

## THE ROLE OF SOCIAL MEDIA AND CRISIS AWARENESS ON THE BUSINESS CONTINUITY MANAGEMENT AND SUSTAINABILITY

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### ABSTRAK

Dengan dampak pandemi yang masih membekas di benak masyarakat karena sangat mempengaruhi setiap lapisan masyarakat, kesadaran akan krisis atau Crisis Awareness menjadi sangat penting bagi akademisi dan praktisi bisnis untuk bertahan. Crisis awareness berkaitan dengan media sosial karena memberikan akses informasi yang lebih banyak dan memuat banyak berita negatif yang terbukti lebih menarik dan memotivasi masyarakat untuk bertindak di masa krisis (sebelum, selama, dan setelah). Beberapa bentuk tindakan adalah menerapkan sistem strategis yang membantu perusahaan untuk bertahan di saat krisis. Salah satu langkah strategis saat krisis adalah dengan menerapkan Business Continuity Management (BCM). Studi ini mencoba mengkaji dampak media sosial dan kesadaran krisis terhadap implementasi BCM. Tidak hanya itu, penelitian ini juga mengkaji dampak BCM terhadap kinerja keberlanjutan perusahaan karena keberlanjutan merupakan tujuan utama yang ingin dicapai perusahaan. Penelitian ini membuat kuesioner yang disebarluaskan secara online kepada 101 responden. Dengan menggunakan pendekatan kuantitatif, penelitian ini menguji empat hipotesis. Studi ini menunjukkan bahwa Penggunaan Media Sosial berdampak signifikan dan positif terhadap tingkat Crisis Awareness karyawan, Crisis Awareness berdampak signifikan terhadap Implementasi BCM yang juga berdampak signifikan terhadap Kinerja Berkelanjutan. Namun, penelitian ini menunjukkan bahwa Media Sosial tidak memberikan dampak yang signifikan terhadap penerapan BCM. Pembahasan, keterbatasan penelitian, dan saran untuk penelitian selanjutnya juga disajikan dalam penelitian ini.

### ABSTRACT

*With the impact of pandemic still lingering in people's minds because it greatly affects every area in the society, crisis awareness become very important for academics and business practitioners during crisis. Crisis awareness relates to social media because social media gives people more access to information and contains a lot of negative news that are proven to be more engage and motivating people to act in*

**Keywords: Business Continuity Management; Crisis Awareness; Social Media Usage; Sustainable Performance**

*times of crisis (before, during, and after). Some form of action during crisis is implementing strategic movement or system that helps companies in times of crisis. One of strategic movement during crisis is Business Continuity Management (BCM). This study tries to examine the impact of social media and crisis awareness on implementation of BCM. Not only that, this study also examines BCM impact on companies' sustainable performance since sustainability is the main purpose of companies to achieve. This study constructs questionnaires that are distributed online to 101 respondents. By using quantitative approach, this study tests four hypotheses relating to variables (The Frequency of Social Media Usage, Crisis Awareness Level, The Implementation of BCM, and Sustainable Performance). This study shows that Social Media Usage impacts Crisis Awareness level of employees significantly and positively, Crisis Awareness impact the BCM Implementation significantly that also significantly impact Sustainable Performance. However, this study shows that Social Media does not give significant impact on BCM implementation. The discussion and limitation as well as suggestions for future studies are also presented in this study.*

## INTRODUCTION

The pandemic has changed the world in every area such as the economy, technology, and business, social, and many more. The social distancing policy increased the usage of technology, digital media, and social media because people still need support and awareness despite the inability to meet in person or offline (Saud et al., 2020). In social media, there is no clear gatekeeper that help us to differentiate between real and fake news (Lynch, 2022). However, the information received from social media still can help us to be vigilant and prepared to handle a potential crisis (Roy et al., 2020). Some previous studies stated that social media may increase awareness on some crisis such as climate change (Mavrodieva et al., 2019), during COVID-19 pandemic (Atarodi et al., 2021; Saud et al., 2020), flood (Lorini et al., 2019), and handling emergency situations (Karteris et al., 2022).

Rozin & Royzman (2001) stated that news or information that contains negative bias and negativity dominance are more contagious and powerful in motivating people to act. Based on the study conducted by Lamot & Van Aelst (2020), negative news produces greater quantities than positive news because it has a higher engagement rate. These statements and facts lead to conclusions that the more people use social media, the more they are expose to negative news or information, then it may motivate them to act. As a result, as more people use social media, they become more aware of and motivated to prevent or deal with future emergencies.

The above explanation shows the important roles of social media in increasing crisis awareness and motivating people to act in with prevention and vigilance goals. This mind set

is essential in business and management because companies must be constantly aware of the possibility of a future crisis. Reflecting of what happen in business and economy areas during pandemic should make us realize the importance of recognizing crises. Crisis is sequence of event that can have substantial negative effect if not properly managed (Ritter & Pedersen, 2020). Especially, during this post-pandemic period, business and companies should always be prepared on what will happen in the future. This is the reason why companies should think and reflect on what strategic management that can be applied for crisis management (Wenzel et al., 2021).

One of strategy that can help companies to survive in facing crisis is Business Continuity Management (BCM). It is widely known that BCM may recognize potential threats to an organization and establishes the capabilities required to protect organizational assets (Kim & Amran, 2018; Krell, 2006). It is proven by The Bank of New York and Morgan Stanley can recover from the crisis of 9/11 by implementing BCM (Kim & Amran, 2018). Other study also proved that implementing BCM may increase or improve firm performance (I. H. S. Sawalha, 2013). This fact strengthens this study's motivation to examine the relationship of BCM with other variable such as social media and crisis awareness. BCM also has proven to improve crisis leadership and crisis performance in Abu Dhabi government (Alharthi & Khalifa, 2019). BCM also helps some companies in Ghana in recovering from their crises both from natural or man-made disaster (Barnett-Quaicoo & Ahmadu, 2021).

*The importance of BCM and its relations to crisis management as well as awareness.* BCM itself is the the capacity of management to recognize potential effects that pose a threat to an organization and to offer a framework for fostering resilience as well as an effective response that protects the interests of its important stakeholders, reputation, brand, and value-creating endeavours (Krell, 2006). Employees, customers, suppliers, investors, and the community or communities in whom an organization operates are all stakeholders. Based on these descriptions, we can conclude that BCM provides frameworks for company to manage their business with the purpose of crisis prevention or management. BCM offers protection functions before, during, and after a crisis and embraces all parties with a stake in the company. However, the studies in Indonesia that address BCM in the context of social media are still few and far between. Thus, one of the purposes of this study is to examine BCM in the context of social media and its impact on Sustainability Performances.

*The relationship between BCM and Sustainability.* Now, relating to Sustainability, The nature of itself BCM is to ensure that companies' continuity even in the time of crises. Thus, BCM and the concept of Sustainability. Speaking of Sustainability itself, though rapid technological advancement and globalization have improved society, they have also sparked a growing concern for the environment, which has forced companies to adopt green business practices (García-Machado & Martínez-Ávila, 2019; Wang, 2019). Nowadays, enhancing effectiveness in both an industrial production system and an environmental management system is now essential for long-term sustainability (Zhou et al., 2018). A case study from

China demonstrated that governmental agencies fail to efficiently monitor the discharge of high salinity wastewater as a result of a lack of a comprehensive management system (Shi et al., 2021). With this in mind, businesses nowadays must also prioritize environmental responsibility in addition to economic benefits.

Sustainability is the ultimate goal of every company. Sustainability contains all the characteristics of a good corporate such as having good performances financially, socially, and even environmentally, which has been stated by many practitioners as well as researchers (Amrutha & Geetha, 2020; Mousa & Othman, 2020; Ren et al., 2022; Saunila et al., 2019; Yacob et al., 2019). Companies that reach sustainability also mean that they already have a competitive advantage, one which keeps them at the top position of the competition (Jia et al., 2018; Mishra, 2017; Yusliza et al., 2020). Hence, once companies have been proven to reach sustainability, besides they have reached their ultimate goal, they also can be known as ‘Good Corporate’.

Though above explanation has shown us the importance of crisis awareness to the implementation of Business Continuity Management and Sustainability, but there is not much research that examines the relationship between the three. This study tries to examine the role of social media in increasing crisis awareness and other variables such as Implementation for Business Continuity Management and Sustainability. All these variables are chosen because they are related to sustainable performance in the era of technology and social media. As a results, the research questions for this study is “How Social Media impacting Crisis Awareness, Implementation of BMC, and Sustainable Performance. This study uses quantitative approach and collecting data through questionnaires. This study will help practitioners and even academics in providing a framework regarding how crisis awareness plays important roles to BCM in the context of social media and how it impacts Sustainable Performance. The discussion and limitation as well as suggestions for future studies are also presented in this study.

## RESEARCH METHODS

As previously mentioned, this study examines the relationships between Social Media Usage, Crises Awareness, Implementation of BCM, and Sustainability in companies. Based on the studies conducted by Zhang et al. (2019) social media may increase people awareness of current or future crisis and help them to always be prepared and vigilante. While study from Lamot & Van Aelst (2020) stated that negative news give stronger impact on people to act according to prevention or management purposes during crisis. One of the strategies that can companies in preventing and managing crisis in Business Continuity Management (BCM). Some studies have proven how BCM guided them in facing and recovering crisis, but only a few studies examines BCM impacts on firm performances. Sawalha (2020) stated that BCM may increase the firm performances due its natural characteristics that engage all stakeholders and assets in companies during crisis. Based on the nature of BCM, runs in one

direction towards sustainability which is also pursued by Sustainable Performance. Based on these studies, this study offers to test four hypotheses which are:

*H1: Frequency of Social Media impacts the level of Crisis Awareness of the Employees significantly and positively.*

*H2: Frequency of Social Media impacts the implementation of Business Continuity Management of the Companies significantly and positively*

*H3: Frequency of Crisis Awareness of Employees impacts the implementation of Business Continuity Management.*

*H4: The Implementation of Business Continuity Management impacts the companies' Sustainable Performance.*

Based on the four hypotheses above, this study proposes a research model to show how the four variables mentioned relate to each other. Figure 1 below shows the relationship between the four variables that are tested in this study.

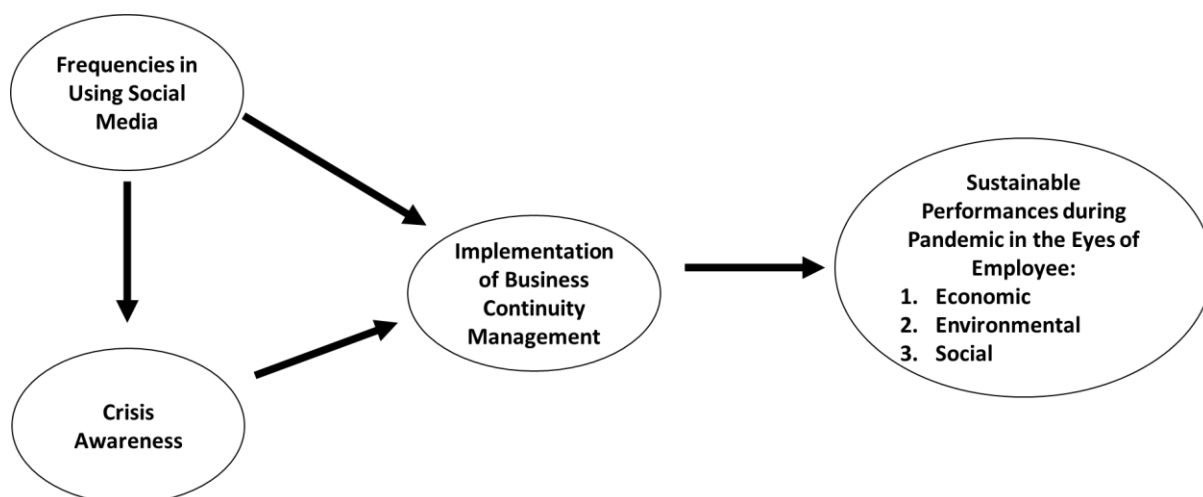


Figure 1. Research Model

*Questionnaire Construction.* This uses questionnaires that contain items contracted from the indicators of the four variables. For Frequency of Social Media, this study uses four the most used social media by Indonesian which are Facebook, Twitter, Instagram, and Tiktok. This study also Linked-In because it also provides some articles or news for professionals. We measure the frequency by asking the respondents how many hours in a week they spent on the mentioned social media. The next variable is Crisis Awareness. This study uses 19 items to measures the level of Crisis Awareness on employees based on how they realize that the companies are in crises or have possibility of future crisis. For implementation of BCM, this study uses 12 items to measure whether BCM are implemented in companies and in what level BCM are implemented.

For Sustainable Performance, this study uses three indicators related to sustainability such as economic, environmental, and social. Economic performance is frequently measured

using both operational and financial results. Environmental Performance is achieved when companies reduce their solid and water waste, carbon emissions, use of contaminated and harmful inputs, frequency of environmental accidents, and overall environmental impact of a firm's activity. Social Performance ensures that a company's social mission is accomplished and is measured by employee safety and health, improved community quality of life, vocation training for community members, and training of employees among others.

The questionnaires are distributed to 101 respondents which includes both business practitioners and academics who also active doing business activities. All questionnaire items are consisted of five-point Likert scales, where 1 = “strongly disagree” and 5 = “strongly agree”, unless otherwise indicated. Each scale was originally designed in English and then translated into Indonesian Language. There are five items for Frequency of Social Media, 19 items for Crisis Awareness, 12 items for Implementation of BCM, and 11 items for Sustainable Performance.

Once questionnaires are completed, they will be analysed by using PLS-SEM to test the eight hypotheses. To know the extent of independent variables' effect on dependent variables, we can use path coefficient value and R-square. According to Hair Jr et al. (2016) path coefficients are estimated path relationships in the structural model (i.e., between the constructs in the model). While R-square values are the amount of explained variance of endogenous latent variables in the structural model. The higher the  $R^2$  values, the better the construct is explained by the latent variables in the structural model that point at it via structural model path relationships. High  $R^2$  values also indicate that the values of the construct can be well predicted via the PLS path model.

The accepted value for path coefficients is above 0.3. A value that is in the range of 0.3-0.49 indicates a moderate correlation, while a value above 0.5 indicates a strong correlation. For R-square, the value of 0.25 indicates a weak effect, 0.5 indicates a moderate effect, and 0.75 indicates a strong effect (Hair et al., 2014; Hair Jr et al., 2016). To test those eight hypotheses, we can use P-values. P-values can be used to test the significance of the tested hypotheses. The hypotheses will be significant if the P-values are below 0.05.

## RESULTS AND DISCUSSION

Before we discuss the model results, we need to know to check the validity and reliability of the data. For the reliability test, the value of Cronbach Alpha can be used to verify the reliability of the questionnaires. The acceptable values of Cronbach Alpha should be around 0,60 and 0,70. In more advanced stages of research, values between 0.70 and 0.95 can be considered satisfactory. Values greater than 0.95 are undesirable because they indicate that all of the indicator variables are measuring the same phenomenon and are thus unlikely to be a valid measure of the construct (Jr et al., 2018). Most of variable in this study have Cronbach's Alpha in between 0.70 and 0.95, however, there are two variable that below 0.70

and above 0.95. But if the values are not far from the ranges which are 0.65 and 0/952, thus, it is still acceptable. Below is the table for reliability test:

**Table 1. Cronbach Alpha Values for Reliability Test**

Cronbach's alpha coefficients						
FSC	CA	BCM	EP	EnP	SP	SusP
0.650	0.914	0.944	0.952	0.850	0.866	0.902

For the validity test, we can use the outer model. There are two criteria to assess whether the outer model meets the requirements of convergent validity for the reflective construct, firstly, loading values should be above 0.70, and secondly, the p-value must be below 0.05 to show that the loading values are significant (Jr et al., 2018). Though ideally, the value of cross-loading is above 0.70, the value of 0,50 is still acceptable (Wilcox, 2017). After questionnaires are being tested, we can continue to analyse the results.

For validity test, some of the P-value for cross-loadings are <0.001 which means the values are significant, but there are two indicators that have >0.05 P-values. For loading values, most of the indicators have ideal values (above 0.70). There are some indicators that have loadings value below 0.70 and even below 0.5. Thus, the indicators that do not have <0.05 for P-values and far below 0.5 for loadings value are pulled out from the analysis process. There are two indicators that are not far from 0.5 which are CA10 (0.487) and EnP5 (0.479), they are still acceptable. These two indicators are orange-highlighted. The rejected variables are red-highlighted. Below is the overall result for validity test.

**Table 2. Validity Test**

Variables	Indicators	P-Value	Loading Values	Accepted/Rejected
FSC (Frequency of Social Media Using)	Facebook	0.363	0.035	Rejected
	Twitter	<0.001	0.886	Accepted
	Instagram	<0.001	0.831	Accepted
	Tiktok	<0.001	0.909	Accepted
	Linked_In	<0.001	0.756	Accepted
CA (Crisis Awareness)	CA1	<0.001	0.621	Accepted
	CA2	<0.001	0.647	Accepted
	CA3	<0.001	0.626	Accepted
	CA4	<0.001	0.675	Accepted
	CA5	<0.001	0.626	Accepted
	CA6	<0.001	0.439	Accepted
	CA7	<0.001	0.668	Accepted
	CA8	<0.001	0.639	Accepted
	CA9	0.198	0.083	Rejected
	CA10	<0.001	0.487	Rejected
	CA11	<0.001	0.683	Accepted
	CA12	<0.001	0.703	Accepted
	CA13	<0.001	0.748	Accepted
	CA14	<0.001	0.808	Accepted
	CA15	<0.001	0.748	Accepted
	CA16	<0.001	0.741	Accepted

	CA17	<0.001	0.581	Accepted
	CA18	<0.001	0.602	Accepted
	CA19	<0.001	0.747	Accepted
BCM (Implementation of Business Continuity Management)	BCM_1	<0.001	0.680	Accepted
	BCM_2	<0.001	0.757	Accepted
	BCM_3	<0.001	0.801	Accepted
	BCM_4	<0.001	0.840	Accepted
	BCM_5	<0.001	0.783	Accepted
	BCM_6	<0.001	0.856	Accepted
	BCM_7	<0.001	0.788	Accepted
	BCM_8	<0.001	0.803	Accepted
	BCM_9	<0.001	0.807	Accepted
	BCM_10	<0.001	0.820	Accepted
	BCM_11	<0.001	0.802	Accepted
	BCM_12	<0.001	0.704	Accepted
EP (Economic Performance)	EP1	<0.001	0.943	Accepted
	EP2	<0.001	0.917	Accepted
	EP3	<0.001	0.963	Accepted
	EP4	<0.001	0.971	Accepted
	EP5	<0.001	0.951	Accepted
EnP (Environmental Performance)	EnP1	<0.001	0.862	Accepted
	EnP2	<0.001	0.782	Accepted
	EnP3	<0.001	0.888	Accepted
	EnP4	<0.001	0.868	Accepted
	EnP5	<0.001	0.479	Rejected
	EnP6	<0.001	0.633	Accepted
SP (Social Performance)	SP1	<0.001	0.732	Accepted
	SP2	<0.001	0.799	Accepted
	SP3	<0.001	0.838	Accepted
	SP4	<0.001	0.851	Accepted
	SP5	<0.001	0.814	Accepted

After the data passed the validity and reliability test, we can now proceed to the results. First, Figure 2 below shows the results for research models in which we can see the relationship of Frequency of Social Media, Crisis Awareness and Implementation of Business Continuity with the three indicators of Sustainable Performance (Economy, Environment, and Social).



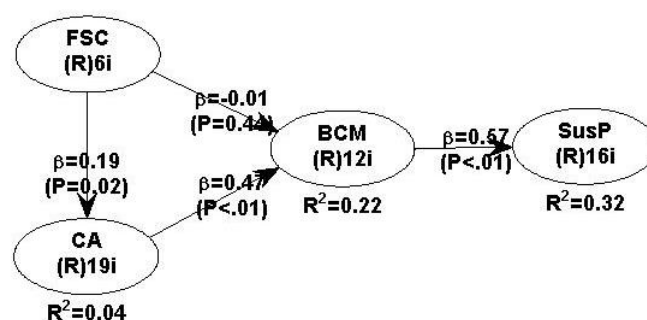


Figure 2. Results for Average Sustainability Performance

On Figure 2, first we need to look at the P-values of each relationship to know whether they are significant or not. As previously mentioned in Methodology part, the acceptable P-value are below 0.05 for the relationships to be considered significant. Based on Figure 2, there is only one relationship that is not significant which is between Frequency of Social Media to Implementation of Business Continuity Management. **Thus, H2 is rejected.** This might be due to the indirect impact of Social Media on implementation of BCM. Social media may impact the level of crises awareness because it contains so many negative news that can make people to recognize potential crisis around them (Atarodi et al., 2021), but people are not always motivated to act as a result of information they got from social media because it only impact people's cognitive aspects. Study by Mirbabaie et al. (2020) stated that social media may give a sense of awareness, but not necessarily motivate people to act because it only touches their cognitive aspects, not affective or behavioral aspect. However, social media may give greater impact on implementation of BCM through crisis awareness.

Beside H2 is rejected, other hypotheses are accepted based on the P-values shown in the results from PLS-SEM. FSC has the P-value of 0.02 in its impact on CA which shows that **H1 is accepted.** Although the strength of impact are small according to the value of path coefficient (only 0.19), but it still positive and significant. This findings proves previous study that stated social media may increase crisis awareness due to the existence of so many negative news that give more engagement with people (Corbu et al., 2021). Then, crisis awareness also impacts the implementation of BCM significantly and positively based on P-value of <0.01 and path coefficient of 0.47. **Thus, H3 is accepted.** The value of path coefficient shows how crisis awareness give strong impact on implementation of BCM. This findings is in-line with the nature of BCM that is based on crisis awareness such as identifying potential impact of crisis (I. H. Sawalha, 2020). This identification comes from people awareness on crisis from cognitive aspects, and later motivates them to implement BCM in their respective companies.

For relationship between the implementation of BCM and Sustainable Performances (SP), the both P-value (<0.01) and path coefficient (0.57) shows that BCM impacts SP positively and significantly making **H4 accepted** in this study. This relationship has the strongest impact and proves that BCM may help companies to improve their Sustainability

through Sustainable Performance. This is due to the nature of BCM that ensure survival of companies during crisis that in-line with Sustainability principles.

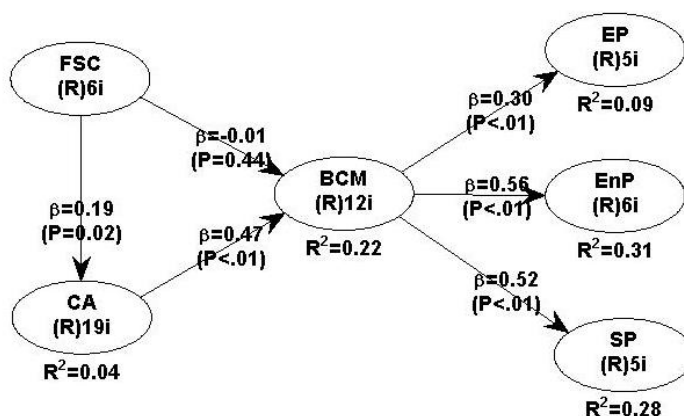


Figure 3. Results for Every Sustainability Performance

This study also furthers examines the impact of Implementation of BCM on every indicators of Sustainable Performance which are economy, environmental, and social. Based on Figure 3, BCM impacts environmental performance the most with path coefficient value of 0.57. This is the answer for companies that seek environmental balance while also doing their business activities. However, BCM give the least impact for economic performance. This is due to impact of pandemic economically in companies. This might due to the nature of crisis itself which is disastrous and impact business activities economically because crisis challenge companies’ management system that also focus on economical values (Prasanna et al., 2019). Thus, for economy perspective, BCM should be integrated with other strategies to lift Economic Performance of companies.

**CONCLUSION AND SUGGESTION**

With the impact of pandemic still lingering in people’s minds because it greatly affects every area in the society, crisis awareness become very important for academics and business practitioners during crisis. Crisis awareness relates to social media because social media gives people more access to information and contains a lot of negative news that are proven to be more engage and motivating people to act in times of crisis (before, during, and after). Some form of action during crisis is implementing strategic movement or system that helps companies in times of crisis. One of strategic movement during crisis is Business Continuity Management (BCM). This study tries to examine the impact of social media and crisis awareness on implementation of BCM. Not only that, this study also examines BCM impact on companies’ sustainable performance since sustainability is the main purpose of companies to achieve.

Based on theories such as crisis awareness and sustainability, this study construct questionnaires that are distributed online to 101 respondents. By using quantitative approach,

this studies tests four hypotheses relating to variables (The Frequency of Social Media Usage, Crisis Awareness Level, The Implementation of BCM, and Sustainable Performance). Social Media in this study includes Facebook, Twitter, Instagram, Tiktok, and Linked-In with some other platform such as YouTube and Whatsapp. Sustainable Performances are measured economically, environmentally, and socially to ensure that it covers all important areas and responsibilities of the companies.

This study shows that Social Media Usage impacts Crisis Awareness level of employees significantly and positively. This might due to the more exposure of external information that increase employees' awareness relating crisis. This study also shows that Crisis Awareness impacts the Implementation of BCM significantly and positively due to the influence of cognitive area by social media and it touches the behavioural aspects in the form of BCM implementation through crisis awareness. This study also proves that BCM implementation significantly and positively impacts Sustainable Performance due to the same nature of both variables in focusing on companies' survival during crisis. However, this study shows that Social Media does not give significant impact on BCM implementation, probably because social media only impact employees' crisis awareness cognitively. But, through crisis awareness, the impact of social media is significant and positive on BCM implementation.

This study has some limitations. First, based on the results, there might be a lot of factors that impact Crisis Awareness, besides social media. Though positive and significant, Social Media only give small impact on Crisis Awareness. So there might be another factors that impact crisis awareness of employees. With this in mind, future studies should examine other factors that might impact the level of crisis awareness in employees. Factors such as leadership, knowledge or employees management that may increase employees' exposure to crisis, should be included to give more comprehensive picture relating social media and crisis awareness. Future studies also may use theory such as Resource-Based Theory to assess social media as resource to implement BCM that give benefits to companies. Second, this study also should use another strategic management during crisis other than BCM. Thus, it can give academics and practitioners a comparison framework and help them to evaluate which model is suitable and give more benefits to companies.

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