



HOW MANY VISITORS SHOULD A TOURISM BUSINESS WELCOME DURING THE COVID-19 PANDEMIC?

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ABSTRACT

Limiting the number of visitors is one of the best efforts that tourism entrepreneurs can make to continue operating safely during the COVID-19 pandemic. Unfortunately, a method for determining the maximum number of visitors accepted during an outbreak is unavailable. This article explains the method to determine the maximum number of visitors using a seafood café in Kedonganan Beach Bali as a case study. The proposed determination method uses a tourism carrying capacity formula that is modified by incorporating physical distancing and correction factors relevant to the COVID-19 pandemic situation, such as temporary closure of destination, attraction, and tourism business, into the equation. This article demonstrates how modifications made to the original carrying capacity formula can produce a formula for determining the maximum number of visitors that can be received during the pandemic while placing the visitors' and workers' safety as a top priority. This article shows how the modified formula can calculate the maximum number of visitors the tourism operator can accept during the COVID-19 Pandemic. This article contributes an idea in developing a method for determining the maximum number of visitors in the future if the tourism industry faces a similar situation where tourist movement and interaction, as the essence of tourism, can threaten their safety.

Keywords: Tourist Capacity, Covid-19, Carrying Capacity

ABSTRAK

Membatasi jumlah pengunjung merupakan salah satu upaya terbaik yang dapat dilakukan pengusaha pariwisata agar dapat tetap beroperasi dengan aman di masa pandemi COVID-19. Sayangnya, metode untuk menentukan jumlah maksimum pengunjung yang dapat diterima dengan aman selama pandemi tidak tersedia. Artikel ini menjelaskan cara menentukan jumlah pengunjung maksimal yang dapat diterima dengan menggunakan studi kasus berupa sebuah kafe seafood yang terletak di Pantai Kedonganan Bali. Metode penentuan yang diusulkan menggunakan rumus daya dukung pariwisata (tourism carrying capacity) yang dimodifikasi dengan memasukkan faktor jarak fisik dan faktor koreksi lainnya yang relevan dengan situasi pandemi COVID-19, seperti penutupan sementara destinasi, daya tarik, dan bisnis pariwisata, ke dalam persamaan. Artikel ini menunjukkan bagaimana modifikasi yang dilakukan terhadap formula carrying capacity dapat menghasilkan formula penentuan jumlah pengunjung maksimal yang dapat diterima selama pandemi dengan tetap mengutamakan

keselamatan pengunjung dan pekerja sebagai prioritas utama. Artikel ini juga menunjukkan bagaimana formula yang dimodifikasi dapat menghitung jumlah maksimum pengunjung yang dapat diterima oleh operator usaha jasa pariwisata selama Pandemi COVID-19. Artikel ini memberikan sumbangsih pemikiran dalam menghasilkan metode penentuan jumlah pengunjung maksimal yang dapat diterima apabila di masa depan industri pariwisata kembali menghadapi situasi serupa dimana pergerakan dan interaksi wisatawan sebagai esensi pariwisata dapat mengancam keselamatan mereka.

Kata Kunci: *Daya Tampung Pengunjung, Covid-19, Carrying Capacity*

PENDAHULUAN

Travel is considered one of the sectors that play a significant role in the spread of disease (Findlater & Bogoch, 2018; Gössling et al., 2020; Jamal & Budke, 2020; Wilder-Smith, 2021). Therefore, when UNWTO declared the SARS-CoV-2 virus infection a global pandemic, tourism became one of the sectors severely affected. The assumption that the virus traveled with the traveler and thus quickly spread to other regions or countries resulted in many tourist destination countries closing their borders (Jamal & Budke, 2020; Mu et al., 2021; Wilder-Smith, 2021).

The same scenario happened in Bali. In the early days of the COVID-19 pandemic, Bali closed its border to stop the arrival of foreign visitors to Bali. The tourist attractions were ordered to close their operations to stop locals from visiting them. The closing of tourist destinations was done because it was believed that closing the border was the best option to deal with the outbreak. It was soon realized that closing tourist destinations has negatively impacted the local population (Yuniti et al., 2020), as well as the tourism industry (Laksito & Yudiarta, 2021).

Understanding the negative effect of the closing on the economy of Bali, and in line with the general guidelines issued by the United Nations to operate safely during the pandemic, the Government of Bali Province started to

reopen Bali for tourism. The opening was done with strict safety measures and was only for domestic visitors. One of the measures was that tourist attractions and tourism-related businesses must reduce the number of visitors they receive (UNWTO, 2020). In line with this, the Government of Bali issued a policy known as protocol number 3355 of the new life order for the people of Bali in 2020 (Government of Bali Province, 2020). The protocol demands that visitors always use face masks, wash their hands, and maintain physical distance. The protocol also underlined the need for tourist attractions and other tourism businesses to serve only half the number of visitors of their standard capacity (Government of Bali Province, 2020). It was believed that receiving fewer visitors is essential to keep the visitors and workers safe from the deadly virus because it will provide better opportunities for visitors and workers to maintain a safe distance between them.

Unfortunately, the UNWTO Global Guidelines and Circular Letter Number 3355 do not specifically regulate how to adjust the number of visitors that a tourism operator can receive, or what percentage of the number of visitors must be received at a particular time when compared to the standard or maximum capacity of the tourism service business. The absent of the much-needed method has resulted in different tourism business

using different method to determine the number of visitors.

Availability of a valid and agreeable method was important if the tourism business in Bali was going to be open. The method was needed to ensure that all business owner/manager using the same method to calculate the visitor number that they can received during the pandemic so that all of them will feel that they are treated fairly. Therefore, this paper discusses the approach that can be used to determine the maximum capacity of visitors that can be received by a tourism business in Bali in order to operate safely during the COVID-19 pandemic.

Given that the method to determine the maximum number of visitors that a tourism business can receive has yet to be available, this paper contributes to showing how managers can determine the safe maximum capacity for their visitors, their worker and eventually, their business.

METHOD

The maximum capacity of visitors referred to in this paper is the maximum number of visitors that Aroma Cafe can receive on one day of operation. To determine the maximum number of visitors, an approach proposed by Cifuentes called Carrying Capacity, which is more widely used to determine the carrying capacity of the environment, was used. The original carrying capacity framework stated that the environment's carrying capacity can be calculated in three steps. The first step is to calculate the Physical Carrying Capacity (PCC), followed by the calculation of the Real Carrying Capacity (RCC and Effective Carrying Capacity (ECC) (Cifuentes Arias et al., 1999; Cifuentes, 1992). The PCC value is always greater than or equal to the RCC, and the RCC value is always greater than or equal to the ECC

value. To calculate the maximum capacity that can be accommodated by seafood cafes in Kedonganan during the COVID-19 pandemic, modifications were made to the original carrying capacity formulas mentioned above to allow for the incorporation of the COVID-19-related safety measures.

The primary data for analysis was obtained through direct observation at the research location and through interviews with the manager of Aroma Café. In contrast, the secondary data were obtained from the Center for Meteorology, Climatology, and Geophysics Region III (BMKG Wilayah III) Denpasar. The primary data collected from the manager of Aroma Café include the number of employees, operating hours, indoor and outdoor area available for visitors, and factors that can reduce the number of visitors (correction factors). Secondary data collected from the Center for Meteorology, Climatology, and Geophysics Region III Denpasar include the number of rainy-day, windy-day and others.

RESULT

1. The modifications to the original Carrying Capacity Formula

The maximum visitor capacity that can safely handled during the COVID-19 pandemic was calculated using a modified Carrying Capacity formula. The first modification was made to the formula intended to calculate the physical carrying capacity (PCC). According to Cifuentes (1992) the original PCC formula is as follows:

$$PCC = S/Sp \times NV$$

Where:

PCC: Physical Carrying Capacity

S : Space available to visitors

Sp : Space required by a visitor
(usually 1 m²)

NV : Number of visits that can be made during operational hours

Given that during the COVID-19 pandemic, there was a recommendation to maintain a distance of 1 Meter from everyone around us. A visitor should always maintain a distance to all directions as far as 1 Meter. If this were imagined, we could draw an imaginary line around each person, where the imaginary line would be a circle, with the circle's radius is 1 meter or a diameter of 2 meters. If we then assume that the circle area is safe for a visitor to be able to minimize the possibility of contracting the SARS CoV-2 virus, then the area of the circle area can be calculated using the circle area formula, which is $22/7 \times 1 \times 1$ so that a result of 3.14 m² will be obtained. The number 3.14 is then substituted into the Cifuentes formula as the Sp value, where Sp is the space needed by a visitor to be able to move safely during the COVID-19 pandemic. By substituting the Sp value by 3.14, the modification of the formula for calculating PCC can be written as follows:

$$PCC = S/3.14 \times NV$$

Where:

PCC: Physical Carrying Capacity

S : Space available to visitors

Sp : Space needed by a visitor during a Pandemic Covid-19

NV : Number of visits that can be made during operational hours during Covid-19 pandemic

Subsequent modifications were made to the RCC calculations. Cifuentes Arias et al., (1999 and Cifuentes (1992) stated that RCC is the result of

multiplication between PCC and correction factors. The original formulation is as follows:

$$RCC = PCC \times ((100 - FC_1/100) \times (100 - FC_2/100 \times (100 - FC_n/100)))$$

Where:

RCC: Real Carrying Capacity.

PCC: Physical Carrying Capacity

FC : Correction Factor

FC can be calculated using the formula:

$$FC = MI/Mt$$

Where:

MI : Limiting Magnitude

Mt : Total Magnitude

Based on the formula above, PCC value and the correction factors values are needed to calculate the RCC value. The PCC value is the result of the PCC calculation done in the previous phase. On the other hand, the correction factors are factors that can reduce the physical carrying capacity of an area (Maldonado & Montagnini, 2004). Depending on the location where the carrying capacity calculation is executed, the correction factor may consists of: 1). Rainfall (Corbau et al., 2019; De Sousa et al., 2014; Maldonado & Montagnini, 2004; Rocha et al., 2021; Rodella et al., 2020; Sunkar et al., 2022; Zacarias et al., 2011), 2). Erosion (Aguilar et al., 2021; Corbau et al., 2019; Maldonado & Montagnini, 2004; Rocha et al., 2021; Rodella et al., 2020; Zacarias et al., 2011), 3). Accessibility (Maldonado & Montagnini, 2004; Rocha et al., 2021; Rodella et al., 2020), 4). Water quality (Rodella et al., 2020), 5). Land slope level (Sunkar et al., 2022), 6). Garbage (Rodella et al., 2020), 7). Sunlight (Corbau et al., 2019; Zacarias et al., 2011), 8). Temporary closure (Rocha et al., 2021; Zacarias et al., 2011), 9). Area

potential (Sunkar et al., 2022), 10). Disturbing fauna (Corbau et al., 2019; Sunkar et al., 2022), 11). Social (Aguilar et al., 2021; Rocha et al., 2021), 12). Stiff wind (Zacarias et al., 2011), 13). Beach quality (Corbau et al., 2019), 14). Available area for visitor, 15). Space requirements per visitor, 16). The visitor group size, 17). The distance between the visiting groups (Maldonado & Montagnini, 2004), and 18). Environmental factors, and 19). Economics (Aguilar et al., 2021).

Given that the calculation to determine the maximum capacity of visitors is carried out for a seafood café located on the beach, the correction factor used to purify the results of the FCC calculation in this paper must be adjusted to the characteristics of the beach area. Based on this assumption, the correction factor for this study consists of 1). windy days, and 2). days with high tide, and 3). rainy days. For seafood cafes in Kedonganan Beach, windy days, high tides, and rain can affect the number of people visiting, especially in their outdoor areas. In addition to these three correction factors, the number of visitors to the Kedonganan seafood café was also influenced by the temporary closure policy due to government recommendations to suppress the spread of the SARS-CoV-2 virus. Therefore, the temporary closure is established as the fourth correction factor in this paper. A third modification was made to the ECC calculations, which is the last phase of the process. In his writings, Cifuentes, (1992) and Cifuentes Arias et al., (1999) mentioned that ECC is the result of the multiplication between RCC and management capacity. Management capacity is the difference between the actual and ideal capacity of the management to serve visitors. In determining the maximum capacity of

visitors during the Covid-19 pandemic, the intended management capacity is a management capacity that can provide good service during the Covid-19 pandemic while still paying attention to the security and safety of workers from the possibility of contracting the SARS CoV-2 virus. Based on the definition, the value of management capacity can be calculated by the formula:

$$MC = AC/IC$$

Where:

AC : Actual Capacity
IC : Ideal Capacity

Once the MC value is calculated, it can be entered into the ECC formula. The formula that can be used to calculate ECC is as follows:

$$ECC = RCC \times MC$$

Where:

ECC: Effective Carrying Capacity
RCC: Real Carrying Capacity
MC : Management Capacity

2. Calculation of the maximum visitor capacity of Aroma Café during the COVID-19 pandemic

Observations show that Aroma Café has two areas where they serve food to their visitors. One area is inside the building (indoors), and the other is on the beach outside the building (outdoors). Outdoor and indoor differences will result in differences in the correction factors, where indoor areas will certainly not be affected by rainy days like outdoor areas. Because the correction factors are different, the calculation of the maximum capacity of Aroma Café visitors during the COVID-19 pandemic will be divided into 2, each for indoor and outdoor areas. Each

calculation will follow the carrying capacity calculation procedure consisting of 3 phases: PCC, RCC, and ECC, using the modified formula explained above. The following is the calculation process.

2.1. Maximum Capacity of Aroma Cafe Indoor Area

PCC Calculation

Based on modifications to the PCC formula described above, the value of S (area available to visitors) must be known to determine the PCC value. Through observation, it is known that the indoor area of Aroma Café has an area of 257.5449 m², so the value of S has been known. In addition to knowing the area available to visitors, determining the maximum capacity of visitors during the COVID-19 pandemic also requires knowing the rotation factor (NV), which is the number of visits that can occur on each operational day. Interviews conducted with the managers of Aroma Café revealed that during the COVID-19 pandemic, Aroma Café operated for 13 hours, from 09.00 am to 10.00 pm. The interview also reveals that the average visitor spends 2 hours enjoying their meals in the cafe. Therefore, the rotation factor (NV) can be calculated by dividing the number of operating hours by the average time of visits so that the result is $13/2 = 6.5$.

With the values of S and NV known, the PCC of the indoor area can be calculated by the following formula:

$$\begin{aligned} \text{PCC} &= S/3.14 \times NV \\ &= 257.5449 \text{ m}^2/3.14 \times 6.5 \\ &= 533.134 \text{ pax per day, or } 533 \\ &\quad \text{pax per day.} \end{aligned}$$

RCC Calculation

RCC calculation is intended to purify the results of PCC calculations.

Therefore, in the RCC calculation, the PCC value is multiplied by several correction factors that affect the number of visitors who come to Aroma Café. The correction factor that affects the indoor area of Aroma Café is only in the form of temporary closures, both those that occur in connection with the celebration of religious holidays and those related to the COVID-19 pandemic. Based on interviews with the managers of Aroma Café, it is known that the temporary closures that occurred during the Covid-19 pandemic were as follows:

- *Pengerupukan* (Hindu holyday) = 1 day
- *Nyepi* (Hindu Holyday) = 1 day
- *Melasti* ceremony (Hindu Holiday) = 2 days
- *Galungan* Day (Hindu Holiday) = 2 days
- Ceremony at *Segara* Temple = 2 days
- Ceremony of *Tengkulung* Temple = 1 day
- COVID-19-related closure = 112 days (Before the Circulation Letter Number 3355 implemented, tourist industry in Bali was closed from March 25 – July 14, 2020)

The total number of temporary closures is 121 days in a year. Therefore, the value of FC4 can be found using the following formula:

$$\begin{aligned} \text{FC} &= \text{MI}/\text{Mt} \\ &= 121/365 \\ &= 0.331 \end{aligned}$$

With the FC value known, the RCC value can be calculated by the following formula:

$$\begin{aligned} \text{RCC} &= \text{PCC} \times (100 - \text{FC}/100) \\ &= 533.134 \times (100 - 0.331/100) \\ &= 533.134 \times 0.996 \end{aligned}$$

= 531.369 pax per day, or 531
pax.

ECC Calculation

ECC is calculated by multiplying RCC with the management capacity during the Covid-19 pandemic. The management capacity is the number of workers allowed to work during the COVID-19 pandemic while maintaining the safety and security of workers from the possibility of contracting the virus that causes COVID-19. To calculate ECC, the value of the management capacity must be known prior to the calculation of ECC. The management capacity is related to the number of workstations (work areas) and the total number of workers who works daily at Aroma Cafe. Observations and interviews conducted with the manager of Aroma Café showed that the number of employees placed in each existing workstation met the safety requirements during the COVID-19 pandemic, which allowed each worker to get a workspace of 3.14 m². After summing up, it is known that for every working day, the number of employees working at Aroma Café during the COVID-19 pandemic amounted to 18 people, far less than before the pandemic, which usually amounted to 80 employees per day. Based on these data, the management capacity of Aroma Café during the Covid-19 pandemic can be calculated as follows:

$$\begin{aligned} MC &= AC/IC \\ &= 18/80 \\ &= 0.225 \end{aligned}$$

With the MC value already known, the ECC value can be calculated as follows:

$$\begin{aligned} ECC &= RCC \times MC \\ &= 531.369 \times 0.225 \end{aligned}$$

= 119.558
= 120 pax per day.

Based on ECC calculations, a final value of 120 was obtained. Based on the results, it can be stated that the maximum number of visitors that Aroma Café can receive in its indoor areas during the COVID-19 pandemic is 120 people per day. If averaged against the time spent by each visitor at Aroma Café, which is 2 hours, it can be stated that in 13 hours of operation, the Aroma Café indoor area can receive as many as 6.5 visits. This figure is obtained by dividing 13 by 2. Then, by dividing 120 by 6.5, a value of 18.461 (rounded to 19) is obtained. That number indicated the number of visitors that can be received by the Aroma Café in their indoor area every 2 hours within 13 hours of operation.

2.2. Maximum Capacity of Aroma Cafe Outdoor Area

PCC Calculation

Based on observations, it is known that the outdoor area of Aroma Café is 555.44 m². This outdoor area is located on Kedonganan Beach. Thus, it has a view of Kedonganan Beach. The manager of Aroma Café utilized the outdoor area for visitors to enjoy the seafood dishes while enjoying the view of Kedonganan Beach.

During the Covid-19 pandemic, the outdoor area still serves visitors. As with indoor areas, the operational hours for their indoor areas are also 13 hours, with the average visitor spending around 2 hours enjoying their seafood dishes.

Based on these data, PCC can be calculated for the Aroma Café outdoor area as follows:

$$\begin{aligned} PCC &= S/sp \times NV \\ &= 555.44/3.14 \times 6.5 \\ &= 1149.796 \text{ or } 1150 \text{ pax per} \end{aligned}$$

day

RCC Calculation

RCC calculations for outdoor areas involve more correction factors compared to indoor areas. This is because the outdoor area is open and affected by the elements, such as rain, strong winds, tides, and seawater. The rain, wind, and tides affect the number of visitors who want to eat outdoors due to their ability to decrease the quality of experience of those who eat outdoors. In addition to natural factors, outdoor areas are strongly influenced by non-natural factors and indoor areas. The non-natural factors are temporary closures due to religious holiday celebrations and closures mandated by the government to prevent transmission of the virus that causes COVID-19. Based on this, the correction factors that will be taken into account in the RCC calculation for outdoor areas are:

1. Rainy days (FC1)

According to the Center for Meteorology, Climatology and Geophysics Region III Denpasar, the number of rainy days in Badung Regency in 2019 was 86 days a year (365 days). Given that data on the number of rainy days in 2020 at that time was not yet available, that data was used as a reference in determining the number of rainy days in 2020. Based on these data, the calculation of rainy days as a correction factor is as follows:

$$\begin{aligned} \text{FC1} &= \text{MI/Mt} \\ &= 86/365 \\ &= 0.235 \end{aligned}$$

2. Windy Days (FC2)

Based on an interview with the Manager of Aroma Cafe, it is known that in a year, strong winds can occur for up to 10 days. This strong wind only affects the closure of outdoor areas and does not

affect indoor areas. Based on the data obtained, FC2 can be calculated as follows:

$$\begin{aligned} \text{FC2} &= \text{MI/Mt} \\ &= 10/365 \\ &= 0.027 \end{aligned}$$

3. Tidal (FC3)

The interview with the Manager of Aroma Cafe revealed that normal sea tides would not result in the closure of the outdoor area of Aroma Café. However, very high tides can result in the closure of the outdoor area of Aroma Café. High tides usually occur in November, December, and January during the new moon (*bulan mati/tilem*) and new moon (*purnama*), which occur twice monthly. Therefore, it can be concluded that high sea tides affecting the outdoor area of Aroma Café occur six days a year. Based on these data, the correction factor for sea tides can be calculated as follows:

$$\begin{aligned} \text{FC3} &= \text{MI/Mt} \\ &= 6/365 \\ &= 0.016 \end{aligned}$$

4. Temporary Closure (FC4)

Temporary closures that occur in outdoor areas are the same as those that occur in indoor areas. Therefore, it can be determined that the value of FC4 is 0.331.

With the value of all correction factors known, the RCC can be calculated as follows:

$$\begin{aligned} \text{RCC} &= \text{PCC}_{\text{outdoor}} \times \\ &\quad ((100 - \text{FC1}/100) \times \\ &\quad (100 - \text{FC2}/100) \times \\ &\quad (100 - \text{FC3}/100) \times \\ &\quad 100 - \text{FC4}/100)) \\ &= 1149.796 \times \\ &\quad ((100 - 0.235/100) \times \\ &\quad (100 - 0.027/100) \times \end{aligned}$$

$$\begin{aligned}
 & (100 - 0.016/100) \\
 & \times (100 - 0.331/100)) \\
 & = 1149.796 \times (0.998 \times 0.999 \\
 & \times 0.999 \times 0.997) \\
 & = 1141.747
 \end{aligned}$$

ECC Calculation

Information obtained through interviews revealed that all employees who work at Aroma Café on every operational day are tasked with providing food and serving visitors who enjoy their food in indoor and outdoor areas. Therefore, the management capacity of Aroma Café during the Covid-19 pandemic for indoors and outdoors is the same, which is 0.225 (obtained from the division between the number of employees allowed to work during the pandemic and the ideal number of employees who worked before the pandemic).

Based on this, the ECC value for the Aroma Café outdoor area can be calculated as follows:

$$\begin{aligned}
 \text{ECC} &= \text{RCC} \times \text{MC} \\
 &= 1141.747 \times 0.225 \\
 &= 256.893 \text{ pax per day.}
 \end{aligned}$$

Based on these results, it can be stated that the maximum number of visitors that the Aroma Café outdoor area can receive during the COVID-19 pandemic is 256.893 people (rounded up to 257 people).

Given that the outdoor area of Aroma Café also operates for 13 hours, and given that the average visitor spends 2 hours enjoying their food, it can be stated that they can receive seven visits per operational day, where the number of visitors that can be accommodated each time is 37 people.

DISCUSSION

The Covid-19 pandemic has resulted in tourism being hit very hard. The ability of the

virus that causes COVID-19 to threaten the lives of the contractors raises fear toward the virus (Ahorsu et al., 2022; Broche-Pérez et al., 2022; Martínez-lorca et al., 2020; Reznik et al., 2021). This concern is not only felt by tourists but also by tourism workers. Concerns over COVID-19 have resulted in workers being afraid to interact in close quarters with tourists (Elshaer, 2022; Yin & Ni, 2021), thus ultimately reducing the performance of those workers (Sun et al., 2022). It even increases the desire to change jobs (Teng et al., 2021). Although the Government of the Republic of Indonesia and the World Health Organization (WHO) have provided safety guidelines through physical distancing for restaurants to operate safely during the COVID-19 pandemic (FAO & WHO, 2020; MOTCE, 2020), but still the fear was felt.

Physical distancing requires more space (Thomas et al., 2020), which means decreasing the ability of a café or a restaurant to accommodate people compared to normal conditions. If the space is available, spatial analysis can be used to support the implementation of physical distancing (Murray, 2020). Therefore, to effectively practice physical distancing, the area where interactions occur in a café or a restaurant must first be known. In addition, the minimum physical distancing distance must also be known. By knowing these two things, café managers can estimate the maximum number of visitors and workers in the place to effectively perform physical distancing as the government and WHO recommended. By knowing the maximum number of visitors that can be received, café managers can appropriately provide the number of seats to limit the number of visitors, thus optimizing physical distancing.

By integrating the understanding that 1). physical distancing requires space, 2). the minimum required distance in doing physical distancing, 3). the size of Aroma Café indoor area, 4). The size of Aroma Café outdoor area, and 5). the correction factors that affect the number

of visitors at Aroma Café, into the carrying capacity calculation method proposed by Cifuentes (1992) will result in a new formula with different uses. This formula can determine the maximum capacity of visitors that Aroma Café can receive during the COVID-19 pandemic.

CONCLUSION

The determination of the maximum capacity of Aroma Café, Kedonganan, during the COVID-19 pandemic, reported in this article, was based on modifications to the original Carrying Capacity formula. The first step is PCC calculation, followed by RCC calculation, and finished with ECC calculation. The calculation results in 120 as the maximum capacity that the Aroma Café indoor area can accept during the COVID-19 pandemic per day of operation. The calculation also yielded a figure of 257 people as the maximum number of visitors that Aroma Café can receive in their outdoor area on each day of operation.

Operating based on the results of the calculations mentioned above will be able to ensure that visitors to Aroma Café can maintain a safe distance (through physical distancing) of 1 meter between themselves and the workers who serve them. In addition, the approach described above will also ensure that café workers in the kitchen, offices, cashier, bars, and others can implement physical distancing to maintain their safety from contracting the virus that causes COVID-19.

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