

# ECONOMIC IMPACT OF HOTEL KIMBERLY IN TAGAYTAY CITY: BASIS FOR ECONOMIC PROGRAM

<sup>1</sup>Gailey Mitchel M. Camonayan, <sup>2</sup>Joyce Erica A. Alfaro, <sup>3</sup>Alex Sandra G. Basto, <sup>4</sup>Dr. Ernesto C. Mandigma Jr.

<sup>1,2,3</sup>Students, <sup>4</sup>Professor

Tourism Management Department

De La Salle University- Dasmariñas College of Tourism and Hospitality Management

**Abstract:** Volcanic eruption is inevitable and seldom unpredictable, surely it could affect its nearby places specially establishments that has a stable and growing economy. One of the best subjects is Hotel Kimberly in Tagaytay City, Cavite, it had been known for being an accredited hotel by Department of Tourism, beyond it knows for having luxurious and world-class service all throughout the year it is established, the phenomena affects the economic state of the hotel in such specific aspects of sales and revenue, employment, salary and wages and financial controls through assessing with its participant from different departments to fully attain the study's objective. The study uses a quantitative approach to fully analyze the actual affect and how it causes abrupt changes to the operation of the hotel, this structured questionnaire resulted from various results that prove that Taal Volcanic eruption had created an impact to its economy. The study uses purposive sampling and descriptive method for determining the demographic features of the respondents through its age, gender and level of education in which treated by the ANOVA and T-test. The results indicated that all sub aspects were verbally interpreted as "agree" in which pertains that the effects of Taal Volcanic Eruption in Hotel Kimberly is evident. With this, current proponents have taken action on each assessed gaps and in needs of improvements to further prevent the establishment to be economically effected when unexpected events occurs to its vicinity, researchers have carefully proposed recommendations to fill in the lacking for the sustainability of the economy of the hotel.

**Keywords:** volcanic eruption, Hotel Kimberly, Economic impact, sales and revenue, employment, salary and wages, financial controls, Tagaytay City, Cavite

## INTRODUCTION

Humans have evidently experienced the sudden impacts of natural phenomena that irreversibly creates changes to the lives of each people especially hotel employees during the eruption of Taal volcano. Natural disasters come in different approaches and the most common type of it is volcanic eruption- (definition) and Philippines possess a huge possibility of being affected during this type of disaster. Opponents will pursue the study for its unexpectable causes that directly hit the economy of the hotel, and some forcibly put an end to their businesses due to the rapid decrease in the figures of their profit (Rahmawati, 2018). In a narrower point, the hotel industry in Tagaytay encounters typical problems in the economy such as in sales and income, forcibly removing employees in adjustment to the impact of the natural disaster and financial issues that could lead to poor maintenance of the hotel's operation (CNN, 2020). Hotel Kimberly in Tagaytay was able to experience the problems mentioned. Researchers have responsibly and safely visited several luxurious hotels in Tagaytay, Cavite to fully investigate the occurrence caused by the volcanic eruption.

There was a slow-paced presence of resilience upon careful investigation of the researchers to some of the selected luxurious hotels. However, Hotel Kimberly, captivated the researchers' interest for it is still on progress and poorly maintained due to the insufficient funding and low-skilled employees (Brown, 2017). Hotel Kimberly was intensively selected for it possessed great reasons to be chosen as the subject for the study. Primarily, it encounters similar problems in general matters in terms of sales and revenue, employment, salary and wages and financial control. Moreover, the current researchers have focused on economic aspect only for the Taal Volcanic eruption directly impact the sub-aspects mentioned earlier and evident impacts were seen and validated by experts and the actual people behind the management of the hotels the researchers have consulted upon pursuing the challenges made by the disaster (Goujon 2021) The researchers decided to use the terms sales and revenue, employment, salary and wages and financial control as their basis to come up with an economic program for Hotel Kimberly. The terms "sales" and "revenue" are often used interchangeably to mean the same thing which is the income received by the company from its sales of goods (CFI Team, 2022). Employment means working for someone else, for which the person is being paid (Cambridge Dictionary). Salary and wages, a salaried person is paid a fixed amount per paid period while a wage earner is paid by the hour. (Accounting Tools, 2022). Financial Control are organizations that monitors and controls the direction, usage and allocation of its financial resources, they are the core of the resource management and operational efficiency in the organizations (CFI Team, 2022)

As cited by Few et. al, 2017, Researchers in Ecuador's eastern cordillera has developed a long-term action plan to address the probable repercussions of an active volcano on its community, focusing on the employees of country companies and their market standing. Furthermore, the study's researchers looked into the potential ramifications of the volcanic eruption in order to establish the best course of action for each hotel featured in the study. In the Philippines, as cited in the study of Shinozaki (2021), put marks on business enterprises that suffer under the worldwide pandemic causing establishments to adjust to the impacts of lockdowns and

strict policies. In comparison to the current study, inevitable events like volcanic eruptions might cause similar impacts that the virus had made to create a significant catastrophic change to establishments and to the industry itself. To support this belief there are proven facts found under the study of Rahmawati (2018), which stated that hotels had lost much money and had less hotel room occupancy when Ngurah Rai Airport was closed because of the Mount Agung eruption.

The researchers opted for Tagaytay as the subject of the study because it has the record for having the most pleasing full view of an active volcano, specifically the "Taal volcano," that erupted in January 2020. The researchers for this study have firsthand knowledge of the effects of the catastrophic event. It is truly a perfect position and an exceptional tourist destination that ranks as one of Cavite's unique locations. In a blog by Magnificent Escape (2019), Tagaytay is known as everyone's "favorite weekend getaway spot.". Tourists have traditionally included Tagaytay when visiting Cavite or on spontaneous getaways. The stunning view of the Taal volcano, pleasant environment, engaging activities, and delectable foods make this region "one of the country's most popular tourist sites." Besides that, Tagaytay is also an hour away from Manila. However, Taal Volcano erupted in January 2020, affecting businesses and tourism activities. (CNN,2020).

This paper focuses on the economic impact of the Taal volcanic eruption in Tagaytay City, Cavite. It will specifically assess its impacts in manners of economic aspect wherein if it abruptly creates sudden changes with sale and revenue, employment, salary and wages, and financial control of the mentioned luxurious hotels (Genc, 2018), immediate implementation of a viable management strategy for these conditions should follow. However, opponents opted to focus the study's objective to its economic side, with this action the plan will be strictly economic and not the broad scope of sustainability to specifically assess all the affected areas of the economy of each hotel (Goujun 2021). Also, to further strengthen the current research, opponents based their study on the Tourism Act of 2009, which stated under its republic act that any measurable impacts caused by tourism that projects changes and development should be provided with a sustainable management plan (Republic Act no. 9593, Tourism Act of 2009).

With this, the study will mainly assess the impacts caused by the volcanic eruption in terms of the economic aspect. In accordance with the preceding legal grounds, it will be furnished with a sustainable economic management plan comprising a number of programs.

The researchers' aim for the paper is to:

- To examine the demographic features of the respondents, particularly their age, gender, and level of education.
- To assess the economic impact of the Taal volcano eruption on luxury hotels in Tagaytay City, Cavite, in terms of sales and revenue, employment, financial control, and lastly, salary and wages.
- To find the substantial difference between the ratings of groups of respondents based on their profile.
- The researchers' objective is to develop a well-assessed recommendations for the management of Hotel Kimberly.

The study's significance is for selected luxurious Hotels in Tagaytay City, Cavite, to strengthen their governance in the event of unforeseen events induced by natural catastrophes. Beyond this notion, researchers are the most beneficial to this study for the reason that beside the fulfillment of the academic requirement it enhances their knowledge and familiarizes them with the facets of the industry know-how to further spread preparedness during the abrupt impacts of the volcanic eruption. Through an educational emphasis of the study regarding the impacts of volcanic eruption, it could raise extra awareness that could aid the causes of the uncontrollable event. Mainly, the study will benefit all the hotels with the same status of the selected luxury hotels and amplify the purpose of the proposed economic plan as a tool for amplifying their economic aspect.

## LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

### The Economic Impact of Taal Volcano Eruption in Hotel Kimberly

"Catastrophe of Environment: The Impact of Natural Disaster on Tourism Industry" by Ruhet Genc, 2018 wherein this study determined the impacts of natural disaster to the tourism industry of the places within turkey that are highly risk in greater challenges such as earthquakes, tsunamis, volcanic eruptions etc. The study uses a quantitative method. The study also comprises of different wide aspects pertaining to natural disaster, however it proves that natural disasters has a catastrophic impacts to the lives of every individual living in a community (Genc, 2018)

"The effects of Natural Disasters on International Tourism: A Global Analysis" by Rossello et. al., 2020 the study's objective is to identify the intense effects of natural disasters to the community it holds. Specifically, it answers the question on what triggers the occurrence of different natural disasters or unexpected events that might cause an impact to the living of the community surrounding it or prone to it. Researchers of the said study provided several data for their case study; it uses several existing studies for comparison of the results. The study stands as an evident to the relationship of natural disaster and tourism movements that whatever unexpected events happened in a certain tourism area it has an effect and should be provided with a plan for recovery (Rosello, 2020)

"Living with Volcan Tungurahua: The dynamics of vulnerability during prolonged volcanic activity" by Few et. al., 2017 . The study highlighted the impacts and appropriate responses to it to prevent major effects in some tourist spots in Ecuador furthermore the study aimed to determine the human safety during or after an eruptive events and how it affects the community's

life in manners of social, cultural and economic aspects (Few, 2017). The study uses qualitative method that includes semi structured questions to the local residents and the proponents' observation however the study provided an evidence that volcanic eruptions can create an impact to the livelihood, society and places in the eastern cordillera of Ecuador

"Natural Disasters vs Hotel Industry Resilience: An Exploratory Study among Hotel Managers from Europe" by Milan Ivkov, et al., (2019). This study assessed the different consequences a hotel can suffer from. In addition to the material loss, there seems to be an associated economic risk that the tourism sector would suffer as a result of a disaster occurrence because tourists will avoid places that have been impacted by the disaster. The research makes use of a strategy that is based on multiple capital predictors, and it investigates the resistance of hotels to natural disasters. The findings of this study were based on the survey responses of 63 hotel managers as well as 12 European suggestions.

"Economic Impact of explosive volcanic eruptions volcanic eruptions: a stimulation-based assessment model was applied to Campania region volcanoes, Giulio Zuccaro, et. al, (2013). This study's purpose is to evaluate, in probabilistic terms, the direct and indirect economic consequences of a sub-plinian I or strombolian-type Vesuvius eruption. (Zuccaro, et. al 2013). All potential "direct expenses" and "factors" (indirect costs) effecting economic expansion in the event region have been determined during the predicted timeline of the eruption (Zuccaro, et. al 2013). The model's architecture is built on simulation logic, which enables the examination of multiple economic effect scenarios through input adjustments, hence enabling the model to be utilized as a decision-making tool (Zuccaro, et. al 2013).

"Simulation of post volcanic eruption time variant land use and economic impacts in the Auckland region of New Zealand (Cardwell, et. al., 2020). This study used a model of a land where they tested post-hazard event scenarios that can cause an economic impact. The findings also show that an integrated land use and economic structure may be used to simulate and evaluate alternative reconstruction methods for metropolitan areas after a volcanic eruption ( Cardwell, et. al., 2020).

"The Economic Impact of Mount Agung Eruption on Bali Tourism, (Putu Indah Rahmawati, et. al., 2018). This study explores the economic impact of the 2017 Mount Agung eruption on Bali's tourism economy. This study utilized qualitative research to collect its data. Through interviews with the respective hotel management and tourism stakeholders in Bali, data was acquired. The sampling procedure was determined using the approach of purposive sampling. Following the shutdown of Ngurah Rai airport as a result of Mount Agung's eruptive activity, the majority of respondents reported a significant drop in their income (Rahmawati, et. al., 2018).

"Developing Strategies to Strengthen the Resilience of Hotels to Disasters (Natalia Tostovrsnik, et. al., 2015). This project aims to produce internationally recognized standards for hotels and resorts that will contribute to reducing business risk and the susceptibility of tourist destinations to natural and technological dangers, while proving their degree of preparedness and security to prospective clients, insurers, and financiers. This study aims to assess the business context and the hotel industry's requires for specific disaster response benchmarks, and to advise how such guidelines could be most effective in reducing disaster risks, so as to better comprehend the hotel industry's current disaster resilience capacities and needs.. This study involved 17 semi-structured interviews with hotel, government, insurance, and hotel association representatives. All interviewees had tourism-related connections and knowledge of renowned sites. Overall, the investigation was consistent with the existing literature on the topic. To ensure the safety of the establishment, defined disaster risk management processes and procedures are required, particularly in independent hotels, to establish best practices and place greater emphasis on disaster risk reduction than disaster response (Tostovrsnik, et. al.,2015).

"Assessing the impact of explosive eruptions of Fogo Volcano (São Miguel, Azores) on the tourism economy (Joana Medeiros, et. al., 2020). A future volcanic eruption in the archipelago could negatively impact this economic sector. This research introduces an innovative way of assessing the economic impact of explosive eruptions on the tourism industry. Tourism-related infrastructure in the municipality of Vila Franca do Campo were overlay with the findings of numerical simulations in order to identify vulnerable elements. The Loss Present Value approach was used to determine the advantages brought by the housing units more than a 30-year period under various economic conditions.. Using data from 2018, an examination of the economic impact reveals that the economic loss in the event of near-total destruction is approximately 145 million euros. This strategy is applicable to other volcanic locations, geologic hazards, and economic sectors in equal measure (Medeiros, et. al., 2020).

"Disaster Preparedness of Hotel Industry Abroad: A Comparative Analysis" (Ahmad R. Albattat, et. al., 2014)The purpose of this article is to identify important conditions that have the potential to place hotels in emergency and catastrophe scenarios; examine how hotels were prepared for emergencies, how they manage and overcome difficulties when they arise; and identify the restrictions and factors that influence effective emergency preparation and emergency management adoption in Malaysian and Jordanian hotels. Face-to-face interviews with managers from three-, four-, and five-star hotels from all over the world were held in Kuala Lumpur, Penang, Amman, and Petra (local, regional, and international). The findings indicated that hotels are susceptible to a wide variety of natural and man-made disasters, which occur globally and have local consequences. With an emphasis on the responsibility of the appropriate authority to show emergency preparedness to hotels and urge them to adopt these practices, so that they can respond successfully to emergencies, hotels lack proactive preparedness plans and face several obstacles that impede the development of efficient response plans for emergencies in the hotel industry. (Albattat, et. al., 2014).

“Mount Sinabung Eruption: Impact on Local Economy and Smallholder Farming in KaroRegency, North Sumatra, (JongkersTampubolon, et. al., 2018) This study aims to determine (I) the extent of financial losses, (II) the impact on agricultural productivity, and (III) the pattern of adaptability utilized by farmers. According to the research, (I) the quantity of regional losses surpasses the local government's yearly budget, while farm business viability has worsened dramatically, and (III) the disaster has jeopardized the local self-help organisation, impeded access to farm financing, and generated a shortfall in agriculture. On the basis of empirical findings, guidelines for rehabilitation and mitigation are proposed (JongkersTampubolon, et. al., 2018).

“The Case of Holiway Garden Resort & Spa in Bali and the Volcano Agung in 2017/2018, Miriam Rener (2019). The goal of this research is to create a crisis management plan specific to hotels based on their unique traits and locations. The goal of this research was to establish, examine, and evaluate the hotel's crisis response by applying existing crisis response disciplines to a case study hotel and crisis. The data for this study was gathered by the researcher's own observation. Literature sources were mostly employed to gather data for the theoretical section of the study. However, the Internet was also utilized to find specific information or data. According to the findings of the study, hotels should think about crisis management before a crisis occurs in order to handle it properly. The theoretical method can be used to hotels of all sizes and types of emergencies, with a focus on natural disasters. This thesis concluded with the creation of a comprehensive crisis management plan for such case study hotel (Miriam Rener, 2019).

**CONCEPTUAL FRAMEWORK**

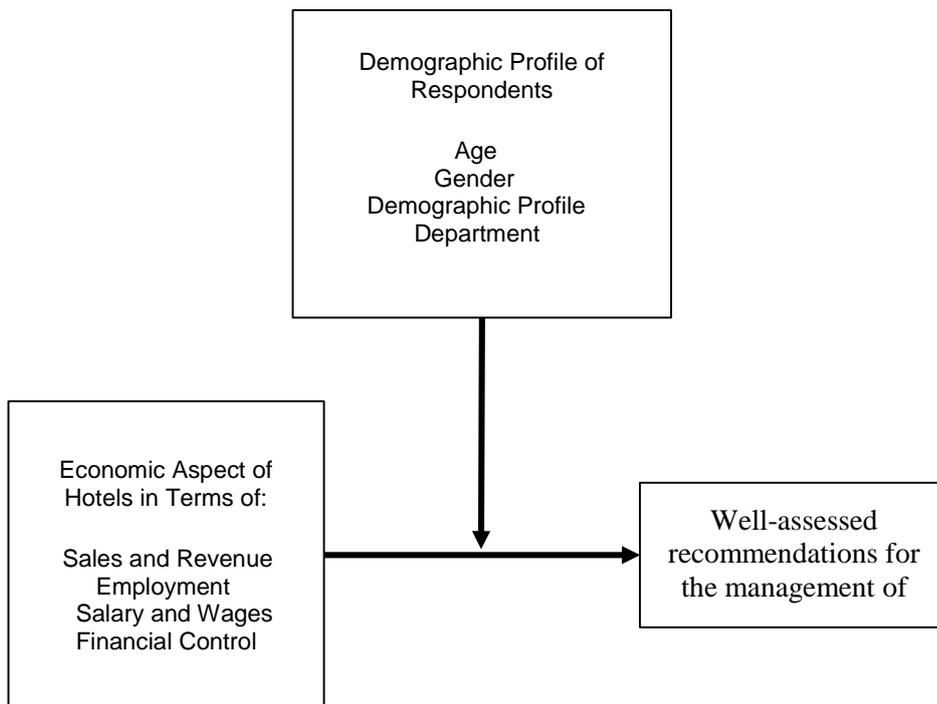


Table 0.1 conceptual framework

The conceptual framework used for the study will consist of the assessed economic impact of the eruption of Taal Volcano on the hotels, which will be extracted from the assessments of the respondents based on the sales, revenue, employment, salary, and wages. This research will be directed by the "Three Pillars of Sustainability" idea, which includes socio-cultural, economic, and environmental factors. However, researchers have limited the study in the economic aspect for it is the main aspect affected during the eruption of Taal Volcano in Tagaytay (Goujon 2021). As per the 2017 study by Few et al., from which the framework is based.

Lastly, the financial control aspects of the hotel industry after the volcanic eruption as the independent variable of the framework in which the aspect is grounded on the "three pillars of sustainability" which the researchers adopted the concept. After assessing the impacts, it will be provided with a sustainable economic plan/program highlighted in the framework as the dependent variable that will be later on can be affected by the respondent’s demographics, which it refers to as the moderator variable.

The study's uniqueness is that most of the existing studies published from the various electronic educational resources consists of complete aspects from the three pillars of sustainability wherein when contrast from the current study of the researchers is that it will focus on economic aspect that is timely relevant to the occurrences during the eruption of the Taal Volcano (Goujon 2021) that could make the study more distinguishable among other existing resources. Furthermore, it uses specific sub-aspects as the structure of the success of the study in such ways of assessing their sales and revenue, employment status, salary and wages, and financial control of the hotels during the time of eruption. In addition to it, most of the study uses a qualitative method and/or existing data from electronic resources or comparison of existing data to the responses during the event that might result to a subjective assessment. However, current researchers will be assessing impacts through quantitative method and questionnaire as a

primary tool for data gathering.

## METHODOLOGY

The researchers will conduct the investigation descriptively. This technique determines an individual's characteristics within a group or population. This research takes a quantitative approach; a questionnaire is utilized to collect data on the impact of the Taal volcano on Tagaytay city. The questionnaire is self-acquired and covers the economic aspects of hotel employees. The respondents will be hotel employees at Hotel Kimberly chosen by purposive sampling, in which the researchers will choose respondents based on their judgment about who will participate in the study and will be distributed randomly. The researchers will randomly choose target respondents using Raosoft with a 95% of confidence level and a 5% of margin of error Raosoft submitted a total of 85 respondents for the researchers' study; the total is calculated methodically using the number of staff in each department of the hotel.

Additionally, the researchers will distribute questionnaires using Google forms, Facebook messaging, and/or direct contact with the researchers' contact person at each luxury hotel. The respondents will respond to the questionnaire on a 4.0 scale, with responses ranging from strongly agree / extensive experience to agree / extensive experience, disagree / less experienced, and strongly disagree / no experience at all. Prior to distribution, the questionnaire will undertake Cronbach Alpha Testing. The tool will be a pilot tested to determine its reliability and consistency and inform the statistician about the appropriateness of the specified treatments for assessed data.

The data analysis will utilize frequency and percentage to establish the respondents' demographics regarding to supervisor, manager, and staff attainment. While for the economic impact of the eruption of Taal Volcano on the hotels (in terms of sales, revenue, employment, salary, wages, financial control), mean/weighted data and ranking method will be used. In contrast, for significant differences between the respondent's assessment and their demographics, ANOVA T-test or analysis of variants will be used, which will project the computation between the participant's responses concerning the group to which they belong.

## RESULTS AND DISCUSSION

These results projected below were extracted from the assessments of the participants in which based from the objectives of the current proponents that works as the inner framework of the study. The first objective is to examine the demographic features of the respondents, particularly their age, gender and level of education for which it determines that if these mentioned characteristics could affect their perspective when responding the provided questionnaire. Secondly, the study assessed the economic impact of Taal volcanic eruption in Hotel Kimberly in Tagaytay City, Cavite in which it indicates that most of the participants "agreed" on the impact of the eruption in such aspects of sales and revenue, employment, financial control and salary and wages based on the rubric provided by the 4.0 likert scale with a value of 2.51-3.50 under the level of "agree" when verbally interpreted. With this, it results that the eruption had caused certain changes in the said aspects under economic impact. For the third objective, it seeks the substantial difference between the ratings of groups of respondents based on the profile they belonged. In this section, it indicated that under "age" it emphasizes that it is significant under this quadrant, when assessed in gender it is significant in all sub-aspect except sales and revenue and lastly the level of education wherein denotes that it is significant in all sub-aspect except financial control. This study also specifies the participants workplace to further specify the relation of their job in the study's objective.

**Table 1.1 POPULATION**  
Descriptives

	N	Missing	Mean	Median	SD	Minimum	Maximum
Department	85	0					
Age	85	0					
Gender	85	0					
Educational Attainment	85	0					

For table 1.1 it denotes the overall population has successfully responded during data collection wherein each classification had completely attained all 85 respondents needed for the study's completion. Through this process, researchers can easily monitor all the responses for every participant is vital for the completion of the study, in comparison to the study of Miriam Renner in which they systematically identify each participant's status of responding during data gathering (Renner, 2019)

**TABLE 1.2 DEPARTMENT**  
Frequencies of Department

Levels	Counts	% of Total	Cumulative %
ENGINEERING	13	15.3 %	15.3 %
F&B KITCHEN	14	16.5 %	31.8 %
F&B SERVICE	15	17.6 %	49.4 %
FINANCE	6	7.1 %	56.5 %
GUEST SERVICES	9	10.6 %	67.1 %
HOUSEKEEPING	25	29.4 %	96.5 %
HR/SALE	3	3.5 %	100.0 %

Table 1.2 indicated the distribution of each participants needed for each groups and it specifically determines the department of Hotel Kimberly, it includes engineering, F and B kitchen, F and B services, Finance, guest service, housekeeping and H/R sale wherein all the participants were seen majorly from the group of housekeeping with a total percent of 29.4% and 96.5% as its cumulative in which works as an indicator if the group is highly needed to be include to further attain the study's completion. While on the other hand, the least participating group with a value of 3.5 as its total percentage is the HR/sales however obtained a 100% cumulative percent that justifies its importance of its relevance to the study. These processes were seen in the study of Miriam Renner wherein it identifies the specific department involved in hotel industry

**TABLE 1.3 AGE**  
Frequencies of Age

Levels	Counts	% of Total	Cumulative %
20-30	18	21.2 %	21.2 %
31-40	20	23.5 %	44.7 %
41-50	14	16.5 %	61.2 %
51-60	20	23.5 %	84.7 %
60+	13	15.3 %	100.0 %

The table above indicates the age of the participants, the highest number of participants were obtained by the group of 31-40 and 51-60 with both value of 20 participants, same total percentage but different cumulative for the reason the 51-60 has more cumulative percentage for it is seen as more experienced and more familiar with the day to day process of the hotel operation. However, the least assessed group were obtained by group of 60+ with 13 respondents that has a total of 15.3 when converted in percentage however it reached the complete percentage in cumulative for it exceeded the experiences needed for the study's objective. In contrary, there are more middle-aged respondents in the study of Milan Ivkov et. al that values 55.6% of the total population of the respondents and tested more reliable when data collection for they have sufficient and high presence of knowledge in hotel operations

**TABLE 1.4 GENDER**  
Frequencies of Gender

Levels	Counts	% of Total	Cumulative %
Female	35	41.2 %	41.2 %
LGBTQIA+	6	7.1 %	48.2 %
Male	44	51.8 %	100.0 %

For table 1.4 it denotes the classification of the respondents when grouped accordingly on their gender, it includes female,

LGBTQIA+ and male, through this process it could aid the question with regard to the differences of their assessment. For this table, the highest group came from male with a total count of 44 and has a value of 51.8% of the total population. With this notion, it emphasizes that majority of the staff were male and values a cumulative percentage of 100 which means that their response is vital to the completion of the study. While on the other side of the spectrum the least group came from the LGBTQIA+ in which has a value of 6 as its total count and values a 7.1% of the total population and cumulative participation of 48.2% which indicates that majority of this group were highly familiar and relevant to the hotel operation. In contrast to the study of Milan Ivkov, in which it gathers more responses from females and majority of the information needed for the study were acquired from the group of females.

**TABLE 1.5 EDUCATIONAL ATTAINMENT**

Frequencies of Educational Attainment

Levels	Counts	% of Total	Cumulative %
College Graduate	68	80.0 %	80.0 %
Highschool Graduate	13	15.3 %	95.3 %
others	4	4.7 %	100.0 %

The table above denotes that there are more college graduates than highschool graduates in which is based from the actual requirements of the Hotel Kimberly. The process is to basically assess the total counts of each group and the level of its importance when included to the study. The highest group with a value of 68 as its total count and 15.3 when converted to percentage of the 100% of the total population with a cumulative percentage of 80.0% as their level of importance in the study while the group that has a least counts those values of 4 with 4.7% but 100 of cumulative are the group from others for may come from other forms of education that has a stronger relevance to hotel operation. In which contrast the study of Milan Ivkov et. al, wherein the study resulted that there are more college graduates participated in their study, also that under this group there were more reliable responses from the formal education they have been through in such manner of familiarization of such in different facet of hotel operation (Ivkov et. al, 2019)

## DESCRIPTIVES OF SUB-ASPECTS OF ECONOMIC IMPACTS

**TABLE 2.1 SALES AND REVENUE**

Descriptives

SALES AND REVENUE

	N	Mean	Median	SD	Rank
Did the eruption help the hotel market more guests due to the interest in the happenings of the eruption?	85	3.200	3	0.530	5
Does it encourage guests to patronize the hotel's products as a form of help due to the eruption?	85	3.424	3	0.520	3
Does a decrease in prices of hotel products help hotel revenue in an increase in sales of each product?	85	3.494	4	0.548	1
Are the changes in the hotel's supply and demand encourage more business proprietors as a partner for the hotel's needs and facilities?	85	3.329	3	0.585	4
Did the eruption cause improvements in the management in terms of new offers of services and promos to boost the hotels' brand?	85	3.482	4	0.648	5

For table 2.1 as one of the sub-aspects of the economic impacts denoted that sales and revenue is important when assessing the effects of Taal volcanic eruption in Hotel Kimberly in Tagaytay City, Cavite. These were guided by the self acquired questionnaire in which the concept was based from the framework of the study.

Under this table, it indicates that the highest mean was obtained by the item 3 with a value of 3.494 in which it agrees that the presence of decrease in prices of hotel products can help the hotel revenue in increasing the sale of each products offered by the hotel. While on the other hand, the item that obtained the least assessed factor is the item 1 that focuses on how the eruption increased their guests in response to their curiosity of the happenings during the eruption with a value of 3.200 as its mean and standard deviation of 0.530.

With a composite mean of 3.386 and standard deviation of 0.346 it is verbally interpreted to as “agree” based on the rubric of 4.0 Likert scale that if manifested a result that is between of 2.51-3.50 it will be interpreted as “agree”. This shows that it somewhat important as one of the factors of economic impact when affected by the eruption. Likewise with the study of Miriam Renner, it which it indicates that the sector of sales and revenue were the primary field that will be affected when disasters appears (Renner, 2018)

**TABLE 2.2 EMPLOYMENT**

EMPLOYMENT	85	3.480	3.600	0.312
Despite the earlier eruption, does the company still accept applicants to work under their hotel?	85	3.424	3	0.543
Did the eruption create an impact to lessen the work of some departments of the hotel?	85	3.706	4	0.458
Does the eruption cause an increase in the opportunities in terms of employment in its local communities?	85	3.482	4	0.569
Does reduced the time schedules of the hotels help employees to have more personal time?	85	3.388	3	0.558
Does the new schedule in which the reduced hours of work create potentiality for working students?	85	3.400	3	0.561

For table 2.2 it denotes that employment is also a must considered factor under economic impacts of hotels, specifically Hotel Kimberly. The highest attained result were obtained by the question number 2 in which answers the question that if the eruption created an impact to the workloads of the employees with a value of 3.706 as its mean and standard deviation of 0.458 and it is verbally interpreted to as “strongly agree”, this indicates that it lessens and limits the work of the usual compared with the usual days of works.

While on the other hand, the least group that obtained a value of mean of 3.388 and standard deviation of 0.558 is the item number 4 in which it emphasizes that the time schedules of the employees were merely affected by the eruption with a verbal interpretation of “agree”. As cited in the study of Miriam Renner, it also justifies that it lessens the workload of the employees but the difference is the reason the current proponents specifically indicates about personal time however previous studies mentioned no reasons for the limitation of time (Crisis Management in Hotel Business: The case of holiway garden resort spa in bali and the volcano agung in 2017/208, Miriam Renner 2018). As for the composite mean, 3.480 with a standard deviation of 0.312 indicate that employment is evidently affected by the eruption.

**TABLE 2.3 SALARY AND WAGES**

SALARY & WAGES	85	3.449	3.600	0.338
Is there any increase in the contribution of employees for wages?	85	3.376	3	0.597
Did the eruption create an increase in each employee’s salary?	85	3.482	4	0.569
Does the hotel have the capability to immediately provide loans for the employees?	85	3.541	4	0.547
Do employees receive extra pay for the risk of the work?	85	3.365	3	0.595
Are there any benefits that the hotels give to their employees?	85	3.482	4	0.590

Table 2.3 under salary and wages indicates that the involvement of salary and wages in the study’s objectives is important for it possesses factors that directly contribute to the economy of Hotel Kimberly. It works as evidence to which how an economic status is seen affected by an external factor in such ways of disasters or any events that could cause abrupt changes in the hotel.

The item that has the highest assessment was obtained by question number 3 in which it seeks if the hotel has the capacity to provide loans for the employees with the value 3.541 and standard deviation of 0.547 with an interpretation of “strongly agree” while on the other hand, the least group from the questionnaire that obtained the lowest assessment is the tem number 4 in which tackles the

extra pay during the risk of the work during the surge of the effects of the eruption with the verbal interpretation of “agree”. As cited in the study of Rahmawhati it denotes that the sector of salary and wages has contributed to the status of economy of a particular establishment, it is an identifier of how it truly affect the economy of the hotel (Rahmawhati et. al, 2017). The overall assessment of the salary and wages falls under the category of “Agree” with a value of 3.499 as its mean and standard deviation of 0.338 which it justifies that the participation of salary and wages is vital in determining the totality of the status of the economy of the hotel.

**TABLE 2.4 FINANCIAL CONTROL**

<b>FINANCIAL CONTROL</b>		<b>3.431</b>	<b>3.400</b>	<b>0.320</b>	
<b>85</b>					
<b>Does Hotel Kimberly strictly follow the safety protocols by DOH during the aftermath of the eruption?</b>	85	3.318	3	0.621	4
<b>Does the hotel create action in terms of health risks to prevent possible ingestions of ashes caused by the eruption?</b>	85	3.612	4	0.490	1
<b>Does the management enhance their handling of expenses and proper funding for the areas and facilities of the hotel?</b>	85	3.471	4	0.569	2
<b>Does the management allot more budget to further encourage guests with new and improved aesthetics of the place?</b>	85	3.318	3	0.561	4
<b>Do hotels allocate budgets for the rehabilitation of the luxury hotels?</b>	85	3.435	3	0.522	3

For table 2.4 as the financial control of the economic impact, it indicates that the results were firmly pertains to the facility repair, funding and management improvement in adaptation to the safety protocols. Under this sector, it identifies the distribution of funds to which how it suffices each operation of the hotel.

According to the respondents’ assessments, the highest assessed item was obtained by the question number 2 for it seeks if the hotel have funded the implementation of safety protocols in prevention of ingestion of the ash in which is a high risk in the health of its tourists, it obtained a value of 3.612 as the mean and standard deviation of 0.490 with an interpretation of “strongly agree” when verbally analyzed.

While on the other hand, the least questions that attained a value of 3.318 are items 1 and 4 however item number 1 gathered standard deviation of 0.621 and item number 4 values 0.561 these items were classified as “agree” when verbally interpreted. As cited in the study of Miriam Renner, defines that their control in finance were abrupt and difficult for it involves monetary and right splurging to the improvement of the management. For the overall assessment, financial control has a value of mean of 3.431 that falls under the category of “agree” when verbally interpreted. It denotes that it is evident during the eruption; it implies that this section was fairly seen during the disaster.

Below are the test of Kruskal Wallis wherein it tests non parametric variants, to fully attest that the result are not just extracted from a particular section hence the total value of all the sub aspect involved in the study. Through this process, it can also aid the significant difference of two different aspects, with this hypotheses are more easily crafted and supported with concrete information (statisticshowto, 2021)

**TABLE 3.1 ONE WAY ANOVA OF POPULATION**

Kruskal-Wallis

	$\chi^2$	df	p
SALES & REVENUE	32.584	6	< .0001 Significant
EMLOYMENT	13.278	6	0.0388 Significant
SALARY & WAGES	13.062	6	0.0421 Significant
FINANCIAL CONTROL	26.641	6	0.0002 Significant

For table 3.2 all of the sub aspects under economic impacts are truly significant to be involved in the study’s objective based from the reference value of 0.05 in which stated under this that if p-value is less than the given value, reject the null and the result is significant. While the table below, table 3.2 projects the specific group of each participant from their respective departments, this works as the transparency of each assessment on how it resulted to being significant

**TABLE 3.2 TOTAL POPULATION PER DEPARTMENT**

Descriptives

	Department	N	Mean	Median	SD
SALES & REVENUE	ENGINEERING	13	3.138	3.000	0.369
	F&B KITCHEN	14	3.400	3.400	0.248
	F&B SERVICE	15	3.560	3.600	0.348
	FINANCE	6	3.767	3.800	0.151
	GUEST SERVICES	9	3.556	3.600	0.088
	HOUSEKEEPING	25	3.288	3.400	0.217
	HR/SALE	3	3.067	3.600	0.924
EMPLOYMENT	ENGINEERING	13	3.385	3.400	0.369
	F&B KITCHEN	14	3.600	3.600	0.260
	F&B SERVICE	15	3.520	3.600	0.270
	FINANCE	6	3.600	3.600	0.126
	GUEST SERVICES	9	3.644	3.600	0.133
	HOUSEKEEPING	25	3.352	3.400	0.333
	HR/SALE	3	3.467	3.800	0.577
SALARY & WAGES	ENGINEERING	13	3.292	3.200	0.405
	F&B KITCHEN	14	3.386	3.400	0.337
	F&B SERVICE	15	3.560	3.600	0.264
	FINANCE	6	3.700	3.700	0.110
	GUEST SERVICES	9	3.644	3.600	0.133
	HOUSEKEEPING	25	3.384	3.400	0.336
	HR/SALE	3	3.333	3.600	0.643
FINANCIAL CONTROL	ENGINEERING	13	3.215	3.200	0.300
	F&B KITCHEN	14	3.386	3.400	0.355
	F&B SERVICE	15	3.653	3.800	0.288
	FINANCE	6	3.700	3.700	0.110
	GUEST SERVICES	9	3.600	3.600	0.173
	HOUSEKEEPING	25	3.304	3.400	0.259
	HR/SALE	3	3.467	3.600	0.416

Table 3.3 wherein the table simply projects that all sub aspects of economic impacts such as the sales and revenue, employment, salary and wages and financial control are all significant when assessed in age, all of the age groups were recorded and enlisted in their respective classification. All assessments resulted from less than 0.05 that causes each group to obtained significance in the study.

**TABLE 3.3 ONE WAY ANOVA OF AGE**

Kruskal-Wallis

	$\chi^2$	df	p	
SALES & REVENUE	15.135	4	0.0044	Significant
EMLOYMENT	12.049	4	0.0170	Significant
SALARY & WAGES	27.862	4	<.0001	Significant
FINANCIAL CONTROL	27.708	4	<.0001	Significant

**TABLE 3.4 POPULATION PER AGE**

Descriptive

	Age	N	Mean	Median	SD
SALES & REVENUE	20-30	18	3.478	3.600	0.412
	31-40	20	3.440	3.600	0.248
	41-50	14	3.471	3.500	0.500
	51-60	20	3.260	3.400	0.260
	60+	13	3.277	3.400	0.239
EMLOYMENT	20-30	18	3.567	3.600	0.316
	31-40	20	3.580	3.600	0.289
	41-50	14	3.500	3.600	0.349
	51-60	20	3.350	3.400	0.282
	60+	13	3.385	3.400	0.288
SALARY & WAGES	20-30	18	3.600	3.700	0.291
	31-40	20	3.540	3.600	0.252
	41-50	14	3.529	3.600	0.356
	51-60	20	3.100	3.100	0.264
	60+	13	3.554	3.600	0.247
FINANCIAL CONTROL	20-30	18	3.644	3.600	0.253
	31-40	20	3.520	3.600	0.300
	41-50	14	3.514	3.600	0.321
	51-60	20	3.140	3.200	0.260
	60+	13	3.354	3.400	0.166

For Table 3.4 Starting from the age group of 20-30 who has a highest corresponding value of 3.478 as the mean and the least item that gathered a value of 3.260 as its mean belongs to the group of 51-60 in which classifies as the least contributing group under sales and revenue. While on the other hand, for the employment as part of the assessment of significant difference the highest item with a corresponding value of 3.580 in which obtained by the item 31-40 and the least assessed when measured through its significance is the group of 51-60 wherein obtained a value of 3.350.

While the salary and wages gathered a highest value of 3.600 and obtained by the item 20-30 in which compared to the significance of 3.100 of the item 51-60 that signifies that younger generations were more reliable for this group are the sector that was affected during the eruption. Lastly, financial control that obtained a highest mean of 3.644 under the group of 20-30 and the least group that obtained the mean of 3.140 falls under the group of 51-60 in which refers that younger generations' opinion with regard to the proper spending of the budgeting were more reliable and significant when assessed during the impacts of the Taal Volcanic eruption.

For Table 3.5 denotes that the significance of the gender in sales and revenue does not exist for it can't affect the respondents'

assessments during volcanic eruption, when expounded means that gender has no bearing when individually examined who obtained a value of 0.0796 in which is greater than the reference value of the significant that was obtained by the rest of the sub aspect included in the study. Current researchers have included three different selections for the participants to choose in which respective groups they want to be included these are the male, female and LGBTQIA+

**TABLE 3.5 ONE WAY ANOVA OF GENDER**

Kruskal-Wallis

	$\chi^2$	df	p	
SALES & REVENUE	5.063	2	0.0796	NS
EMLOYMENT	5.529	2	0.0630	Significant
SALARY & WAGES	6.250	2	0.0439	Significant
FINANCIAL CONTROL	6.421	2	0.0403	Significant

For Table 3.6 it indicates the population and the lowest and the highest mean obtain by the corresponding aspect to which assessed the level of importance of each group as a participating subject of the study. This process is to fully measure the intensity of their participation and the reliability of the information that could relay to the current researchers. For the sales and revenue, the highest variable obtained a value of 3.633 as it means in which refers to the LGBTQIA+ and the least obtained a result of 3.341 in which falls under the category of male.

**TABLE 3.6 POPULATION PER GENDER**

Descriptives

	Gender	N	Mean	Median	SD
SALES & REVENUE	Female	35	3.400	3.400	0.369
	LGBTQIA+	6	3.633	3.600	0.151
	Male	44	3.341	3.400	0.336
EMLOYMENT	Female	35	3.417	3.400	0.304
	LGBTQIA+	6	3.700	3.700	0.110
	Male	44	3.500	3.600	0.324
SALARY & WAGES	Female	35	3.406	3.600	0.358
	LGBTQIA+	6	3.733	3.800	0.163
	Male	44	3.445	3.600	0.325
FINANCIAL CONTROL	Female	35	3.417	3.400	0.330
	LGBTQIA+	6	3.733	3.700	0.163
	Male	44	3.400	3.400	0.311

For Table 3.6 first the employment the level of significance were evidently seen high as it obtained 3.700 that falls under the group of LGBTQIA+ with its least group obtaining a value of 3.417 as correspond to the group of females to which the results indicates that most of the effective participants that were affected during the eruption are from the item LGBTQIA+. For the salary and wages, primarily it denotes that LGBTQIA+ were also an important group for data collection for obtaining a significant level of 3.733 as its mean and the least group wherein obtained a value 3.406 from the group of females are less significant to be assessed during the time of the eruption. Lastly, financial control with a highest assessed group that obtained a value of 3.733 in which also falls under the LGBTQIA+ group and its least group labeled as "male" with a corresponding value of 3.400 in which it indicates that the participants from LGBTQIA+ were tested as a reliable source of impacts during the eruption.

For Table 3.7 indicates that most of the sub-aspects of the economic impacts specifically, sales and revenue, employment, and salary and wages bears no significance for the study when assessed for the study's attainment. With the exception of one item from the sub-aspects in which refers to financial control who obtained a value of not less than 0.05 to be considered as null or no

significance. All were based from its P-value to further attest the strong significance of all the factors or variables from the sub-aspects.

**TABLE 3.7 ONE WAY ANOVA FOR EDUCATIONAL ATTAINMENT**

Kruskal-Wallis				
	$\chi^2$	df	p	
SALES & REVENUE	4.858	2	0.0881	NS
EMLOYMENT	1.887	2	0.3893	NS
SALARY & WAGES	0.845	2	0.6553	NS
FINANCIAL CONTROL	6.194	2	0.0452	Significant

For Table 3.8 indicates the expounded results of level of significance of each profile to the sub aspect when assessed during the effects of the Taal volcanic eruption to Hotel Kimberly. This process is to emphasize the importance of educational attainments to the sub aspects and assessments. For the sales and revenue it denotes that the highest mean were obtained by the group from high school graduates and the least participating group obtained a value of 3.44 as its mean, this result gradually indicates that formal education can't hurdle the effects of the unexpected eruption. The employment gathers a result with a highest group that corresponds with a value of 3.569 that falls under high school graduates and the least group gathered a value of 3.400 in which falls under the group of "others" or referred to as the other forms of education.

**TABLE 3.8 POPULATION PER EDUCATIONAL ATTAINMENT**

Descriptive					
	Educational Attainment	N	Mean	Median	SD
SALES & REVENUE	College Graduate	68	3.344	3.400	0.359
	Highschool Graduate	13	3.554	3.600	0.145
	others	4	3.550	3.600	0.443
EMLOYMENT	College Graduate	68	3.468	3.400	0.314
	Highschool Graduate	13	3.569	3.600	0.304
	others	4	3.400	3.400	0.327
SALARY & WAGES	College Graduate	68	3.432	3.600	0.350
	Highschool Graduate	13	3.538	3.600	0.250
	others	4	3.450	3.500	0.412
FINANCIAL CONTROL	College Graduate	68	3.388	3.400	0.320
	Highschool Graduate	13	3.585	3.600	0.288
	others	4	3.650	3.700	0.191

For the salary and wages the highest group were obtained by high school graduates in which corresponds to the value of 3.538 while the least group gathered a value of 3.400 in which falls under the category of "others" which means in determining the effects of the eruption formal education had no bearing when assessed for its level of importance in the study's significance. Lastly, for financial control it indicates that the the highest obtained mean were from the group of "others" in which corresponds to the value of 3.650 and the least came from the group of college graduates obtaining a result of 3.388 that emphasizes that education is significant when determining financial control and budgeting but it does not require high level to be considered as significant.

## CONCLUSION

Volcanic eruption are inevitable and can unexpectedly caused an abrupt changes to its nearby community and establishments, indeed preventive measures are present but has a low effectiveness through which the current proponents have augmented the preparedness of the management by expanding the plan that fits to each involved sub variables under economic

aspect. Tagaytay City, Cavite had been seen as the primary affected cities surrounding the volcano for its economy revolves around tourism to which current researchers had examined during the data collection. Hotel Kimberly is a perfect fit for the study's objective for it operates and accredited by prestige critiques that makes it on the A list of the tourist. Its opulence and luxurious interior were seen largely affected by the ash fall caused by the eruption of Taal Volcano. Therefore, proponents have strictly considered aspects that complete the economic status of the hotel. In such, considering the factors under economic factor aided the gap that fills in the lacking or improvement of the management plan through helpful recommendations.

Primarily, researchers have examined the demographic features of the respondents, specifically its age, gender and educational attainment. The descriptive process, stands as the guide in analyzing the relevance and significance of the responses when they are grouped to their respective sectors. Current researchers were able to attain all 85 respondents and classified each to their groups, this objective strictly pertains to the hotel's staffs that experienced the actual ash fall that was caused by the eruption. When assessed in age, two of the sectors tied up for the total population however the level of significance shows that major as per the highest level of mean was obtained by the group of 20-30 and 31-40 years old with mostly verbally interpreted as "agree". Therefore, that this age provides more reliable responses in line with the study's objective, also as the least group that covers the bracket of 51-60 and 61+ has a low probability of well-accurate responses perhaps for the age may be restricted during the phenomenon that causes them to limit their access as hotel staff to the establishment. All were categorized to different sub-aspect under economic impacts in such terms of sales and revenue, employment, salary and wages and financial control to fully determine and extract appropriate responses to suffice the study's completion.

All the assessed gaps under the second objectives were the main source of the recommendation to which it assessed the economic impacts of the Taal Volcano eruption in a luxury hotel in which referred to as Hotel Kimberly on its operations during the actual damage of the phenomenon. Under this examination, it proves that the damages were present with the level of verbal interpretation of "agree" extracted from the composite mean of each sub variables included in the concept of the study. With the corresponding value of sales revenue with a composite mean of 3.386, employment obtained a value of 3.480 while salary and wages values 3.449 and lastly the financial control 3.431 which correlates that all respondents agreed that the presence of the sudden eruption affected their operation through this aspects and can be evidently seen by the staff through their experiences.

For the level of significance of each assessments when grouped through their respective profiles it was used with ANOVA T-test and One way ANOVA or non parametric to fully examined each quadrants to which it will not only refer to a particular sub-aspect but one result extracted from the 4 variables under the economic aspects. The results indicated that when classified as hotel staff in such department of engineering, F and B kitchen, F and B service, Finance, Guest services and housekeeping are significantly needed for the study's attainment for they are considered experts for the industry know-how of the hotel and experienced the actual ash fall. When classified accordingly to their age in such age brackets of 20-30, 31-40, 41-50, 51-60 and 61+ denotes that identifying age and grouping the respondents to their classification are significant when determining the effects of the volcano eruption for all ages experienced the actual phenomenon that temporarily damaged the both internal factors of the hotel operations. In terms of gender, current proponents have added up a category LGBTQIA+ to which participants can freely choose the appropriate gender they want for themselves. It manifested a result of all the sub variables under economic aspect gender is somewhat relevant however on sales and revenue stated that it is null and no significance present under this sector for it exceeded the reference value of 0.05. Lastly, when classified to the educational attainment bears no significance to sales and revenue, employment and salary and wages except to the variable financial control in which values less than 0.05 with a mean of 0.0452 with groups of college students, high school graduates and participants from "others". All low in assessment of this study were provided with a recommendation that could polished management's plan in preparing them to the unexpected events especially volcanic eruptions.

## RECOMMENDATIONS

Proponents' structure in crafting recommendations were extracted from the low assessed sectors from the questionnaire, to further validate the purpose of the proposed recommendation, current researchers have seek professional guidance from hotel operation experts in shaping up the suggestions to seal the effectiveness of each proposals. Primarily under the sector of Sales and Revenue, Hotel Kimberly analyzed well the situation and look for an opportunity to make the eruption as a way encouraging visitors in ensuring their safety and enjoyment simultaneously. Through the process of promotional advertisement that involves the ash fall on how they handle safety inside the establishment, this might boost the sales of the establishment. For the employment, since most of the staff seeks more personal time for privacy to temporarily escape the work, researchers will recommend to adjust work shifts of each staff and allot other personnel to make it more flexible to work in a particular department. For the salary and wages, researchers would recommend the rightful increase to the staff's hazard pay to encourage them to be at their best by motivating each of the staff as if they are heard and well-taken care of. Lastly financial control, since this phenomenon had created a temporary problem, at least company should provide a flexible budget to suffice each needs in adherence to the safety protocol to continually operate whenever unexpected event occurs.

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