

IMPROVING BUSINESS CONTINUITY PLAN (BCP)  
TO MITIGATE THE IMPACT OF COVID-19 ON BUSINESS

KOH KARIN

UNIVERSITI TEKNOLOGI MALAYSIA

IMPROVING BUSINESS CONTINUITY PLAN (BCP)  
TO MITIGATE THE IMPACT OF COVID-19 ON BUSINESS

KOH KARIN

An Action Research submitted in fulfilment of the  
requirements for the award of the degree of  
Master of Business Administration

Azman Hashim International Business School  
Universiti Teknologi Malaysia

JANUARY 2022

## DEDICATION

This Action Research is dedicated to my father, who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my late mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

## **ACKNOWLEDGEMENT**

In preparing this Action Research, I was in contact with many people, including academicians and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my Action Research supervisor, Dr. Ong Choon Hee, for encouragement, guidance, critics and friendship. I am also very thankful to the industry player, VS Industry Berhad (VSI), particularly Mr. Gary Lim, the General Manager and his team for their co-operation to complete the Action Research. Without their continued support and interest, this Action Research would not have been the same as presented here.

My fellow postgraduate student should also be recognised for their support. My sincere appreciation also extends to others who have provided assistance at various occasions. Their views and tips are useful indeed. Unfortunately, it is not possible to list all of them in this limited space. I am grateful to all my family member.

## **ABSTRACT**

The purpose of this study is to improve the Business Continuity Plan (BCP) to mitigate the impact of Covid-19 on business of the industry partner, VSI by using Action Research. VSI has developed its own BCP for Covid-19 in April 2020 to fulfil the requirement of its customers after the Covid-19 pandemic outbreak. However, the existing BCP for Covid-19 is incomplete as it only covers the prevention, detection and restoration which covered up to the third lifecycle of BCM and in February 2021, workers of VSI were tested positive for Covid-19 and due to this, VSI received notice from Ministry of Health (MOH) to temporarily shut down 3 of its production plants in Senai, Johor which has caused some damages to VSI including financial wise and its reputation. In view of this, under both cycles of the Action Research, the existing BCP for Covid-19 has been revised to mitigate the impact of Covid-19 on the business. Due to time limitation, this Action Research has only managed to improve the BCP by using the fifth lifecycle of BCM which is Exercising, Maintenance and Audit of Business Continuity Management (BCM) by revising the existing BCP twice and part of fourth lifecycle which is Building and Embedding a BCM Culture by including the training requirement for Covid-19 in the revised BCP.

## ABSTRAK

Tujuan kajian ini adalah untuk menambah baik BCP bagi mengurangkan kesan Covid-19 terhadap rakan industri, VSI dengan menggunakan Penyelidikan Tindakan. VSI mempunyai BCP sendiri untuk Covid-19 sejak April 2020 untuk memenuhi keperluan pelanggannya selepas wabak pandemik Covid-19. Walau bagaimanapun, BCP yang sedia ada untuk Covid-19 tidak lengkap kerana ia hanya meliputi pencegahan, pengesanan dan pemulihan sehingga kitaran hayat ketiga BCM dan pada Februari 2021, pekerja VSI telah diuji positif untuk Covid-19 dan disebabkan ini, VSI menerima notis daripada Kementerian Kesihatan Malaysia (KKM) untuk menutup sementara 3 kilang pengeluarannya di Senai, Johor yang telah menyebabkan kerugian kepada VSI termasuk dari segi kewangan dan reputasinya. Justeru itu, di bawah kedua-dua kitaran Penyelidikan Tindakan, pembaikan BCP yang sedia ada untuk Covid-19 untuk mengurangkan kesan Covid-19 ke atas perniagaan telah dilaksanakan. Disebabkan oleh masa terhad, Penyelidikan Tindakan ini hanya berjaya menambah baik BCP dengan menggunakan kitaran hayat kelima BCM iaitu Exercising, Maintenance dan Audit of BCM dengan menyemak semula BCP yang sedia ada sebanyak dua kali and sebahagian daripada kitaran hayat keempat iaitu Building and Embedding a BCM Culture dengan memasukkan keperluan latihan untuk Covid-19 dalam BCP.

## TABLE OF CONTENTS

DECLARATION .....	i
DEDICATION .....	ii
ACKNOWLEDGEMENT .....	iii
ABSTRACT.....	iv
ABSTRAK.....	v
LIST OF FIGURES .....	viii
LIST OF ABBREVIATIONS.....	x
LIST OF APPENDICES.....	xi
CHAPTER 1 .....	1
INTRODUCTION.....	1
1.1 Information About VSI.....	1
1.2 Problematic Situation and Problem Formulation .....	4
1.3 Problem Diagnosis.....	8
1.4 Research Questions & Research Objectives.....	13
1.5 Importance of the Research .....	14
CHAPTER 2 .....	16
INDUSTRY AND PROBLEM DIAGNOSIS .....	16
2.1 Case Description.....	16
2.2 Relevant Theory and Models.....	17
2.3 Previous and Contemporary Studies.....	21
2.4 Proposed Theoretical Model.....	23
2.5 Intervention Planned and Implication.....	25
2.6 Cycle of Action Research .....	26
2.7 Summary of the Chapter and Conclusion.....	28
CHAPTER 3 .....	30
METHODOLOGY .....	30
3.1 Introduction .....	30
3.2 Philosophical Assumptions: Pragmatism .....	30
3.3 Research Design .....	31
3.4 Data Collection Method.....	34
3.5 Content Validity .....	37
3.6 Reliability .....	37
3.7 Data Analysis Method .....	38

3.8	Chapter Summary .....	40
CHAPTER 4	.....	41
DATA ANALYSIS	.....	41
4.1	Introduction .....	41
4.2	Fieldwork.....	41
4.3	Participant Profiling.....	43
4.4	Supporting Review Documents .....	45
4.5	Mixed-Method Pre and Post Data Analysis .....	45
4.6	Findings and Discussion .....	58
4.7	Chapter Summary .....	62
CHAPTER 5	.....	64
REFLECTION CYCLE-1	.....	64
5.1	Introduction .....	64
5.2	Overall Findings .....	64
5.3	Reflection on Action Research Process.....	72
5.4	Conclusion.....	74
5.5	Revised Action Plan for Action Research 2 .....	76
CHAPTER 6	.....	77
REFLECTION CYCLE-2	.....	77
6.1	Reporting the AR-2 Findings .....	77
6.2	T-Test Analysis.....	85
6.3	Reflection on AR Process.....	86
CHAPTER 7	.....	89
CONCLUSION	.....	89
7.1	Introduction .....	89
7.2	Case Closure .....	89
7.3	Implication for Practice .....	90
7.4	Contribution to Theory .....	90
7.5	Limitation and Recommendation for Future Research.....	91
7.6	Conclusion.....	91
REFERENCES	.....	92



## LIST OF FIGURES

<b>FIGURE NO.</b>	<b>TITLE</b>	<b>PAGE</b>
Figure 1	Corporate structure of VSI (VS Industry Berhad Annual Report, 2020)	2
Figure 2	Financial summary of VSI from FY2016 to FY2020 (VS Industry Berhad Annual Report, 2020)	3
Figure 3	Total revenue breakdown for FY2019 and FY2020 (VS Industry Berhad Annual Report, 2020)	4
Figure 4	Quarterly revenue and profit/(loss) before tax (Official website of VSI)	6
Figure 5	Share price of VSI from 11 <sup>th</sup> February 2021 to 17 <sup>th</sup> February 2021 (KL Screener)	7
Figure 6	SWOT analysis of VSI	8
Figure 7	Fishbone of the problem of existing BCP for Covid-19 of VSI	10
Figure 8	Reason of the incomplete BCP of VSI	11
Figure 9	Research questions and research objectives	13
Figure 10	Criteria of good BCP (Management et al., 2020)	19
Figure 11	The BCM lifecycle (Management Quarterly, 2003)	23
Figure 12	BCM process (Management Quarterly, 2003)	24
Figure 13	Workflow planned for this action research	26
Figure 14	Workflow planned for business research	27
Figure 15	Workflow planned for action research 1	27
Figure 16	Workflow planned for action research 2	28
Figure 17	Summary of the chapter and conclusion	28
Figure 18	Saunders' Research Onion (Crossley & Jansen, 2021)	30
Figure 19	Spiral process of action research	31
Figure 20	Process planned for this study	32
Figure 21	Table for determining sample size for a finite population (Krejcie & Morgan, 1970)	34
Figure 22	Mixed method sequential explanatory flow	35

Figure 23	Cronbach's Alpha for each filed of the questionnaire (Enshasy, 2009)	37
Figure 24	Summary of instruments use for this research	38
Figure 25	Result of normality analysis	42
Figure 26	Result of reliability analysis	42
Figure 27	Demographic data of the respondents	43
Figure 28	Mean score and standard deviation of variables	45
Figure 29	Mean score and standard deviation for BCP Development	46
Figure 30	Mean score and standard deviation for BCP Training, Audit and Maintenance	46
Figure 31	Mean score and standard deviation for BCP Audit	47
Figure 32	Mean score and standard deviation for BCP Maintenance	47
Figure 33	Mean score and standard deviation for BCP Training	48
Figure 34	Skewness and Kurtosis of variables	48
Figure 35	Cronbach's Alpha for variable 1 – BCP Development	49
Figure 36	Cronbach's Alpha for variable 2 – BCP Testing, Auditing and Maintenance	49
Figure 37	Cronbach's Alpha for variable 3 – BCP Auditing	50
Figure 38	Cronbach's Alpha for variable 4 – BCP Maintenance	50
Figure 39	Cronbach's Alpha for variable 5 – BCP Training	51
Figure 40	Mind map of the existing BCP for Covid-19 of VSI	52
Figure 41	Summary of nodes of semi-structured interview transcripts	53
Figure 42	Categories of themes	54
Figure 43	Comparison of BCP for Covid-19 before and after revision	67
Figure 44	Progress of BCM adoption in VSI's BCP for Covid-19 for Cycle-1	75
Figure 45	Timeline for AR1 and estimated timeline for AR2	76
Figure 46	Timeline for AR2	77
Figure 47	Comparison of BCP for Covid-19 before and after second revision	79
Figure 48	Paired Samples Statistics	85
Figure 49	Paired Samples Test	86

## LIST OF ABBREVIATIONS

AR	-	Action Research
BCP	-	Business Continuity Plan
BCM	-	Business Continuity Management
EMS	-	Electronics Manufacturing Services
EOA	-	Expert Opinion Analysis
OEM	-	Original Equipment Manufacturers
ICU	-	Intensive Care Unit
MCO	-	Movement Control Order
MITI	-	Ministry of International Trade and Industry
MNCs	-	Multinational Companies
MOH	-	Ministry of Health
SWOT	-	Strength, Weakness, Opportunity and Threat
SOPs	-	Standard Operating Procedures
VSI	-	V.S. Industry Berhad

## LIST OF APPENDICES

<b>APPENDIX</b>	<b>TITLE</b>	<b>PAGE</b>
Appendix A	Similarity Index Report	94
Appendix B	Impact Report	95
Appendix C	Supervisor Consent Form	97
Appendix D	Interview Consent Form	98
Appendix E	Company Letter of Intent	100
Appendix F	Compulsory Meeting Form	102
Appendix G	Presentation Consent Form	103
Appendix H	Interview Protocol	104
Appendix I	Pre-Survey & Post-Survey Instrument	107
Appendix J	Expert Opinion Analysis	110

# CHAPTER 1

## INTRODUCTION

### 1.1 Information About VSI

Industry partner for this review is VSI. It was incorporated in 1982 with more than 35 years history. It is the holding company of the group and is listed on the Main Market of Bursa Malaysia Securities Berhad since 1998, as at 11 June 2021, its market capitalisation is RM5.16 billion.

The group has 8 manufacturing plants in Malaysia, all based in Senai, Johor. Other than Malaysia, the group also has manufacturing facilities in Vietnam, China and Indonesia. The group employs more than 8,000 people.

The group is a leading Integrated EMS in Asia, ranked top 50 (2020: ranked 23<sup>rd</sup>) in the world for 13 consecutive years from 2007 to 2019. It is also the 5<sup>th</sup> largest EMS player in ASEAN region and the largest homegrown EMS organization in Malaysia. According to Wikipedia, EMS is a term used for companies that design, manufacture, test, distribute, and provide return/repair services for electronic components and assemblies for OEMs.

The group provides one stop manufacturing solutions to its customers who are mostly from Europe, Japan and the USA which includes designing and fabricating of plastic injection mould design, injection moulding service, printing of circuit boards and assembling of products.

The following is the corporate structure of the Group extracted from the annual report for financial year 2020:-

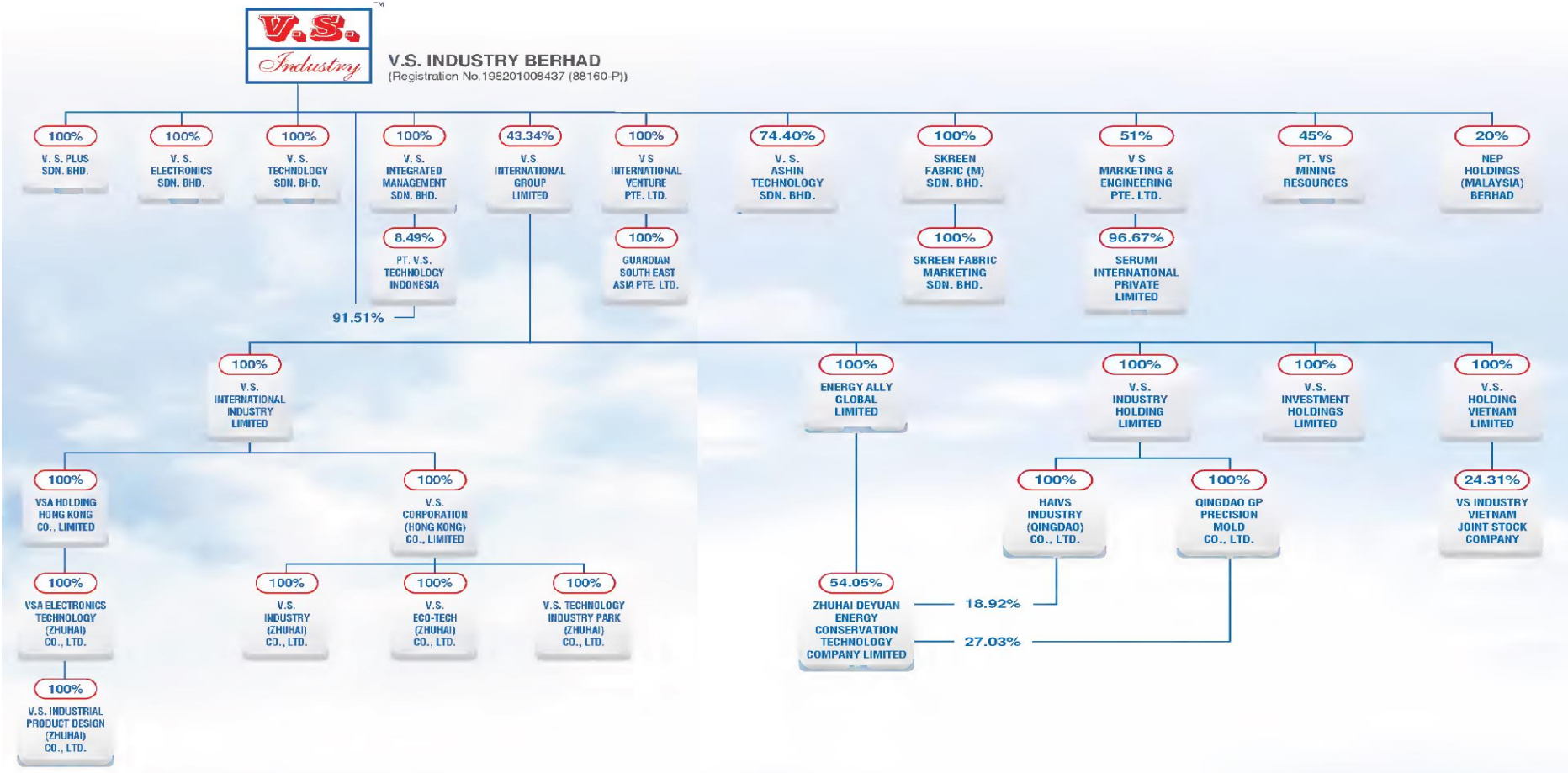


Figure 1: Corporate structure of VSI (VS Industry Berhad Annual Report, 2020)

Some key financial highlights of VSI from FY2016 to FY2020 as depicted in the annual report for FY2020 are as follow:-

#### FINANCIAL SUMMARY

For the Financial Year Ended 31 July (RM '000)	2020	2019	2018	2017	2016
Revenue	3,243,192	3,978,350	4,100,736	3,281,350	2,175,626
Earnings before Interest, Tax, Depreciation and Amortisation ("EBITDA")	253,152	302,252	287,801	322,047	226,384
Earnings before Interest and Tax ("EBIT")	161,337	203,069	206,150	243,996	154,338
Share of Results of Associates	2,264	(2,181)	(6,635)	(235)	1,620
Profit before Tax ("PBT")	153,362	181,856	176,216	223,673	141,866
Net Profit after Minority Interest	116,478	165,394	151,074	156,319	117,928
Total Dividends Paid	48,616*	80,226	69,382	71,639	54,876
<b>AS AT 31 JULY (RM '000)</b>					
Shareholders' Funds	1,709,016	1,606,466	1,437,590	1,070,910	879,903
Share Capital	782,947	753,077	603,303	369,109	235,169
Reserves (Net of Treasury Shares at Cost)	926,069	853,389	834,287	701,801	644,734
Total Assets	2,833,259	3,037,600	3,123,040	2,914,931	1,984,443
Net Current Assets	887,339	803,704	640,886	421,710	336,212
Total Borrowings	252,024	428,441	645,448	706,881	415,043
Cash and Cash Equivalents	404,512	379,457	415,636	344,919	218,401
<b>PER SHARE</b>					
Basic Earnings per Share (sen)	6.3	9.3	9.3	10.3	8.2
Total Tax-Exempt Dividend per Share (sen)	2.6*	4.4	4.1	4.7	3.8
Net Tangible Assets per Share (RM)	0.92	0.88	0.85	0.7	0.6
<b>RETURNS (%)</b>					
Return on Average Shareholders' Equity (%)	7.0	10.9	12.0	16.1	14.2
Return on Average Total Assets (%)	4.0	5.4	5.0	6.4	6.1
<b>FINANCIAL ANALYSIS</b>					
Gross Margin (%)	9.9	9.3	9.4	14.0	15.5
Operating Margin (%)	5.0	5.1	5.0	7.4	7.1
PBT Margin (%)	4.7	4.6	4.3	6.8	6.5
Net Margin (%)	3.6	4.2	3.7	4.8	5.4
Gearing (Net of Cash) (times)	Net Cash	0.0	0.2	0.3	0.2
Interest Coverage (times)	15.8	10.7	8.8	12.1	11.0
Dividend Payout Ratio (%)	41.7	48.5	45.9	45.5	46.5

\* inclusive of proposed final dividend of 0.8 sen per share for shareholders' approval

Figure 2: Financial summary of VSI from FY2016 to FY2020 (VSI Annual Report, 2020)

The above revealed that VSI's revenue is fluctuating, and declined in FY2019 and deteriorated further in FY2020. Its PBT margin has also declined, however, improved slightly in FY2020. Nonetheless the group remains financially solid with improved balance sheet position with strong Shareholders' Funds of RM1.7 billion with nil borrowings net of cash as at 31 July 2020.

The revenue breakdown of VSI for FY2019 and FY2020 extracted from annual report of VSI for FY2020 is as follows: -



Figure 3: Total revenue breakdown for FY2019 and FY2020 (*VS Industry Berhad Annual Report, 2020*)

The above clearly shows that, VSI's revenue has declined by around 18%. Based on the annual report, the decline was largely due to temporary business closure during MCO announced by Government of Malaysia to curb the spread of Covid-19, this has affected the trade and business activities of most in Malaysia, including VSI. VSI's Malaysia operation itself contributes around 79% of VSI's total revenue in FY2020. Other than the impact of MCO, VSI's revenue was also affected by softer orders from one of its key customers.

## 1.2 Problematic Situation and Problem Formulation

The impact of Covid-19 to VSI is tremendous, VSI was unable to operate during the initial of MCO from 18 March 2020 until April 2020 after approval obtained from MITI. VSI's special business development task force managed to capitalise on the opportunities arising from the US-China trade dispute and continued to be one of the preferred locations for US MNCs to shift or diversify their manufacturing base to Southeast Asia and managed to secure new customers from the US.

VSI which operations are mostly based in Malaysia appears to benefit from the US-China trade war, however, these customers are also strict in selecting their sub-contractors. VSI despite a world top EMS player, was asked to submit BCP to its existing and new customers who are MNCs to ensure that it has the ability to handle pandemic particularly during that timing when Covid-19 started to spread the world,



these MNCs customers need to ensure that their sub-contractors have the ability to deliver to mitigate the supply risk to ensure non-disruption of supply.

Due to this, VSI has set-up a team of staff to develop its own BCP to fulfil the requirement of its customers to clinch deals as well as to ensure that prevention and measures are in place to recover from the threat of Covid-19 pandemic.

The existing 10 pages BCP for Covid-19 pandemic of VSI serves as guide for VSI and its subsidiaries to make preventive actions, detection and response in appropriate and timely manner to carry out the recovery and restoration for all activities and function after a disaster.

Covid-19 crisis in Malaysia was under good controlled by Malaysia's government after implementing of MCO in March 2020 which has shutdown most of the economy in Malaysia except for essential services until gradual easing by way of Conditional MCO, Recovery MCO, etc depending on the severeness of each state. Nonetheless, Sabah state election held in September 2020 has worsen the situation, where factory outbreak was seen at Top Glove Corporation Berhad and cases in most states in Malaysia has surged with alarming figures.

As many Covid-19 cases was found to be workplace clusters, particularly the big factories in Malaysia, the government has then given instruction on mandatory Covid-19 screening for foreign workers announced back in January 2021, employers who employed foreign workers anywhere in the country are required to send their workers for testing.

VSI too, not spared, send its 5,000 workers for Covid-19 screening. To VSI's surprised, the test results revealed that 270 workers were tested positive and they are mostly from 3 out of 8 manufacturing plants of VSI in Senai, Johor. 3 manufacturing plants of VSI were closed from 11<sup>th</sup> February 2021 to 17<sup>th</sup> February 2021 to carry out deep cleansing and disinfecting exercise at those affected factories. This closure has affected VSI's production activities are these 3 factories are not allowed to operate during the closure of factories.

Despite having BCP in place, VSI did not anticipate the result from Covid-19 screening and thought that it was handling the situation well with the existing BCP for Covid-19.

As such with the setback, the management of VSI has concluded that the existing BCP for Covid-19 is not comprehensive and incapable to handle the pandemic as evidenced by the notice from MOH to temporarily closed 3 of its manufacturing plants from 11<sup>th</sup> February to 17<sup>th</sup> February 2021 to carry out disinfection to curb the spread within the workplace.

The management of VSI is extremely concern on the capability of the existing BCP which was designed in rushed, this has triggered VSI to relook into improving the BCP to conduct this AR to ensure that the BCP is capable to avoid the occurrence of workplace Covid-19 cluster in VSI effectively with minimal impact.

REVENUE (in RM'000)	Q1	Q2	Q3	Q4
2017	680,018	763,838	854,108	983,386
2018	1,071,824	1,120,369	881,597	1,026,946
2019	1,072,931	978,988	888,263	1,038,168
2020	1,034,596	820,328	505,655	882,613
2021	987,100			

PROFIT / (LOSS) BEFORE TAX (in RM'000)	Q1	Q2	Q3	Q4
2017	45,493	60,557	69,801	47,822
2018	49,493	66,565	29,790	30,368
2019	45,318	49,409	38,237	48,892
2020	63,669	43,510	(26,875)	73,058
2021	88,410			

Figure 4: Quarterly revenue and profit/(loss) before tax (Official website of VSI)

VSI's financial year end is July. Covid-19 was first reported in Malaysia in January 2020, the effect of Covid-19 was reflected on the Q2 and Q3 performance of VSI in FY2020. During FY2019, VSI has been reporting quarterly revenue of not less than RM888 million and was profitable, nonetheless, due to Covid-19, VSI has reported declined in revenue in Q2 FY2020 to RM820 million. The impact of Covid-19 to VSI was much obvious in Q3 FY2020 when its revenue declined tremendously to RM506

million and reported losses in this quarter as a result of closure of production plants in Malaysia during MCO in March 2020 and resume its operation in April 2020.

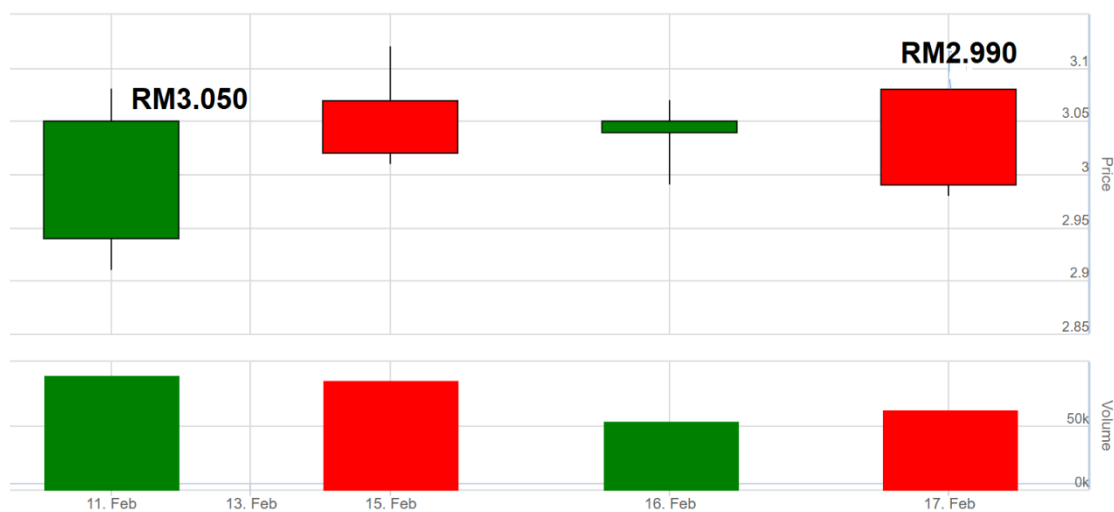


Figure 5: Share price of VSI from 11<sup>th</sup> February 2021 to 17<sup>th</sup> February 2021 (KL Screener)

Reputation wise, the announcement that 3 of the manufacturing plants have been closed during February 2021 due to notice from MOH to curb spread of workplace cluster has adversely caused VSI's share price to plummet from RM3.050 (11<sup>th</sup> February 2021) to RM2.099 (17<sup>th</sup> February 2021) as evidenced above.

### 1.3 Problem Diagnosis

The following is the SWOT analysis on VSI: -

<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"> <li>Established business &gt;35 years of history</li> <li>Listed in Main Board of Bursa Malaysia</li> <li>Leading Integrated EMS in Asia, ranked top 50 (2020: ranked 23<sup>rd</sup>) in the world for 13 consecutive years from 2007 to 2019</li> <li>Profitable entity and financially sound</li> <li>Providing one stop solution to customers with good track record in the industry</li> <li>Have technical skills and expertise to receive recurrent and new orders from reputable customers who are stringent on their sub-contractors/suppliers</li> <li>Other than Malaysia, the group also has production facilities in Vietnam, China and Indonesia</li> <li>VSI is ISO 22301:2019 certified – Business continuity management systems</li> </ul>	<ul style="list-style-type: none"> <li>Relying on customers for deals, often have to cut price to secure deal as evidenced by fluctuating sales and thinning profitability</li> <li>Business affected by Covid-19 due to closure of business for more than one month during MCO, revenue is lower in FY2020 affected by this</li> <li>Does not have own products, depending on MNCs who are in electrical and electronic (E&amp;E) business for orders, lower revenue in FY2020 is also affected by softer orders from a key customer</li> <li>All of its production plant in Malaysia is situated in Senai, Johor, any disaster that happen in this area will affect the business sustainability of VSI as 79% of its revenue is derived from Malaysia’s operation</li> </ul>
<u>Opportunities</u>	<u>Threats</u>
<ul style="list-style-type: none"> <li>US-China trade war, customers are shifting out from China and looking for alternatives in other countries</li> <li>The demand of E&amp;E products is good during good times</li> </ul>	<ul style="list-style-type: none"> <li>Uncertain global economy condition such as Covid-19 pandemic, US-China trade dispute and withdrawal of United Kingdom from European Union</li> <li>Competition from other competitors who are also providing the same service.</li> <li>Global recession which will affect the demand of products</li> <li>Home-country, Malaysia is in recession now and political instability</li> <li>Electronics products are not recession proof, demand is affected on the consumer spending power</li> </ul>

Figure 6: SWOT analysis of VSI

Based on the SWOT analysis of VSI, it can be concluded that Covid-19 BCP is essential for the group to sustain its business operation as it is relying on customers for business orders and its customers are reputable and established parties who are stringent on the quality and standard of supplier to mitigate supply risk.

All of the production plants of VSI are located in Senai, Johor and nearly 80% of VSI's total revenue is contributed by Malaysia's plants, therefore any disruption in Malaysia's operation will affect the continuity and sustainability of the Group.

Previously, during the initial implementation of MCO, VSI has to shut down its business operation and this has affected its financial performance, therefore a comprehensive BCP in place to manage Covid-19 pandemic to keep the business going is desirable for VSI to continue to serve its customers' requirement.

Also, without BCP, foreign customers are not willing to deal with VSI even though it is one of the global EMS players. Being able to continue to operate and produce during Covid-19 pandemic will also help VSI to boost the its customers' confident in order for VSI to maintain good and strong relationship with customers being their reliable and trusted supplier/sub-contractor who can manage crisis.

Prior to Covid-19 pandemic, VSI does not have an existing BCP to handle Covid-19 pandemic. The BCP of VSI for Covid-19 pandemic was first prepared and approved back in April 2020.

The following are the summary of the problems of existing BCP for Covid-19 of VSI:-

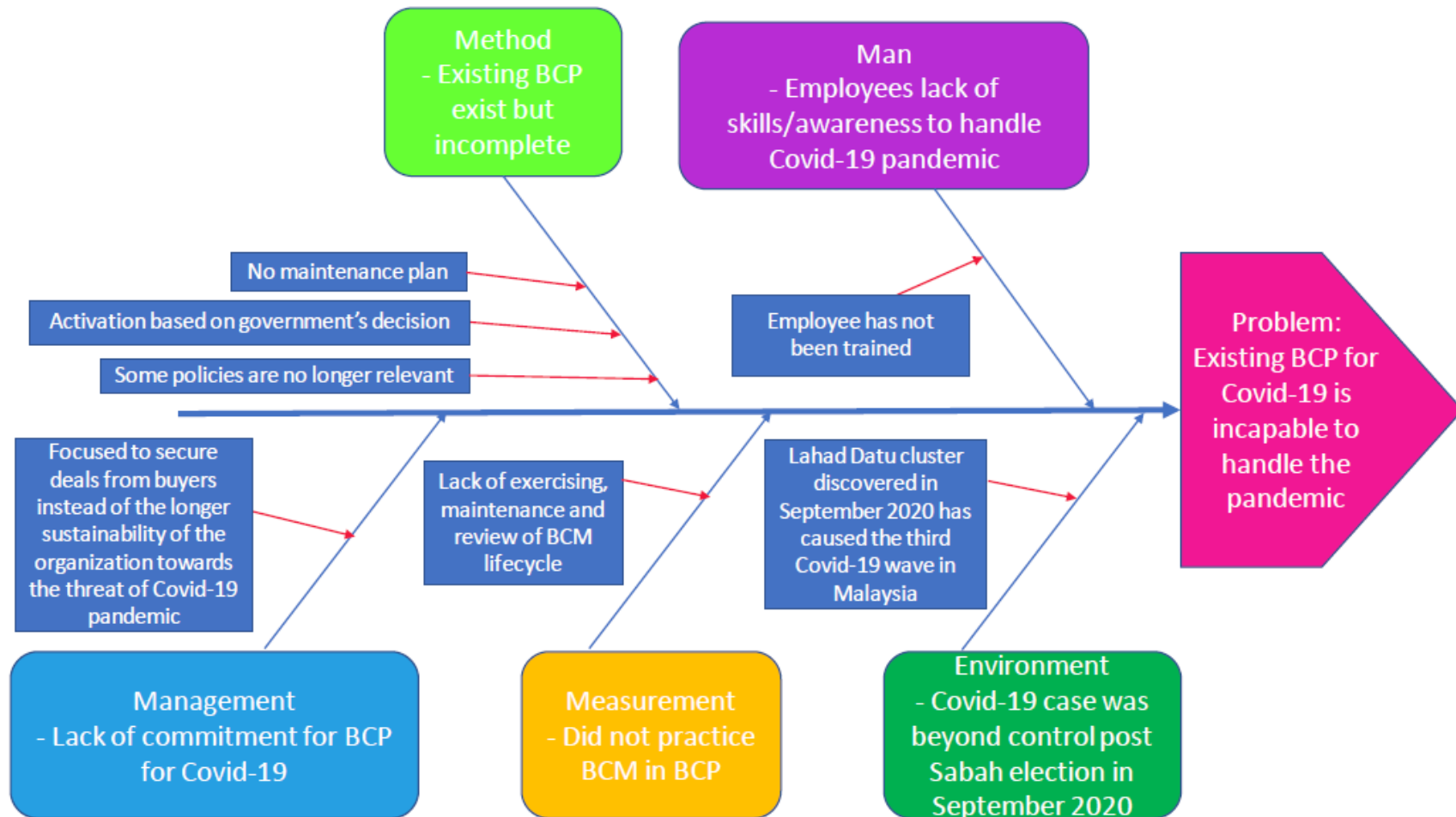


Figure 7: Fishbone of the problem of existing BCP for Covid-19 of VSI

Although BCP for Covid-19 pandemic exist, however, employees have not been trained and are lack of awareness to handle the pandemic. Employees are not brief on the content of the BCP to handle the pandemic effectively.

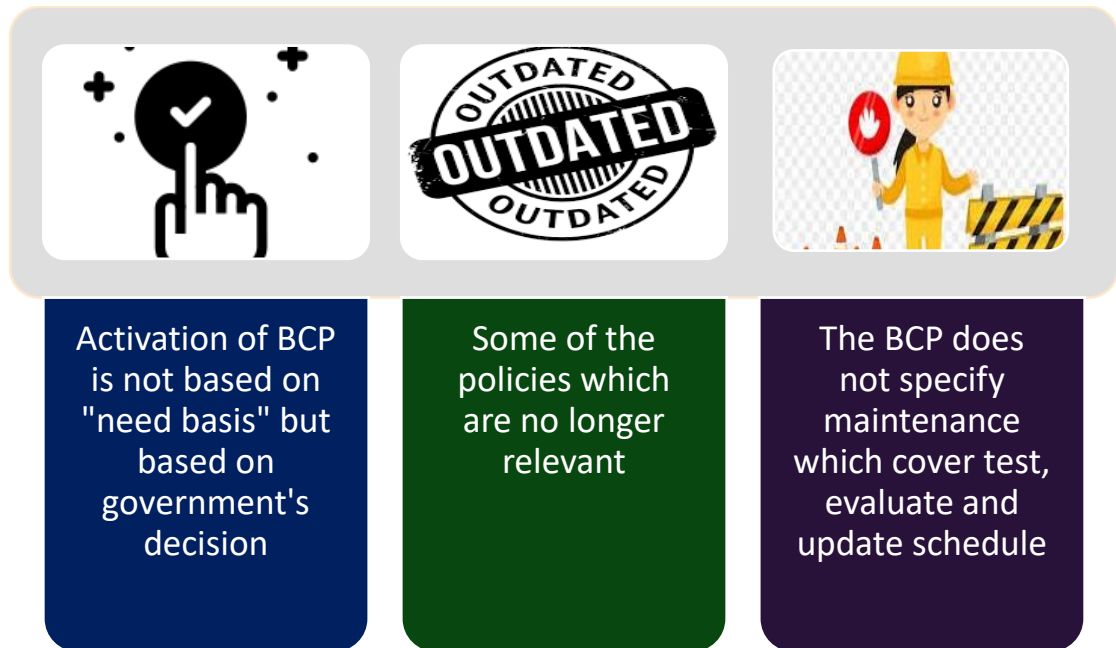


Figure 8: Reason of the incomplete BCP of VSI

Although BCP has been designed since April 2020, but it is still incomplete as illustrated under Figure 8.

Based on the BCP, activation of BCP is not based on “need basis”, as these days, the number of contracted cases is still on increasing trend, and the number of contracted patients in Johor Bahru is still surging as of January 2021, mostly due to workplace or hostel clusters, the activation of BCP shall not be based on government’s decision, instead should be based on “need basis” to manage curb the spread of pandemic more effectively.

Some of the existing procedures in BCP are also outdated such as the need for employees or visitors to declare their historical travelling record to Singapore due significant infections of Singapore migrant workers due to spread in foreign workers dormitories back in 2020.

VSI’s existing BCP also does not specify the test, evaluate and update schedule. To ensure a BCP is good, frequent updates are required to allow an organization to

manage risk completely and more effectively, for this instance, BCP for Covid-19 pandemic need to be updated regularly and according to current practice or situation so that the group will have comprehensive plan to manage the risk should any unfortunate events occur within the organization before an ultimate solution to treat Covid-19 is found.

Also, since BCP has already been established, the management did not emphasize on the importance of BCP for Covid-19 as their priority to develop the BCP was only meant to fulfil the requirements of customers to secure deals. The management did not realise the incompleteness of the BCP until the closure of 3 production facilities in February 2021 due to notice from government as a result of significant cases of employees being tested positive for Covid-19. This however is never too late as the management of VSI is now seeking for improvement on the existing BCP for Covid-19 through this AR.

Despite having existing BCP for Covid-19, theory of BCM was not practice, therefore this ascertain that the existing BCP is incomplete to a certain extent as it is not backed by any theoretical framework.

Like many others in Malaysia, VSI has also underestimate the threat of Covid-19, Sabah post-election due to Lahad Datu prison cluster which led to community spread, has created the by far, worse third Covid-19 wave to Malaysia, daily infection rate surpasses one thousand cases per day since then. VSI having around 5,000 workers in Malaysia with most of them are blue collars foreigners who are staying in hostels has given VSI a painful lesson after 270 of its workers being tested Covid-19 positive in February 2021. With this, VSI has to suffer from reputation and financial losses as a result of 3 production plants being closed temporary to curb the workplace cluster as well as to fulfil the notice given by MOH.



## 1.4 Research Questions & Research Objectives

Research Question	Research Objective
<p>RQ1: What are the weaknesses of VSI's existing BCP for Covid-19 pandemic?</p> <p><i>This first research question is meant to identify the weakness of VSI's existing BCP</i></p>	<p>RO1: To identify the weaknesses of the existing BCP for Covid-19 pandemic</p> <p><i>This first objective of this research is to understand the existing BCP and then identify the weaknesses of it to suggest solution to fix the weaknesses</i></p>
<p>RQ2: How can BCM helps in improving the existing BCP of VSI for Covid-19 pandemic?</p> <p><i>This research question aims to study how BCM can be practiced to improve the existing BCP of VSI for Covid-19 pandemic</i></p>	<p>RO2: To improve the BCP for Covid-19 pandemic by using BCM</p> <p><i>This objective of this paper is meant to study BCM and apply building and embedding a BCM culture and exercising, maintenance and audit lifecycles of BCM to improve and maintain BCP for crisis management.</i></p>
<p>RQ3: What are the interventions needed to improve the existing BCP for Covid-19 pandemic of VSI?</p> <p><i>Implementation of solution &amp; how to measure before and after the intervention and normally this will use the mixed approach to ascertain measures which can be taken by VSI to improve the BCP to manage Covid-19 pandemic</i></p>	<p>RO3: To provide solution for VSI to improve the existing BCP to handle Covid-19 pandemic more effectively</p> <p><i>Existing BCP is already in place, nonetheless, it was designed in hurry to satisfy the requirement of customers to seal orders, this research will focus on improvising the existing BCP of VSI to remove outdated practice in the existing BCP. This study will also look into developing procedures for maintenance which cover test, evaluate and update schedule to ensure the BCP</i></p>

	<i>is complete to a certain extent to assist VSI to manage Covid-19 pandemic.</i>
--	---

Figure 9: Research questions and research objectives

### 1.5 Importance of the Research

Most of the companies are affected by Covid-19 which has completely changed the modus operandi of businesses and also life of most, most companies are unable to operate normally during the pandemic, VSI, too, is not spared by the pandemic.

The outbreak first started in China, and also because of the prolonged trade war between China and United States, many players in the world who have previously rely on China for supply of parts have to look for alternatives outside China in low cost producing countries such as India, Vietnam, Indonesia, Bolivia, Brazil, Mexico, etc including Malaysia.

MCO implemented by the Government of Malaysia in March 2020 to curb the spread has created chaos to many in Malaysia including businesses as the announcement and implementation of MCO came too suddenly. Most businesses were affected as they do not have the experience to handle the situation and most organizations do not have BCP for Covid-19 pandemic and nobody would expect a pandemic to prolong, make tremendous changes to norm and created a new norm which everyone is forced to adapt it.

BCP for Covid-19 will contain measures for businesses to handle pandemic, this has also been requirement of reputable customers who are mostly international players to ensure the ability of sub-contractors to mitigate the supply risk due to unforeseen circumstances as many believe that Covid19 will not be the last to hit the world. The Group has established its own BCP Covid-19 pandemic in April 2020, this BCP is in place and has room for improvement to better manage the situation.

Action plans will be taken to look into the existing BCP in-depth and propose suitable interventions to the Group such as improvise the existing BCP for Covid-19 pandemic. In general, this AR will improve the existing BCP for Covid-19 pandemic of VSI by using BCM to handle pandemic to ensure sustainability of the business.

Having comprehensive BCP to handle Covid-19 pandemic will allow VSI to continue to secure and fulfil orders from its suppliers, therefore sustain its financial performance. Having about 8,000 employees, any negative impact on financials may result on the livelihood of the employees of VSI. Being a listed company, any adverse news on the group will lead to unfavourable result to the company's share price. However, with competent BCP to handle Covid-19 pandemic, the impact of the pandemic will be minimized to a certain extent to avoid any loss of confidence on investors towards VSI's stock price.

Existing BCP for Covid-19 was initially developed to meet the requirement of customers, with comprehensive BCP, customers will feel more confident to deal with VSI and continue to deal with it which will bring long-term sustainable trading relationship between VSI and its customers, this directly will lead to positive financial health for VSI in longer term. Similar to customers, suppliers will also have more confident to continue to supply to VSI who has plan to mitigate the Covid-19 impact as the suppliers are depending on VSI, who are their customers for payment of supplies, this will also strengthen the long-term partnership between both parties and give VSI better negotiation power to negotiate with its suppliers, be it pricing or credit terms to the benefit of VSI.

As employees are the most important assets of all organizations, the employees of VSI are no exception. Everyone wishes to work in safe working environment, safer working environment benefits fewer accidents including occupational health cost, employee and satisfaction, productivity level, etc. By giving employees safe environment, employees will feel more attached to the organization and tends to give better commitment to the organization.

Lastly, the results of this study can be adopted by VSI and other manufacturers who are also facing the threat of Covid-19 pandemic to mitigate the risk of this pandemic effectively.

## REFERENCES

- Adams, W. C. (2015). Conducting Semi-Structured Interviews. *Handbook of Practical Program Evaluation: Fourth Edition, August*, 492–505. <https://doi.org/10.1002/9781119171386.ch19>
- Apuke, O. D. (2017). Quantitative Research Methods : A Synopsis Approach. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 6(11), 40–47. <https://doi.org/10.12816/0040336>
- Business continuity and crisis management. (2003). *Management Quarterly, January* 20, 27–33. <https://doi.org/10.2118/185315-ms>
- Crossley, J., & Jansen, D. (2021). *Saunders ' Research Onion : Explained Simply*. <https://gradcoach.com/saunders-research-onion/>
- DiscoverPHDs. (2020). *The Unit of Analysis Explained*. <https://www.discoverphds.com/blog/unit-of-analysis>
- Enshasy, M. (2009). Evaluating Business continuity and Disaster recovery planning in information technology departments in Palestinian listed companies. In *The Islamic University-Gaza*. <http://www.dissertation.lib-ebook.com/d-economy/2996896-24-evaluating-business-continuity-and-disaster-recovery-planning-i.php%0Ahttp://library.iugaza.edu.ps/thesis/87671.pdf>
- Etikan, I., & Bala, K. (2017). Sampling and Sampling Methods. *Biometrics & Biostatistics International Journal*, 5(6), 5–7. <https://doi.org/10.15406/bbij.2017.05.00149>
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods*, 18(1), 3–20. <https://doi.org/10.1177/1525822X05282260>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Lafsson, K. Ó. (2016). *METHOD GUIDE 4: Adopting and adapting a standardised modular survey*. November, 23. [www.globalkidsonline.net](http://www.globalkidsonline.net)
- Management, R., The, A.-, & Identify, I.-. (2020). *THE IMPORTANCE OF BUSINESS CONTINUITY PLAN AND HOW TO The importance of business continuity plan and how to make one*. <https://packtica.com/the-importance-of-business-continuity-plan-and-how-to-make->

- one/?lang=th&gclid=EAIaIQobChMI2Oakubrb7QIVUgQrCh06OAvy
- Peterson, C. A. (2009). Business Continuity Management & Guidelines. *Business Continuity Management*. <https://doi.org/10.4324/9780203996904>
- Speight, P. (2011). Business continuity. *Journal of Applied Security Research*, 6(4), 529–554. <https://doi.org/10.1080/19361610.2011.604021>
- Terrell, S. R., & Ph, D. (2012). Mixed-Methods Research Methodologies. *The Qualitative Report*, 17(1).
- UKEssays. (2018). *Research Methodology, Different Types of Philosophical*. <https://doi.org/10.1038/sj.bdj.4810015>
- Ursachi, G., Horodnic, I. A., & Zait, A. (2015). How Reliable are Measurement Scales? External Factors with Indirect Influence on Reliability Estimators. *Procedia Economics and Finance*, 20(15), 679–686. [https://doi.org/10.1016/s2212-5671\(15\)00123-9](https://doi.org/10.1016/s2212-5671(15)00123-9)
- VS Industry Berhad Annual Report*. (2020).
- Wang, S. (n.d.). Action Research As a Research Method. *International Journal of Humanities and Social Sciences*, 2(1), 98–103.
- Woodman, P. (2007). Business Continuity Management. In *Chartered Management Institute* (Issue March). [https://doi.org/10.1007/978-3-658-23403-4\\_4](https://doi.org/10.1007/978-3-658-23403-4_4)