have suggested that it is necessary to launch, sponsor and support a senior management business continuity program in the pre-implementation phase. Senior management commitment is essential to provide company

functions and services that operate under good conditions. Therefore, only the active involvement of senior management can guarantee the continued provision of financial support and other critical resources to develop and support the business continuity project implementation. the lack of support by top management ultimately leads to poor execution, inadequate involvement of the company as a whole, and ultimately failure planning. Similarly, lack of understanding by senior management also prevents the effective implementation of the business continuity project program. business continuity project initiatives are taken seriously by employees if it is clear that the management team is fully committed and supportive of business continuity project. Without direct supervision and monitoring by managers, most initiatives of business continuity project will not be effective and may not innovate and mobilize opportunities for company change.

business continuity project is no longer an additional task for large companies operated in public and private sectors. Maintaining corporate value has become a growing problem for external stakeholders, such as legislators and regulatory authorities, who must force companies in their area of responsibility to comply with the rules of business continuity. Regulatory requirements by government agencies and at some point, by consumers motivate management to further improve the sustainability of information technologies and their systems, external factors could make business continuity project more important for a corporate governance program, but have also challenged companies to assess whether their actions should be limited to the minimum

requirements set by regulators or use a more strategic approach to go beyond the minimum requirements and improve their business continuity project capabilities.

Organization Preparedness

The company's sustainability largely depends on its ability to quickly avoid and resolve an unwanted event. an organization that was able to quickly identify potential risks and transfer them to a crisis management team was better under the control of external risks (Zahari et al., 2015). Company availability means knowing different ways to recover and avoid risks, such as: action plans for continuity, creation of crisis management teams and duplication of jobs for key employees. Even after serious incidents have occurred, business continuity plans must be updated, tested and improved regularly. the rapid recovery from risks shows the strong ability in the form of company preparation to deal with potential risks, which includes alternative target preparation, well-executed recovery plans, and reduction of critical resources. Company readiness is also enhanced if one or more individuals can effectively restore critical business functions or systems.

Risk Management

In any industries, business continuity management is viewed as an important component of a larger framework or as a component of other management processes and framework process. Risk management and business impact analysis part of Business Continuity Management and are examples of activities governed under the corporate governance and risk management policy. Risk management main aim is to identify internal as well as external threats, to pyritize identified threats before identifying and developing action plans to mitigate risk. Business impact analysis which is within the business continuity management refers to the critically identified processes associated to the risks to businesses and are detailed in an organization's risk management program. Previous literature has shown that risk management and are important factors in planning business continuity#. Every organization has different types of risks and companies should develop a culture of risk management. All types of risks must be identified, evaluated and controlled.

Company Performance

Company performance is a measurement of achievement of targets and objectives. Alternatively, company performance comprises actual results or amounts compared with planned outcomes. Company performance is also defined as the actual output (outcome) of an organization as measured against its intended (expected) outputs. The measurement of company performance concentrates on two fundamental outcomes, first, “financial performance”; second, “non-financial performance”. Financial performance includes, revenue, profitability, cost saving, return on investment, and other financial measures, while non-financial performance includes: effectiveness, efficiency, quality, innovation and productivity. Company performance measures in terms of both quantitative as well as qualitative terms, and it is achieved by the efforts of individual employees and departments. Company performance is a vital indicator of any organization's success or failure. For instance, companies that have high performance are successful in the market and on the other hand those companies that perform not well consider failure in the market. Nowadays, company performance plays a significant role for companies especially in that environment where companies face issues regarding higher competition. Moreover, the success of an organization is based on their performance that shows how well an organization achieves its objectives. Meanwhile, company performance is a factor that measures how well an organization attains its desired goals. Moreover, company performance plays a vital role in the existence of any kind of companies such as profit-making companies and non-profit making companies. It is evident that performance is a necessary factor in company analysis and there is no theory on companies that is void of this concept. In this rapidly evolving and dynamic environment, one of the effective factors for the success of companies, enhanced company performance and surviving the competition, includes concentration on innovation and strategic planning. Many studies have underscored that innovation often leads to competitive advantage and is used to measure the performance of companies.

1.9. The Project Structure

Chapter 1: Overview

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Statistical Analysis & Findings discussion

Chapter 5: Research limitations, Recommendations & Conclusion

2. Chapter 2: Literature Review

2.1. Introduction

Business continuity has become an increasingly critical area of focus for organizations across various industries, driven by the growing recognition of the potential impact of disruptions on operations, financial stability, and reputation. (Sawalha, 2013). As a result, a substantial body of research has emerged, seeking to understand the dynamics of business continuity, the effectiveness of continuity strategies, and the factors that contribute to organizational resilience in the face of unexpected events. (Maier et al., 2014).

The concept of business continuity encompasses a broad spectrum of activities and measures aimed at ensuring that organizations can continue to operate and deliver essential services, even in the event of disruptive incidents such as natural disasters, cyber-attacks, supply chain disruptions, pandemics, or other unforeseen crises. (Sawalha, 2013). As organizations strive to navigate an increasingly complex and interconnected global business environment, the need to proactively plan for and respond to potential disruptions has become a strategic imperative. (Sawalha, 2013).

The literature on business continuity research reflects a multidisciplinary approach, drawing from fields such as risk management, disaster recovery, information technology, organizational behavior, and supply chain management. This interdisciplinary nature underscores the multifaceted challenges and opportunities associated with business continuity, as well as the diverse array of factors that can influence an organization's ability to effectively manage and recover from disruptive events. (Maier et al., 2014).

Moreover, the evolving landscape of business continuity is shaped by technological advancements, regulatory requirements, global supply chain complexities, and the growing interdependence of organizations within interconnected ecosystems. (Maier et al., 2014). These factors have prompted researchers to explore not only the technical aspects of continuity planning but also the human, organizational, and strategic dimensions that underpin resilience and recovery efforts. (Sawalha, 2013).

In this literature review, we aim to synthesize and analyze the existing body of research on business continuity, with a focus on understanding the key themes, trends, and insights that

have emerged from scholarly inquiry in this field. (Shaw & Harrald, 2006), By critically examining the literature, we seek to identify the current state of knowledge, gaps in understanding, and potential avenues for future research that can contribute to advancing the theory and practice of business continuity. (Sawalha, 2013).

The review begins by providing an overview of the fundamental concepts and principles of business continuity, including the definitions, frameworks, and models that underpin the field. Subsequently, it delves into the various dimensions of business continuity (Shaw & Harrald, 2006), encompassing technological solutions, organizational resilience, risk management, regulatory compliance, and the role of human factors in continuity planning and execution. (Sawalha, 2013). Furthermore, the review explores the evolving landscape of business continuity, considering the impact of emerging technologies, global interconnectedness, and the changing nature of threats and vulnerabilities. It also examines the role of collaboration, partnerships, and supply chain resilience in enhancing organizational continuity, as well as the implications of business continuity for broader societal and economic resilience. (Shaw & Harrald, 2006),

By synthesizing and analysing the diverse body of literature on business continuity, this review aims to provide a comprehensive understanding of the current state of knowledge in the field, while also identifying opportunities for further research and practical implications for organizations seeking to strengthen their continuity capabilities. (Sawalha, 2013).

Overall, the literature review seeks to contribute to a deeper understanding of the complexities, challenges, and opportunities associated with business continuity, offering insights that can inform both scholarly inquiry and practical strategies for building resilient and adaptive organizations in an increasingly unpredictable and interconnected world. (Shaw & Harrald, 2006).

Business continuity management (BCM) has emerged as a critical area of focus for organizations seeking to enhance their resilience in the face of disruptions and disasters. In today's dynamic and interconnected business environment, (Shaw & Harrald, 2006), the ability to maintain essential operations and swiftly recover from unexpected events is paramount to organizational survival and success. (Shaw & Harrald, 2006), As such, a comprehensive understanding of business continuity practices, strategies, and their impact on organizational performance is essential for both researchers and practitioners.

This literature review aims to provide a comprehensive analysis of the current state of business continuity research, identify key trends, challenges, and best practices, and highlight areas for further exploration. By synthesizing and critically evaluating existing literature, this review seeks to contribute to the ongoing discourse surrounding business continuity and resilience, offering insights that can inform future research, policy, and organizational strategies.

The review will encompass a wide range of topics within the realm of business continuity, including but not limited to the development and implementation of business continuity plans, the role of technology in enhancing resilience, the influence of regulatory frameworks, and the impact of organizational culture on continuity practices. (Shaw & Harrauld, 2006), Additionally, it will explore the evolving nature of disruptions, such as cyber threats, pandemics, and natural disasters, and their implications for business continuity. (Sawalha, 2013).

By delving into these areas, this review aims to shed light on the current state of knowledge, identify gaps in the literature, and propose avenues for future research. Ultimately, the goal is to provide a comprehensive and insightful overview of business continuity research, offering valuable perspectives for researchers, practitioners, and decision-makers alike. (Shaw & Harrauld, 2006),

2.2. The independent variable

Implementation of Business Continuity Plans: This variable involves assessing the impact of implementing specific business continuity strategies or plans on organizational resilience and recovery capabilities.

Organizational Size and Industry: Explore how the size of an organization or the industry it operates in influences the effectiveness of business continuity measures.

Technology Integration: The independent variable the level of technology integration within business continuity plans and how it affects an organization's ability to maintain operations during disruptions.

Regulatory Compliance: Investigate how compliance with specific regulatory requirements or industry standards influences the development and implementation of business continuity strategies.

Risk Assessment and Management: Examining the impact of different risk assessment and management approaches on the overall effectiveness of business continuity efforts.

Training and Awareness: Focus on the independent variable of employee training and awareness programs related to business continuity and their impact on organizational resilience.

Communication and Coordination: The effectiveness of communication and coordination mechanisms during a crisis could be an independent variable, exploring how these factors influence the overall business continuity outcomes.

2.3. The dependent variable

Organizational Resilience: This variable measures the ability of an organization to withstand and recover from disruptive events, reflecting its overall resilience in the face of challenges.

Operational Continuity: The organization's ability to maintain essential operations during and after a disruption, indicating the continuity of critical business functions.

Recovery Time: Focus on the dependent variable of the time it takes for an organization to recover and return to normal operations following a disruptive event.

Financial Impact: Assessing the financial consequences of a disruption on the organization, such as revenue loss, recovery costs, and overall financial stability.

Customer Satisfaction and Trust: The impact of business continuity efforts on maintaining customer satisfaction, trust, and loyalty during and after a crisis.

Employee Well-being and Productivity: Examine the effects of business continuity measures on employee well-being, productivity, and morale in the aftermath of a disruptive event.

Reputation and Brand Image: Assessing the impact of business continuity on the organization's reputation, brand image, and public perception during and after a crisis.

2.4. The relationship between the independent and the dependent variables

The relationship between the independent and dependent variables is crucial for understanding the impact of business continuity strategies and practices on organizational outcomes. The independent variable represents the factor that is manipulated or changed, while the dependent variable reflects the outcome or measure that is influenced by the changes in the independent variable.

key points regarding their relationship:

Causality: To establish a causal relationship between the independent variable (e.g., implementation of business continuity plans) and the dependent variable (e.g., organizational resilience). They aim to determine whether changes in the independent variable lead to changes in the dependent variable.

Impact Assessment: The relationship between the independent and dependent variables involves assessing the impact of business continuity measures on organizational outcomes. This may involve quantitative analysis to measure the magnitude of the effect and qualitative analysis to understand the mechanisms through which the independent variable influences the dependent variable.

Mediating and Moderating Factors: The relationship between the independent and dependent variables can be influenced by mediating and moderating factors. Mediating variables explain the process through which the independent variable affects the dependent variable, while moderating variables influence the strength or direction of the relationship.

Longitudinal Analysis: Understanding the relationship between the independent and dependent variables may require longitudinal analysis to track changes over time and assess how business continuity practices impact organizational outcomes in the short and long term.

Contextual Considerations: The relationship between the independent and dependent variables is influenced by the specific organizational context, industry dynamics, regulatory environment, and the nature of potential disruptions. These contextual factors can shape the nature and strength of the relationship.

2.5. Conclusion

Importance of Business Continuity: The literature consistently emphasizes the critical importance of business continuity planning and strategies for organizations to effectively respond to and recover from disruptions, ensuring the continuity of essential operations.

Impact on Organizational Resilience: Business continuity measures have been shown to significantly contribute to enhancing organizational resilience, enabling companies to adapt to changing circumstances, mitigate risks, and maintain stability during and after disruptive events.

Role of Technology: Studies highlight the increasing role of technology in business continuity, with a focus on leveraging digital tools, data analytics, and cloud-based solutions to enhance resilience and facilitate remote operations.

Human Factors: The literature underscores the significance of considering human factors in business continuity planning, including employee training, communication, and psychological support, as crucial elements for successful continuity efforts.

Regulatory Compliance: Research emphasizes the influence of regulatory requirements and industry standards on shaping business continuity practices, with organizations aligning their strategies to meet compliance obligations.

Collaborative Networks: The literature points to the value of collaborative networks and partnerships in enhancing business continuity, emphasizing the importance of coordination with suppliers, customers, and other stakeholders.

Continuous Improvement: Business continuity research highlights the need for organizations to adopt a proactive and iterative approach, continuously evaluating and improving their continuity plans in response to evolving threats and changing business environments.

Overall, the literature review demonstrates the multifaceted nature of business continuity, emphasizing the interconnectedness of technology, human elements, regulatory considerations, and collaborative efforts in ensuring organizational resilience and continuity of operations. These findings provide valuable insights for organizations seeking to strengthen their business continuity capabilities in an increasingly complex and uncertain business landscape.

3. Chapter 3: Research Methodology

3.1. Introduction

The research methodology for business continuity planning involves a systematic approach to developing plans that ensure an organization can continue operating during and after a disruption. It includes phases such as project initiation, risk assessment, design and development of the BCP, creation of BCP, testing, practicing, and implementation. The purpose is to present a multi-usable business continuity planning methodology that considers the protection of mission-critical business processes, resources, and services. The methodology involves defining any and all risks that can affect the company's operations, making it an important part of the organization's risk management strategy. The research aims to develop a framework based on industry standards like COBIT 5 and ISO 22301, outlining procedures and instructions an organization must follow in the face of disaster, whether fire, flood, or cyberattack. It draws insights from years of experience and aims to create a modern business continuity plan. The background and motivation for this research is to enhance the planning and development of business continuity plans, as well as to manage the BCM planning framework, define the scope, objectives, and assumptions, and research the work in the areas of BCM.

The analysis in this study is based on quantitative methods. Survey questionnaire and is the main research methods for primary data collection. The target research population in this study is represented all the employees in Riyadh public organization in KSA. Moreover, a question was built to approve the existence of a relationship between business continuity project, company performance.

3.2. Operational definitions for research variables

Recovery Time Objective (RTO): The maximum acceptable duration of time within which a business process or function must be restored after a disruption. It is typically expressed in hours or days.

Recovery Point Objective (RPO): The maximum tolerable amount of data loss measured in time. It represents the point in time to which data must be restored in order to successfully resume business operations.

Maximum Acceptable Outage (MAO): The maximum duration of time that a business process or system can be unavailable before it significantly impacts the organization's ability to function effectively.

Resource Dependencies: The identification and documentation of the critical resources, such as personnel, technology, facilities, and suppliers, that are essential for the continuity of business operations.

Crisis Communication Plan: A predefined strategy outlining how the organization will communicate with internal and external stakeholders during a crisis or disruption, including the methods, channels, and responsible parties for communication.

Business Impact Analysis (BIA): A systematic process for determining the potential impacts of disruptions to business operations, including financial, operational, and reputational consequences.

Recovery Strategies: The predetermined approaches and methods for restoring business operations and processes, including options for alternate facilities, technology recovery, and supply chain management.

Dimension	Operational definition	Measured variable	Literature
Green Practices (GP)	Practices that committed to created reducing negative impacts of operations on the environment	Internal Environmental Management (IEM) Technology Integration (TI) Logistic Management (LM) Customer Focus (CF)	Esty and Winston (2006); Vachon and Klassen, (2006); Manaktola, (2007); Zhu <i>et al.</i> , (2008); Jansson <i>et al.</i> , (2010)
Green Innovation (GI)	The innovation that a industry carries out and involved in energy-saving, pollution-prevention, waste recycling, green product and process designs and corporate environmental management	Green product innovation (GPTI) Green process innovation (GPSI)	Brunnermeier and Cohen (2003); Chen <i>et al.</i> , (2006); Chiou <i>et al.</i> , (2011); Huang and Wu (2010); Santamaria <i>et. al.</i> , (2012)
Green Performance	Focus for the improvement of environmental management to the industry	Environmental performance Economic performance Operational performance Innovation performance	Rennings (2000); Wagner <i>et al.</i> , (2001); Zhu <i>et al.</i> , (2008); Zhu and Sarkis (2004); Chien and Shih (2007); Montabon <i>et al.</i> , (2007); Chiou <i>et. al.</i> , (2011)

Table 1: Research Variables and Operational Definitions

3.3. Research design (research onion)

3.3.1 Research Philosophy:

Positivism: Positivist research philosophy is based on the belief that knowledge is derived from observable, measurable phenomena. In the context of business continuity, a positivist approach may focus on identifying and quantifying specific factors that contribute to effective continuity planning and management. This could involve using statistical analysis to measure the impact of various strategies on business resilience and recovery.

Interpretivism: Interpretivist research philosophy emphasizes the subjective understanding of social phenomena and the importance of context and human interpretation. In the context of business continuity, an interpretivist approach may involve exploring the meanings and interpretations that individuals and organizations attribute to continuity planning and responses to disruptions. This could include qualitative methods such as interviews and case studies to understand the diverse perspectives and experiences related to business continuity.

Critical Theory: Critical research philosophy is concerned with understanding and challenging power dynamics, social inequalities, and systemic issues. In the context of business continuity, a critical approach may involve examining how business continuity practices intersect with broader social, economic, and political structures. This could include investigating how business continuity strategies address or perpetuate inequalities and vulnerabilities within and across organizations.

Pragmatism: Pragmatist research philosophy emphasizes the practical consequences and utility of research findings. In the context of business continuity, a pragmatic approach may seek to combine elements of positivism and interpretivism to address specific research questions and practical challenges related to continuity planning and resilience. This could involve using mixed methods to gather comprehensive insights and actionable recommendations for improving business continuity practices.

3.3.2 Research Approach:

Exploratory: This approach is used when the topic of business continuity is not well understood or when there is a need to explore new insights and perspectives. Exploratory research often involves gathering preliminary information, conducting literature reviews, and using qualitative methods such as interviews and focus groups to gain a deeper understanding of the challenges and opportunities related to business continuity.

Descriptive: The descriptive approach is employed to provide a detailed and comprehensive overview of specific aspects of business continuity within organizations. This may involve documenting the current state of continuity planning, identifying common practices, and analysing the effectiveness of existing strategies. Surveys,

questionnaires, and observational studies are commonly used in descriptive research to gather data.

Explanatory: When the goal is to understand the factors that contribute to successful business continuity or to explain the relationships between different variables, an explanatory research approach is employed. This approach often involves testing hypotheses, conducting causal analyses, and using both quantitative and qualitative methods to uncover the underlying mechanisms and drivers of effective continuity planning and management.

Research Strategy: Selecting specific methods such as surveys, interviews, case studies, or simulations to investigate various aspects of business continuity planning and management, chosen strategy is surveys

Time Horizons:

Short-Term: Covers immediate actions and responses to disruptive events. It focuses on the initial hours, days, and weeks following an incident, aiming to ensure the safety of employees, protect critical assets, and maintain essential operations during the early stages of a crisis.

Medium-Term: Extends beyond the initial response phase and encompasses the weeks and months following a disruptive event. During this period, organizations focus on stabilizing operations, implementing recovery plans, and mitigating the impact of the incident on their business processes, supply chain, and customer relationships.

Long-Term: Involves the strategic planning and preparation for prolonged disruptions and recovery efforts that may extend over months or even years. Organizations consider the long-term effects of a crisis, such as reputational damage, financial impacts, and regulatory compliance, and develop strategies to restore normal operations, rebuild resilience, and adapt to the changing business landscape

Data Collection: The specific techniques and tools that will be used to gather data, such as questionnaires, interviews, observations, or document analysis.

Data Analysis: techniques that will be used to analyse the collected data. For business continuity research, this includes qualitative analysis, quantitative analysis, or a combination of both to gain insights into the factors influencing business continuity and resilience.

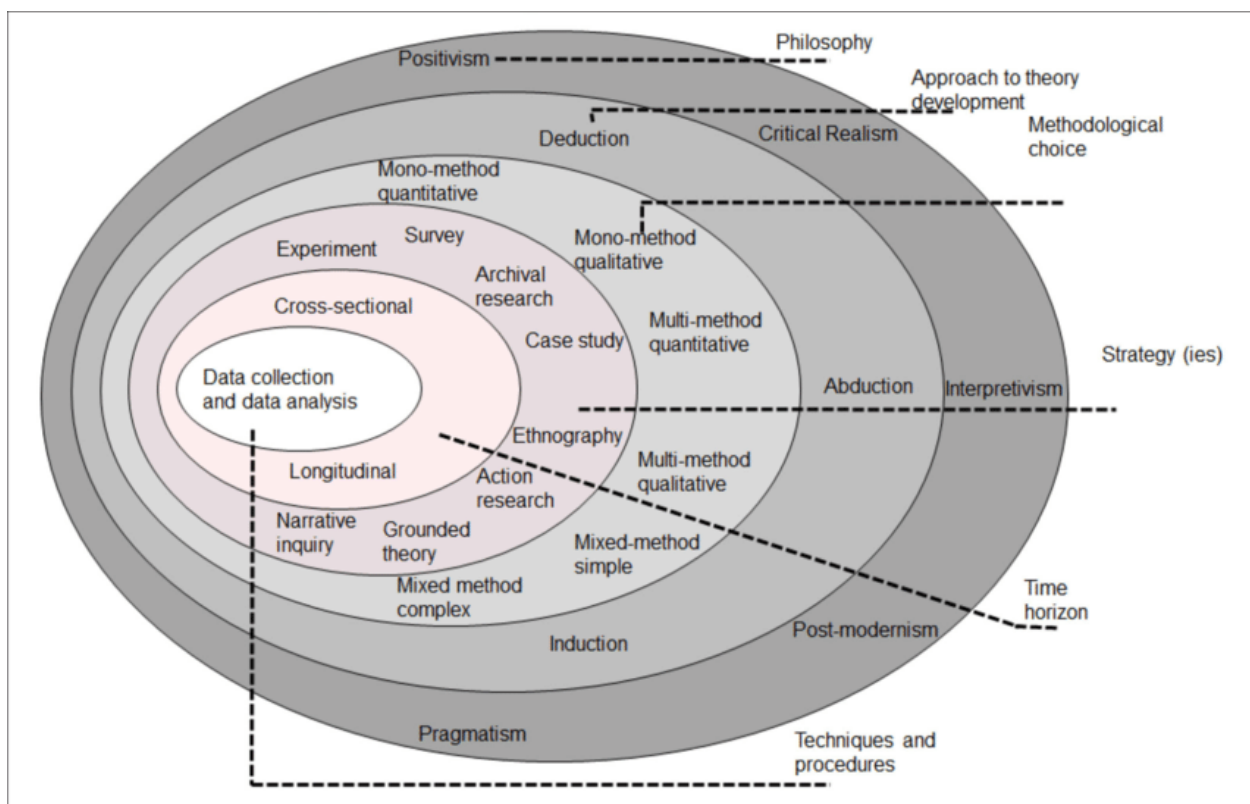
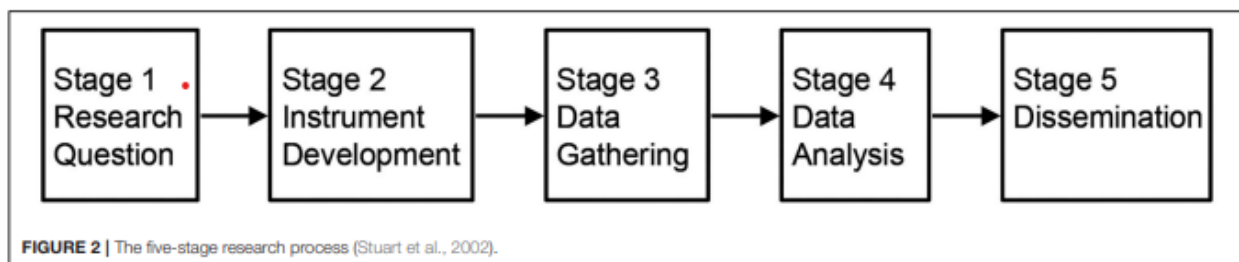


FIGURE 1: Research onion (Saunders et al., 2019, p. 108).



3.4. Research population & Sampling methods and technique

Research Population: The research population refers to the entire group of individuals, organizations, or entities that the researcher is interested in studying. In the context of business continuity, the research population may include businesses, government agencies, non-profit organizations, or other entities that are involved in continuity planning and management.

Sampling Methods and Techniques: Sampling involves selecting a subset of the research population to represent the larger group. The choice of sampling method and technique depends on various factors, including the research objectives, the characteristics of the population, and the resources available. Here are some common sampling methods and techniques used in business continuity research:

Probability Sampling:

- **Simple Random Sampling:** Each member of the population has an equal chance of being selected.
- **Stratified Sampling:** The population is divided into subgroups (or strata), and samples are randomly selected from each stratum.
- **Cluster Sampling:** The population is divided into clusters, and clusters are randomly selected for inclusion in the sample.

Non-Probability Sampling:

- **Convenience Sampling:** Participants are selected based on their availability and accessibility.
- **Purposive Sampling:** Participants are chosen based on specific characteristics relevant to the research objectives.
- **Snowball Sampling:** Existing participants recruit new participants, particularly useful when studying hard-to-reach populations.

Mixed Methods Sampling:

- Sequential Sampling: Involves using one type of sampling method followed by another, such as starting with a convenience sample and then selecting specific cases purposefully.
- Quota Sampling: The researcher selects a specific number of participants from different subgroups to ensure representation.

3.5. Data collection method

surveys and Questionnaires: Surveys and questionnaires can be used to gather quantitative data from a large number of participants. These tools can help assess the current state of business continuity practices, identify challenges, and measure the level of preparedness within organizations.

Interviews: Conducting interviews with key stakeholders, such as business continuity managers, senior executives, and employees, can provide in-depth qualitative insights into the effectiveness of business continuity plans, organizational resilience, and the impact of disruptions.

Workshops and Focus Groups: Organizing workshops and focus groups allows for interactive discussions and idea generation. These methods can be valuable for exploring best practices, identifying vulnerabilities, and gathering diverse perspectives on business continuity within an organization.

Document Analysis: Analysing existing business continuity plans, incident reports, and relevant documentation can provide insights into past incidents, response strategies, and areas for improvement.

Observations: Direct observations of business continuity exercises, drills, or actual response efforts can offer valuable firsthand insights into the practical implementation of continuity plans and the organizational response to disruptions.

3.6. Types of data

Quantitative data involves numerical information and can be collected through surveys, questionnaires, and structured observations. This type of data can include metrics related to the

implementation of business continuity plans, such as the percentage of employees trained in emergency procedures, the frequency of plan updates, or the financial impact of disruptions

3.7. Statistical analysis procedures

Descriptive Statistics: Summarizing and describing the main features of the data, such as mean, median, mode, standard deviation, and range. Descriptive statistics provide an overview of the data and help in understanding the distribution of key variables related to business continuity.

Inferential Statistics: Making inferences and predictions about the population based on sample data. Inferential statistics help in testing hypotheses, estimating parameters, and making predictions about the future of business continuity under different scenarios.

Regression Analysis: To examine the relationship between variables and to predict the impact of one variable on another. In business continuity research, regression analysis can be used to identify factors that influence the resilience of business operations and to predict the impact of disruptions.

Time Series Analysis: This involves analyzing data collected at different points in time to identify patterns, trends, and seasonality. Time series analysis can help in understanding the historical performance of business continuity measures and in forecasting future risks and disruptions.

Risk Analysis: Statistical techniques such as Monte Carlo simulation and sensitivity analysis are used to assess the impact of various risks on business continuity plans. These techniques help in quantifying the likelihood and potential impact of different risk scenarios.

Survival Analysis: This is used to analyze the time until an event of interest occurs, such as the time until recovery from a disruption or the time until a business resumes normal operations. Survival analysis can help in assessing the effectiveness of business continuity plans and in identifying factors that affect the time to recovery.

3.8. Conclusion

The research methodology for business continuity involves various statistical analysis procedures to gather, analyse, and interpret data related to the resilience of business operations. These procedures include descriptive statistics, inferential statistics, regression analysis, time series analysis, risk analysis, and survival analysis. By utilizing these statistical techniques, researchers can gain valuable insights into the effectiveness of business continuity plans, identify areas for improvement, and make evidence-based decisions to enhance the resilience of business operations.

Overall, the research methodology for business continuity is crucial for understanding the impact of disruptions, assessing risks, and developing strategies to ensure the continuity of business operations. By employing statistical analysis procedures, organizations can make informed decisions to mitigate risks and enhance their ability to recover from potential disruptions.

4. Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

4.2. Sample profile (descriptive statistics for research sample)

4.3. Validity & reliability tests for the questionnaires

4.4. Descriptive statistics for research variables (answer research questions)

4.5. Testing Hypotheses & Findings Discussion

4.6. Conclusion

5. Chapter five: Research limitations, Recommendations & Conclusion

5.1. Research Limitations & Future Research

5.2. Research Recommendations

5.3. Conclusion

References

Appendix