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## International Marketing Journal of Culture and Tourism (IMJCT)

*Published by Katara Publishing House in cooperation with Al Rayyan  
International University College-University of Derby UK-Qatar.*

*FOUNDER & EDITOR-IN-CHIEF*

### Professor Khalid Al-Sulaiti

*Al Rayyan International University College-University of Derby UK-Qatar  
and CEO of Katara Cultural Village Foundation*

The main objective of the journal is to publish scientific research works on the subject of culture and tourism marketing that includes management trends, government policies, and the insight related to development of new technologies, methodologies and tools.

The journal seeks to provide a platform for researchers and experts in the field of culture and tourism marketing to reach a wider audience.



## About Journal

IMJCT is an international scientific journal specialized in publishing research in tourism culture and marketing, including government administration and policies, and developing new technologies, methodologies, and tools. It is published by Katara Publishing House in cooperation with Al Rayyan International University College-University of Derby UK-Qatar. The Journal publishes two issues per year and aims to provide a scientific platform that allows researchers and specialists to arbitrate and publish their scientific papers from research and studies in the field of tourism, culture, and marketing, as well as to contribute to the spread of knowledge by making these researches and studies available to the beneficiaries across this vast space.

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The journal has a huge scope as it fills a void. It will help not only students, teachers, experts and researchers who are working in this area, but also cultural and tourism institutions, organizations, NGOs, companies, and the general public to update themselves about the latest research, developments, and trends in culture and tourism marketing.

## Vision

To be a leading global scientific publishing platform in the field of tourism culture and marketing.

## Journal

- Giving the opportunity to Arab and international researchers to arbitrate and publish their research in the field of tourism culture and marketing.
- Contributing to supporting and developing the cultural field and tourism marketing through genuine and serious research studies in accordance with international standards.
- Achieving the universality of culture and tourism in accordance with the modern vision, with its professional controls and ethics.
- Creating a knowledge base for the magazine that contributes to creating a scientific reference and a solid documentary record.



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### **Procedural Steps for Publishing a Research**

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- The research and studies submitted for publication in the journal are arbitrated by at least two arbitrators.
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- If the research is accepted for publication, then all copyrights shall devolve to the journal, and it may not be published in any paper or electronic means of publication except with the written permission of the editor-in-chief.
- If the research is published, the researcher will be sent a letter of publication with an electronic copy of the journal in which his research was published.



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## Editorial

Dear academic and industry colleagues, I take great pleasure in presenting to you the inaugural issue of the International Marketing Journal of Culture and Tourism, which is a joint publication of Katara Publishing House and Al Rayan International University College in partnership with the University of Derby.

The main objective of the journal is to publish scientific research in the fields of culture and tourism marketing focused on the latest management trends, government policies, and industry insights related to development of the tourism sector. The journal seeks to provide researchers and experts in the field of culture and tourism marketing with an opportunity to share their knowledge with a wider circle of academics, government officials, and industry professionals.

We aim to have two publications per year, the content of which will be easily made available through an open-access platform. In the future some of the publications will be developed around a specific theme, which is of interest to the wider academic and professional communities.

All published articles will undergo a rigorous double-blind peer review process and meet the criteria for high-quality academic research. Our goal is to shorten the turnaround time between submission and publication and make this process more efficient compared to other journals in our field.

I would like to sincerely thank the editors, the authors, and the reviewers who have dedicated their time and expertise to the development of our journal.

I would like to use this opportunity and invite future authors from academia and the industry to submit their exciting research to the International Marketing Journal of Culture and Tourism.

*Sincerely,*

**Professor Khalid Al Sulaiti**  
*Founder and Editor in Chief*





# The Mediating Effect Of Cultural Diversity On Organizational Commitment And Well-Being Of Filipino Cruise Seafarers

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## **Abstract Purpose**

The purpose of this study is to identify how the current setting of the workplace environment onboard, specifically hotel operations, affects the level of commitment and overall well-being of Filipino cruise seafarers towards their workmates of different nationalities.

## **Design/methodology/approach**

This study focuses on Filipino cruise seafarers' experiences in working in a cross-cultural environment onboard. Researchers used quantitative-predictive-causal research for this study. Using the adapted and modified instrument, researchers surveyed 291 Filipino cruise seafarers working in hotel operations through online data collection procedures.

## **Findings**

The results revealed that cruise seafarers agree that cultural diversity, organizational commitment, and well-being are essential in seafarers' living and working conditions onboard. Regarding psychographic profiles in terms of lifestyle, the study reveals a significant difference in cultural diversity and organizational commitment. Using the Pearson Correlation, the study found a high relationship between the level of organizational commitment and well-being. As the level of organizational commitment increases, the level



of well-being of respondents also tends to increase. By using SB-SEM through AMOS, it revealed that cultural diversity mediates the relationship between organizational commitment and well-being. The study only covers Filipino cruise seafarers' work and life experiences in hotel operations. The sample for this study was restricted to the other types of maritime groups. In addition, this study is strictly limited to Filipinos as the primary population for this research.

**Keywords:** *Filipino cruise seafarers, cultural diversity, organizational commitment, well-being, structural equation modeling*

## **Introduction**

The cruise industry progresses as days and generations do. As the cruising industry grew in popularity, it began to provide tourism and hospitality services to a wide range of individuals worldwide (Lau & Yip, 2020) excellent geographical locations, diversified oriental cultures, local wildlife, rich tourism resource and exotic experiences in Asia for western travellers. Cruising in the Asian regions has considered as a potential growth in the transport and tourism industry. In this paper, we aim to provide suggestions to industrial practitioners on the development of the cruise port in Asia and identify the key elements of a regional leading cruise hub as desired by different users. Nevertheless, the majority of cruising-related studies were focused on tourism management in the North American and European regions. Relevant cruising studies on maritime transport management in the Asian region are under-researched. In doing so, we newly propose the CRUISE PORT framework by illustrating four representative countries in Asia (South Korea, Japan, Vietnam and Singapore). In addition, the Cruise Lines International Association (2021) revealed that the continuous expansion of the industry has increased the number of jobs offered in the field, drawing industry professionals worldwide.

As an effect of globalization, cultural diversity in the workplace is present, particularly in a work environment comprising employees of different nationalities. Gebauer (2020) mentioned that the differences in work ethics are a prominent issue where crew members from different cultures display a wide range of characteristics on how they perform their duties in their regular work context, finding it challenging to work on the same page.



Moreover, Wang et al. (2020) states that organizational commitment and wellbeing emerge as one of the crucial themes that any organization manages. It requires accepting diversity and fostering a climate where workers feel valued while using their abilities to further company objectives. It confirms the significance of assessing individuals' organizational commitment levels before predicting their working environment (Rameshkumar, 2020). In a broader sense, organizational commitment has evolved into a cornerstone of behavioral management with its diversified environment of seafarers during past years (Tsai & Liou, 2017).

Work engagement and work-life quality were connected with well-being (Chambel & Carvalho, 2022). It was believed that seafarers would perform better, work more efficiently, and be more committed if they were happier at work. Moreover, a study by McVeigh et al. (2019) revealed that when working in a multicultural setting, factors affecting their well-being and performance are anchored at various work levels and influenced by workplace cultural differences. This is also congruent with the study of Muslu (2022), which indicates that the difficult working conditions of cruise seafarers impact their commitment to their organization.

Furthermore, researchers aim to identify how the current workplace environment onboard, specifically hotel operations, affects Filipino cruise seafarers' commitment and overall well-being towards their workmates of different nationalities. With that, cultural diversity, organizational commitment, and well-being came to be three significant variables that the study focused on since they were fundamentals that became highly involved at present. Therefore, the study attempted to address the gap by identifying the relationship between variables, handling different cases of crew onboard ships, and specific demands leveraging barriers posed by cultural diversity.

This study benefits cruise companies' onboard workforce management by providing an in-depth description and results of primary concerns encountered by most crew onboard. This can also guide them in crafting new techniques and their workforce strategy. Furthermore, this research intends to produce a model based on the information gathered from the relationship between diversity, organizational commitment, and employees' well-being. In addition, this study comprehends proper standards and engagement in a range of everyday circumstances that can benefit individuals to work together more effectively among groups of people with various cultures.



Lastly, researchers aim to provide the Filipino cruise community with new theoretical knowledge by publishing this paper available for cruise companies to access information regarding cultural diversity in the workplace. It also serves as the basis for possible innovations that strengthen and enrich information regarding cruise seafaring. This could also be the basis on their possible research that they may conduct in the future.

## **Literature Review**

### *Cruise and shipping industry*

The cruise and shipping industry began as a means of transporting enjoyable recreation to the most passengers aboard sailing ships that visited different ports around the globe (Pallis, 2021). In today's market, the industry is known as one of the key players among worldwide businesses. To entertain, feed, and protect such a large number of people, a massive company with thousands of workers is required (Sun et al., 2017). The rise of the cruise and shipping industry has increased career opportunities in a field that attracts industry experts worldwide. Evangelia et al. (2019) expressed how the industry plays a substantial role in the economic development of a country. Professionals from all countries engage in the cruise sector to take part and serve the industry.

Over the last decades, the cruise and shipping industry has testified to relentless expansion and unavoidable globalization developments. Moreover, Atef and Al-Balushi (2017) stated that monetarily, the cruise and shipping industries have all contributed to the globalization of the tourism and hospitality industry that have embraced economies of scale and progressed division as well as the needs and wants of every tourist onboard ships. In addition, the study of Nadiia and Sergei (2016) argued that it is likewise exceptional by changes in the market, specifically the developing internationalization of cruise travelers.

### *Cruise industry during the pandemic period*

The industry has been steadily growing for decades and is now regarded as a significant source of employment worldwide. With the emergence of COVID-19, however, Holland et al. (2021) stated that the industry has been impacted negatively as millions of passengers and employees have been affected by significant disruptions and cancellations of its operation. This is in line with the study of Petrizzo (2020) that most

cruise line companies are compelled to cease their operations and services, losing revenue and forced to request loans merely to keep afloat. As eloquently stated by Silva (2021), the rapid spread of COVID-19 has been attributed to globalization and worldwide travel trends. Since cruise ships are facilitated and confined by the presence of a considerable number of people, vessels are tagged as a potential source of infectious diseases and transmission (Quigley et al., 2021). This implies that the transmission rate onboard is relatively higher.

As studied by Liu and Chang (2020), risks and outbreaks concerning health and safety can hurt the cruise industry as they have the potential to influence passengers' perceptions of a cruise line, more specifically, the likelihood of purchasing a cruise product in the future. Containment plans were formulated amid constantly shifting conditions in response to this crisis. As Brewster et al. (2020) mentioned, preventative measures comprise a variety of strategic planning and designing, hygiene and sanitation, and surveillance and monitoring initiatives designed to increase the safety of all cruise ship passengers and crew. Cruise ships are progressively restarting their operations worldwide, adopting restrictive guidelines and with the authorization and participation of local and regional governments (Cruise Lines International Association, 2021).

### *Filipino seafarers*

Seafaring helps Filipino seafarers' families in the Philippines, one of the key motivations that push them to work on board (Evangelista, 2021). In addition, Bendicio (2019) claimed that Filipino seafarers continue to work on board for monetary benefits and to proceed to better opportunities for themselves and their families. Furthermore, Andrew et al. (2019) mentioned that living onboard or at sea is a crucial working environment for Filipino seafarers. As a result, in the study of Isidro -Banez (2020), several Filipino seafarers are influenced by the level of support from family, and it affects their perception of their decision whether they still want to return on board or not.

Despite that, Dacwag (2018) explained that Filipinos are easy to adjust since they are open and interested in exploring other cultures and sharing their own with different nationalities on board. In addition, conflict scenarios for Filipino seafarers on board are unavoidable. Usual factors that spark conflicts could be beliefs, interests, points of view, needs, etc. (Garcia et al., 2018). Moreover, Reyes et al. (2019) most of the bases were race,



ethnicity, physical features, and communication; and these are commonly experienced in various settings such as schools, work places, social gatherings among others. If these settings are vulnerable to discriminatory situations, the researchers believe that it can also happen to seafarers who were on board a ship. Hence, the researchers investigated the extent of racial discrimination, degree of conflict, and the coping strategies of selected Filipino seafarers. Specifically, the study determined relative profiles of the respondents; the extent of racial discrimination they experienced; the degree of conflict they have encountered; the relationship between racial discrimination and degree of conflict they have experienced; the significant difference in the racial discrimination they experienced; and, the coping strategies they applied in countering the discrimination and conflicts they experienced. Using descriptive-survey as method in gathering data, the researchers employed 100 Filipino seafarers who have boarded an international vessel for at least 1 year. Convenience sampling was used in choosing the respondents who were taken in Kalaw Avenue, Manila. A researcher-made questionnaire, framed after the theories and literatures reflected in the study was used. Frequency, percentage, weighted mean, analysis of variance and Pearson product-moment correlation were also used to treat the data of the study. Finally, the study was conducted from June 2016 to October 2016. Based on the result of the study, majority of the respondents are from Luzon (34% mentioned that discrimination is due to race, ethnicity, physical appearance, and language barriers or intercommunication).

### *Factors influencing cultural diversity*

Eriksson and Hägg (2016) defined cultural diversity as differences among people of various racial or ethnic origins with diverse cultural backgrounds that can be recognized within a society, community, or organization. These divergences constantly changing through time are considered a contentious topic in literature. In addition, Mohamed (2017) further elucidated that cultural diversity includes disparities between individuals regarding ethnicity and historical ties, socioeconomic background, personality and attitude, temperament, and nature of people within the same social system. In relation to the cruise industry, cultural diversity plays a vital role in how most cruise companies and businesses currently operate as an effect of internationalization.

Regardless of how a company supervises and manages a diverse workforce, the outcome might have been an asset or a challenge (Amakiri et al., 2021). According to Tompos and Ablonczy-Mihályka (2017), the emerging interest in diversity and inclusion creates substantial advantages and disadvantages for organizations. In order to help an organization achieve its strategic goals and objectives, diversity management is applied as it provides management strategies that ensure equality, respect, admiration, and involvement between its employees (Valentine & Godkin, 2017).

### *Organizational commitment*

Organizational commitment is now one of the most common studies conducted on employees and organizations to shape the culture for which every organization strives to be renowned. Noraazian (2016) mentioned that organizational commitment alludes to sensations of connectivity and affiliation that an individual from an organization feels. Directed by qualities that straightforwardly influence seafarers, it is characterized as people's rational and emotional involvement in their work, professions, organizational units, and companions (Walden et al., 2017). In addition, Ryu and Moon (2019) observed that engaged seafarers are the organization's key asset since they are highly driven to devote their time and efforts to achieve organizational goals. Seafarers, in particular, must be offered many opportunities and interactions to feel a sense of responsibility inside the business as they integrate into a multicultural environment.

Apart from this, Herrera and De Las Heras-Rosas (2021) aspire to create a high level of performance and low levels of absenteeism and turnover. Organizational commitment is considered a key factor in achieving this objective, however, it can be conditioned by several factors, among which is the psychological contract. The literature has related the organizational commitment with the fulfillment of the psychological contract framing it as one of the explanatory variables. This work aims to investigate research trends on psychological contract and organizational commitment. For this purpose, bibliometric techniques and the software SciMAT have been used. 220 journal articles indexed in Web of Science (WoS) stated that the workplace condition for seafarers may be necessary to increase their perceived work engagement as it would enhance workplace cohesion. In addition, Noraazian (2016) also indicated that this has the potential to boost organizational productivity and seafarer enthusiasm and improve a company's



capacity to meet its objective. Establishing a committed workplace culture will help the organization generate better results and help people achieve their professional and personal goals (Tsai & Liou, 2017).

### *Seafarers' wellbeing*

According to Panganiban and Garcia (2017), being flexible, having a firm intellectual state, possessing robust physical health, and keeping an easy-to-adjust attitude must be embodied by a seafarer on board. On the other hand, being exhausted and stressed at work obstructs seafarers' performance. Moreover, due to COVID-19, workers worldwide, including cruise seafarers, are greatly affected by this health crisis (Pauksztat et al., 2020). The spread of the virus imposes new threats and changes in work conditions and causes mental distress to seafarers. Based on the study by Makhanya (2021), workers' wellness significantly impacts their surroundings, and their capabilities influence every person. As explained by Otenyo and Smith (2017), wellness previously concentrated on encouraging good health, behaviors, exercise, and proper weight management, but now, it has evolved into many factors.

It revealed that being isolated alone on board and having a lengthy period of work affects mental, physical, and social well-being. It entails the physical, emotional, spiritual, occupational, and intellectual well-being influencing employment and the onboard environment. Apart from this, McVeigh et al. (2019) indicated that different causes are connected to well-being. These involve shelter, earnings, health, environment, etc. In connection, having social relations, work-life balance, and subjective well-being have also significantly discerned all these methods.

### *Theoretical Background*

To identify cultural differences among cruise seafarers, researchers adapted the dimension to support the study from earlier literature, such as Geert Hofstede's (1980) 6-D Model Theory of National Culture, which was mentioned by Gebauer (2020). This theory distinguishes one culture from another. Aside from that, this Cultural Dimension Theory is an internationally recognized standard for understanding cultural differences. It allows the study to identify if a Filipino cruise seafarer could work effectively with people from various cultural and geographic backgrounds. This framework will enable researchers to identify Filipino seafarers' cultural traits and



characteristics to assess and comprehend their behavior in the workplace. As a result, the organization may develop and implement management strategies that help manage a diverse workforce. This provides knowledge in cross-cultural management, primarily how diversity in culture is minimized and managed Eriksson and Hägg (2016).

## Method

The researchers used quantitative-predictive-causal research since it is designed to determine whether the main variable, cultural diversity, is used to mediate or moderate one or more outcome variables, which are organizational commitment and wellbeing, as the prediction perspective is present with this complex model.

The researcher determined the sample size of at least 112 respondents using the statistical power analysis of G-power. It is a statistical treatment used to determine the sample size wherein the established effect size is 0.40, an alpha error is 0.05, and the actual power is 0.95. However, the researchers gathered 291 Filipino cruise seafarers to achieve a proper representation of the chosen population. The researchers gathered 291 Filipino cruise seafarers to properly represent the chosen population. The study's respondents are Filipino cruise seafarers who have experience working onboard. These are restricted outside other types of maritime industry segments. The study requires respondents to be 22 years old and above and have experienced a minimum of two contracts in an international shipboard or fleet since a cruise employee needs at least six to 12 months to adjust to a new work culture (Panganiban & Garcia, 2017). Researchers used the questionnaire as the main instrument for data gathering and adapted and modified different instruments from different related literatures and authors. The first part pertains to the psychographic profile of the respondents. The variable's indicators were a researcher-made for psychographic profiling. This part was measured through a check box and frequency. Moreover, the second part focuses on identifying the cultural differences among employees on board. The basis of the ideas of the said variable's indicators was adapted from the instrument of Yoo et al., (2011), indicating the 6-D Model Theory of National Culture by Geert Hofstede (1980). The third part highlights how cruise employees are committed to their organization. The indicators were adapted from the instrument of Khalili and Asmawi (2012) that identifies the measurement and antecedents of affective, continuance, and normative



commitment to the organization. The fourth part emphasizes the factors that affected seafarers' well-being during the pandemic. The indicators were adapted from the focus group discussion of Sliskovic (2020) participants who gave their reflections on the current pandemic situation in terms of the well-being dimensions. The three industry experts validated and ran the instrument in pilot testing. Below is the result of the Cronbach alpha:

**Table A. Result of Reliability Analysis**

<i>Major Variables</i>	<i>Cronbach Alpha</i>	<i>Interpretation</i>
Cultural Diversity	0.761	Acceptable
Organizational Commitment	0.801	Good
Well-Being	0.788	Acceptable

*Legend:*  $\alpha \geq 0.9$  excellent;  $0.9 > \alpha \geq 0.8$  good;  $0.8 > \alpha \geq 0.7$  acceptable;  $0.7 > \alpha \geq 0.6$  questionable;  $0.6 > \alpha \geq 0.5$  poor;  $0.5 > \alpha$  unacceptable

The instrument is divided into four parts and disseminated online through Microsoft Forms. The researchers distributed the survey questionnaire online to search for random respondents within the locale. In addition, the researchers communicated with the respondents by asking for consent letters from the personnel of different manning agencies and companies to gain voluntary participation in the study. In addition, referrals from friends, colleagues, and acquaintances until the target sample size is reached. The respondents chosen by the researchers were selected using a combination of purposive and snowball sampling.

The researchers ought to consider the intent of the research and follow the standards in performing the study by providing consent letters to respondents of this study, which outline the study's objectives and guidelines for respondents to be aware that their thoughts and comments were strictly treated with utmost care and confidentiality. Their anonymity as respondents was disclosed to anyone. As researchers distributed questionnaires online, R.A. 10173, or the Data Privacy Act of 2012, was attached, stating that all personal or sensitive information gathered and submitted through this questionnaire was solely used for this study.

It utilized frequency and percentage distribution to present seafarers' psychographic profiles in terms of lifestyle, physical activities, and devices used to communicate. Weighted mean and composite mean to identify seafarers' perceptions towards cultural diversity, organizational commitment, and well-being to calculate the average value of the data by providing



different weights to some individual values that reflect the relative importance of each number averaged. Moreover, Analysis of Variance (ANOVA) was used to compare the mean difference among variables to determine significant differences between organizational commitment, well-being, and factors influencing cultural diversity when grouped according to psychographic profile. Furthermore, the Pearson Correlation tested the significant relationship between organizational commitment and well-being, which understands the strength of the relationship between the two variables. Finally, a Covariance-based or CB-SEM using AMOS was used to assess relationships among organizational commitment and well-being and the mediating effect of factors influencing the cultural diversity of Filipino seafarers.

## Results And Discussion

*Table 1: Summary Of The Psychographic Profile Of The Respondents*

<i>Items</i>	<i>Frequency</i>	<i>Percentage</i>
<b>Lifestyle</b>		
Hedonistic	101	34.71
Adventurous	171	58.76
Individualistic	11	3.78
Promethean	8	2.75
Total	291	100%
<b>Physical Activities</b>		
Aerobics	148	50.86
Strengthening	123	42.27
Flexibility	20	6.87
Total	291	100%
<b>Devices Used to Communicate</b>		
Smartphones	278	95.53
Tablets	9	3.09
Computing Machine	4	1.37
Total	291	100%

Table 1 presents the summary of the Psychographic profile of the respondents. It is revealed that most Filipino Cruise Seafarers are adventurous



and open to taking chances, trying new things, and seeking enjoyment through new experiences with an adventurous lifestyle ranked highest among indicators (58.76%). Furthermore, aerobic activities such as jump rope, treadmill, jogging, and other related activities gathered the most data regarding the response of Filipino cruise seafarers (50.86%). Lastly, it depicts that most seafarers on board use smartphones like iOS and Android (95.53%) when communicating with their families and friends.

Table 2 presents the table summary of the factors influencing cultural diversity, organizational commitment, and formation of Filipino cruise seafarers' well-being as the three significant variables of the study.

Regarding Factors Influencing Cultural diversity, it is revealed that most respondents agreed that all the factors influence the work culture on a cruise ship (4.00). The respondents strongly agreed that the Uncertainty Avoidance Index greatly influenced onboard culture (4.66). This suggests that seafarers on cruises consider how much ambiguity and uncertainty are tolerable. Cruise seafarers take serious consideration in managing unfamiliar conflicts that arise since these situations may potentially threaten the entire operation of every department and result in a negative outcome. Therefore, crew members abide by organizational rules and policies when facing unprecedented situations, as data reveals that they promote a high uncertainty avoidance index.

***Table 2: Summary Of The Table For The Factors Influencing Cultural Diversity, Organizational Commitment, And Formation Of Filipino Cruise Seafarers' Well-Being***

<i>Sub - Variables</i>	<i>Weighted Mean</i>	<i>Interpretation</i>	<i>Rank</i>
Factors influencing cultural diversity			
Power Distance Index	4.03	Agree	4
Interpersonal Connection	4.24	Agree	3
Uncertainty Avoidance Index	4.66	Strongly Agree	1
Gender Sensitivity	3.89	Agree	5
Time Bound	4.27	Agree	2
Liberty Control	3.67	Agree	6
Composite Mean	4.00	Agree	
Organizational Commitment			
Affective Commitment	4.16	Agree	1

Continuance Commitment	3.75	Agree	3
Normative Commitment	4.08	Agree	2
Composite Mean	4.00	Agree	
Filipino cruise seafarers' well-being			
Mental and Physical Well-Being	4.57	Strongly Agree	1
Social Well-Being	4.37	Agree	2
Economic Well-Being	4.15	Agree	3
Composite Mean	4.36	Agree	

*Legend: 1.00 – 1.49 Strongly Disagree; 1.50 – 2.49 Disagree; 2.50 – 3.49 Moderately Agree; 3.50 – 4.49 Agree; 4.50 – 5.00 Strongly Agree*

Furthermore, it can be gleaned from the table that most respondents agree that sub-variables influence crew members' commitment level at work (4.00). Results reveal that most respondents agree that affective commitment greatly influences cruise employees' commitment level (4.16), ranked highest among other sub-variables under organizational commitment. This is because crew members, regardless of their job status, believe that the company's objective aligns with their personal beliefs and interests and feel at ease within the company. Their workplace culture makes them realize they fit into the organization and are satisfied with their work. This leads to an increase in their dedication to the business.

Lastly, Filipino cruise seafarers agree on the formation of their mental and physical well-being, social well-being, and economic well-being (4.36). Consequently, it turned out that Filipino cruise seafarers strongly agreed regarding the formation of their mental and physical well-being (4.57), which ranked highest. This implies that living and working on cruise ships sustained their psychological and physical stability due to the programs and facilities that cruise ship management offers for their crew members. Working in passenger vessels like cruise ships gives them the advantage, especially in this present generation since cruise ships are becoming more modern and further improving their services for their passengers and to make that happen, they must take good care of their workforce's overall well-being since they are front liners in this industry. They are improving their crew members' well-being, resulting in the improvement of crew members' performance and motivation to work.



**Table 3: Difference Between Organizational Commitment In Terms Of Continuance And Normative Commitment When Grouped According To Psychographic Profile.**

<i>Psychographic Profile</i>	<i>F<sub>c</sub></i>	<i>p-value</i>	<i>Interpretation</i>
Continuance Commitment			
Lifestyle	3.80	0.011	Significant
Physical activities	0.74	0.478	Not significant
Devices used to communicate	0.49	0.612	Not significant
Normative Commitment			
Lifestyle	3.17	0.025	Significant
Physical Activities	0.95	0.389	Not Significant
Devices used to Communicate	0.41	4.08	Not Significant

*Legend: If p-value is < 0.05, significant; If p-value is > 0.05, Not Significant*

Table 3 exhibits the significant difference between organizational commitment in terms of continuance and normative commitment when grouped according to psychographic profile.

In continuance commitment, responses present no significant difference between organizational commitment and continuance commitment when grouped according to physical activities and devices used to communicate since their p-values are all greater than 0.05. Furthermore, it shows that results differ based on the post hoc test. There is a significant difference in the level of organizational commitment in terms of continuance commitment when grouped according to lifestyle ( $p=0.011$ ) since its p-value is less than 0.05.

This means that cruise seafarers with hedonistic, adventurous, and Promethean lifestyles are more committed to several investments and privileges from an organization than those with individualistic lifestyles. It further implies that cruise seafarers who seek to feel satisfied, luxurious, and have an extravagant lifestyle fear losing their jobs since these might assume losses that can be financial (compensation and privileges), careers (seniority or role-related skills), or social (friendships or allies). Along with the adventurous experience, seafarers also earn lucrative pay, primarily due to the time spent working. Therefore, seafarers working on cruise ships with an established lifestyle are more likely to experience continuance commitment to compelling their grandeur.

Moreover, seafarers would prefer to stay in their position because they believe it is the best option for them to support their need and their dependents to provide the lifestyle they have. What is advantageous about working in the maritime industry is that it allows those looking for adventure to go on an exciting journey while being paid for it. The seafarers' routine includes going through various exhausting and exciting experimental scenarios yet satisfying life at sea. The more satisfied individuals are with their workplace, the more they will want to contribute to keeping it a secure and enjoyable workplace.

On the other hand, the responses indicate no significant difference between organizational commitment in terms of normative commitment when grouped according to physical activities and devices used to communicate since their p-values are all greater than 0.05. Moreover, results also show that based on the post hoc test, there is a significant difference in the level of organizational commitment in terms of normative commitment when grouped according to lifestyle ( $p=0.025$ ) since its p-value is less than 0.05. This means cruise seafarers with adventurous, individualistic, and Promethean lifestyles are less committed to getting tied in the industry as a response to responsibility than those with hedonistic lifestyles. It further implies that cruise seafarers motivated by pleasure and happiness appear to have a stronger feeling of moral commitment to the organization or responsibility in their work, making them less inclined to quit. It is strongly connected to pleasure, which is also focused on providing people with what they need to be satisfied. Onboard seafarers could believe they must hold onto their jobs, which might also add to their sense of pride and satisfaction. The need for pleasure has an impact on the happiness experienced in the fulfillment of those needs.

**Table 4: Difference Between Factors Influencing Cultural Diversity In Terms Of Power Distance Index, Interpersonal Connection, Uncertainty Avoidance Index, And Liberty Control When Grouped According To Psychographic Profile.**

<i>Psychographic Profile</i>	<i>F<sub>c</sub></i>	<i>p-value</i>	<i>Interpretation</i>
<i>Power Distance Index</i>			
Lifestyle	3.12	0.026	Significant
Physical activities	0.33	0.716	Not significant
Devices used to communicate	1.27	0.284	Not significant
<i>Interpersonal Connection</i>			



Lifestyle	2.72	0.045	Significant
Physical activities	0.15	0.858	Not significant
Devices used to communicate	0.47	0.626	Not significant
<b><i>Uncertainty Avoidance Index</i></b>			
Lifestyle	4.95	0.002	Significant
Physical activities	8.96	0.000	Significant
Devices used to communicate	0.60	0.549	Not significant
<b><i>Liberty Control</i></b>			
Lifestyle	3.68	0.013	Significant
Physical activities	1.98	0.140	Not significant
Devices used to communicate	1.63	3.68	Not significant

*Legend: If p-value is < 0.05, significant; If p-value is > 0.05, Not Significant*

Table 4 presents the significant difference between factors influencing cultural diversity in terms of power distance index, interpersonal connection, uncertainty avoidance index, and liberty control when grouped according to psychographic profile.

Regarding the power distance index, there is no significant difference in responses between factors influencing cultural diversity when grouped according to physical activities ( $p=0.716$ ) and devices used to communicate ( $p=0.284$ ) since their p-values are all greater than 0.05. Furthermore, results also show that based on the post hoc test, there is a significant difference in the factor that influences cultural diversity in terms of power distance index when grouped according to lifestyle ( $p=0.026$ ) since its p-value is less than 0.05.

This means that cruise seafarers with adventurous (3.97) and Promethean (3.83) lifestyles are more likely to influence the crew member's perception of inequality that exists and is accepted between high-ranking and low-ranking crew members on board compared to those with hedonistic (4.13) and individualistic (4.10) lifestyles. This is because senior sailors typically have more experience working on board. This implies that the more time they spend working on a cruise ship, the more different individuals they are exposed to, including passengers and coworkers from various nations of origin. Low-ranking members frequently learn from the experiences of their seniors, creating an impression that encourages them to try those experiences, too. This is because the exchange of knowledge and good communication between the team and the workplace are practiced on board. Furthermore, high-ranking crew members have the most significant direct

impact on the workers they line manage, giving them the best opportunity and authority to impart new information to their crew members on board.

Additionally, the behavior of cruise seafarers in terms of how elegantly they should live is also influenced by the type of working environment they are in. Cruise ships convey notions of luxury since they provide the most upscale, high-end, and exquisite comforts. As a result, crew members tailor their lifestyle, particularly in terms of how gracefully they should live according to their working environment. Since high-ranking crew members typically work on board for a more extended period and have more knowledge and experience, they have unintentionally absorbed the style of living conditions on board over time as they already have resources to live elegantly at a high cost. On the contrary, low-ranking crew members with less time and experience working on board are still in the period of adjustment and adaptation.

Regarding interpersonal connection, there is no significant difference in responses between factors influencing cultural diversity when grouped according to physical activities ( $p=0.858$ ) and devices used to communicate ( $p=0.626$ ) since their  $p$ -values are all greater than 0.05. Furthermore, data also shows that results differ based on the post hoc test. There is a significant difference in the factors influencing cultural diversity regarding interpersonal connection when grouped according to lifestyle ( $p=0.045$ ) since its  $p$ -value is less than 0.05.

This means that cruise seafarers with hedonistic (4.32), adventurous (4.20), and individualistic (4.23) lifestyles are more likely to influence the crew member's connection to one another in their organization compared to those with Promethean (4.06) lifestyles. This is because most seafarers working on board for a long time considered drinking to enjoy, relax, and socialize with their colleagues during their free time. Since most cruise ships provide their own bar for crew members, the prevalence of consuming alcohol has been a habit for them as it allows for pleasure and enjoyment. As a result, social interaction fostered by drinking among crew members is crucial to developing positive connections among seafarers.

Additionally, establishing a good relationship with coworkers from diverse cultures enables one to learn more about other cultures and develop their cross-cultural understanding. This includes discovering a new language, enhancing one already known, discovering a unique culinary tradition, etc.





Generally, there is a chance to gain from crew members' familiarity with their home countries and native languages, which can only be attained when crew members push themselves outside their comfort zones. On the contrary, the individualistic habits of cruise seafarers aiming to satisfy their personal needs play an essential role in enhancing their overall well-being. These behaviors may be tied to physical activities like workouts and exercises at onboard gyms.

Regarding the uncertainty avoidance index, it reveals no significant difference between devices used to communicate ( $p=0.549$ ) since the  $p$ -value is greater than 0.05. Furthermore, data also shows that results differ based on the post hoc test. There is a significant difference in factors that influence cultural diversity when grouped according to lifestyle ( $p=0.002$ ) and physical activities ( $p=0.000$ ) since their  $p$ -values are less than 0.05.

In relation to lifestyle, data reveals that cruise seafarers with hedonistic (3.76) and adventurous (3.71) lifestyles are more likely to influence the crew member's behavior in terms of responding to uncertain and unforeseen circumstances compared to those with individualistic (3.11) and Promethean (3.28) lifestyles. This implies that crew members who seek pleasure often experience a feeling of fulfillment and satisfaction when solving a problem in the workplace or accomplishing a task that is beyond their work knowledge. It is a key to innovation as gratification waiting at the end of the situation keeps crew members motivated to finish an uncertain situation.

Moreover, crew members who want new experiences are also persuaded to accomplish an unfamiliar event since they are the types who are commonly willing to take risks. This means experiencing new things outside their comfort zones and considering new experiences as learning sources.

In relation to physical activities, data also reveals that cruise seafarers inclined with aerobic (3.69) and strengthening (3.78) activities are more likely to influence the crew member's behavior in terms of responding to uncertain and unforeseen circumstances compared to flexibility (3.15) activities. This is because crew members who frequently use the onboard gym to exercise can interact with one another and build bonds, leading to improved teamwork and coordination when presented with a challenge. Additionally, a person's physical and mental health are intertwined, and



these physical activities contribute to the crew members' increased enjoyment, mental health, and general well-being while on board. Therefore, leading an active lifestyle can aid in lowering the risk of being ill, which benefits performance and leads to better results.

Regarding liberty control, there is no significant difference between factors influencing cultural diversity when grouped according to physical activities and devices used to communicate since their p-values are all greater than 0.05. There is, however, a significant difference in the level of influence in terms of liberty control when grouped according to lifestyle since its p-value is less than 0.05.

This means respondents whose lifestyles are hedonistic, adventurous, and individualistic are less restrained than those who are Promethean. Since they project to be more welcoming and open to experiencing new things in life, it does not matter if it is luxurious, but what matters to them is if it satisfies them. It is a unique experience that benefits them. At the same time, respondents whose lifestyle is Promethean tend to be more restrained since they must work a lot to sustain their luxurious lifestyle.

**Table 5. Relationship Between Organizational Commitment And Wellbeing**

		<b>Organizational commitment</b>	<b>Wellbeing</b>
Organizational commitment	Pearson correlation		0.586** (Significant with high relationship)
	Sig. (2-tailed) N		0.000
		291	291
Wellbeing	Pearson correlation	0.586** (Significant with high relationship)	
	Sig. (2-tailed) N	0.000	
		291	291

\*\*Correlation is significant at the 0.01 level (2-tailed).

*1 – perfect relationship; 0.80 to 0.99 very high relationship; 0.60 to 0.79 moderately high relationship; 0.40 to 0.59 high relationship; 0.20 to 0.39 moderately low relationship; 0.01 to 0.19 very low relationship; 0 – no relationship*

Responses drawn in Table 5 illustrate a high relationship (.000 Sig. 2-tailed) between the level of organizational commitment and level of wellbeing (.586 Pearson Correlation) of Filipino cruise seafarers. As the level of organizational commitment increases, the level of well-being of



respondents tends to increase or vice versa. It further implies that two variables are dependent on one another.

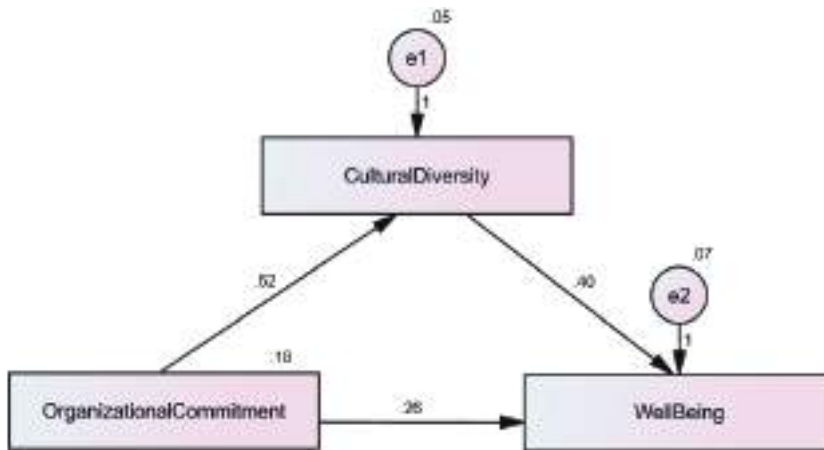
Moreover, this further implies that cruise seafarers' physical, mental, social, and economic states are interrelated to factors that affect their sensations of connectivity and affiliation with the organization. Good management significantly increases crew members' workplace productivity, improves their morale, and enhances companies' ability to achieve goals and objectives. This is because of proper and equal treatment of employees and the availability of necessary facilities and amenities that enhance all states mentioned, such as fitness centers and wellness programs. Additionally, having sufficient wages and salaries that enable crew members to fulfill their responsibilities and allow them to purchase and enjoy goods and services creates a sense of job satisfaction. As a result, having equal access and being provided with sufficient work resources creates a healthy and productive work environment for crew members.

Additionally, giving crew members sufficient time and space on board to interact and socialize with one another helps them build supportive relationships, which fosters a dynamic work environment. Therefore, it can be inferred that having a healthy work-life balance benefits how crew members behave at work since it enables them to express their emotions in an open way and value their coworkers' experiences with the organization and current situation. Overall, organizations imposing methods that promote effective performance benefit the emotional and mental state, creating a sense of guilt when considering other work alternatives. People who are committed to or devoted to their companies work harder and more productively, which improves their general well-being.

**Table 6. Summary Of Model Indices**

<b>Model Indices</b>	<b>Values</b>	<b>Standard Values</b>	<b>Interpretation</b>
Chi-square/degrees of freedom	0.000	< 5	Good fit
Goodness of fit index (GFI)	1.000	> 0.80	Good fit
Normal fit index (NFI)	1.000	> 0.90	Good fit
Comparative fit index (CFI)	1.000	> 0.90	Good fit
RMSEA	0.641	< 0.05	Poor Fit

Researchers evaluated the model based on multiple indices. These are chi-square, chi-square/df, goodness of fit index (GFI), normal fit index (NFI), and comparative fit index (CFI). The result of the model fit is shown in Table 6.



**FIGURE 1. THE MEDIATING EFFECT OF CULTURAL DIVERSITY**

As seen in the structural equation modeling, three significant variables were tested—cultural diversity, organizational commitment, and well-being. Those that are inside the box are measured or observed variables in this structural equation model. It was visually confirmed that there is a mediation effect since there are mediating arrows leading toward each variable, implying that it created a strong direct relationship when cultural diversity occurs. It is determined that organizational commitment has a high relationship (.52) with cultural diversity and a moderately low relationship (.26) with well-being. Moreover, cultural diversity has a high relationship (.40) with well-being.

Based on the model fit indices summary, cultural diversity mediates the relationship between organizational commitment and well-being. Researchers evaluated the model based on multiple indices and determined it fit its observed variable well. Table 6 shows that the chi-square/degree of the form (0.000) of the study has a good fit with a deviation of less than 0.05. According to Plackett (1983), researchers often used to determine if observed variations are significant or a good fit if the value  $p < 0.05$ . Any deviations more significant than this level would be reason to reject and assume something other than chance was at play. Moreover, other indices resulted in a goodness of fit index of 1.000, normal fit index of 1.000, comparative fit index of 1.000, and RMSEA of 0.641. The high value of RMSEA resulted in a poor fit. This happened since the degree of freedom used is small. This, however, still indicates that it is a correct model but has



a high RMSEA value. This supported the results of the investigation of Kenny et al. (2015) it is important to know how well the RMSEA performs in models with small degrees of freedom (df) that the RMSEA too frequently gives an inaccurate impression of a poorly fitting model when cutoff values are used to evaluate the fit of models that have been correctly stated and with a tiny degree of freedom and small sample sizes. Furthermore, RMSEA, CFI, and TLI integration is highly conditional on a set of cutoff criteria. Older studies of Browne and Cudeck (1993) implicated that an RMSEA value of  $<0.05$  demonstrates a “close fit” and that  $>0.08$  involves a valid model–data fit. Bentler and Bonett (1980) recommended that TLI  $>0.90$  indicates an acceptable fit. This insinuates that upon testing, it corresponded to having an indirect mediation effect since there are mediating arrows heading in the direction of each variable, demonstrating that when cultural diversity is present, a strong direct relationship is established.

Furthermore, it depicts that as cultural diversity contributes to or plays a significant role, it further strengthens the level of relationship between organizational commitment and well-being. Therefore, this implies that those factors influencing cultural diversity, such as power distance index, interpersonal connection, uncertainty avoidance index, gender sensitivity, time-bound, and liberty control, encompass how most cruise companies and seafarers function at present as an effect of a cross-cultural work environment. In a cross-cultural situation, recognizing the specific type of culture allows cruise ship crew members to modify and adapt to suit the majority’s preferences. This implies that the kind of working environment significantly impacts crew members’ behavior and operational style.

Additionally, this further implies that the results of cultural diversity on board also affect seafarers’ mental and physical well-being, social well-being, and economic well-being. This means that interacting, living, and working with a diverse crew on board can affect each other’s well-being, which could lead to adapting other crew members’ cultures applicable to them. It could affect their way of thinking (mental), physical health (physical), socialization and interactions (social), and expenditures (economic).

Moreover, it further states that Filipino cruise seafarers’ quality of work on board has a high relationship to their well-being since the quality of work influences the state of their wellness in terms of their personal and

professional careers and vice versa. It also implies that if well-being is unstable, the work quality of the seafarer will also become erratic. Once work quality and well-being are taken into effect, Filipino seafarers' organizational commitment will also be compromised based on the positivity or negativity of work well-being. Finally, since the work environment of the Filipino seafarers on board is diverse due to the different rent nationalities present, this mediates the effect of cultural diversity between organizational commitment and well-being.

**Table 7. Hypothesis Test Result From Amos**

<i>Hypothesis</i>	<i>Relationship</i>	<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	<i>Result</i>
H1	CD $\leftarrow$ OC	.523	.030	17.475	***	Accepted
H2	WB $\leftarrow$ CD	.404	.072	5.613	***	Accepted
H3	WB $\leftarrow$ OC	.265	.052	5.040	***	Accepted

When the research model in Figure 1 and the hypothesis result in Table 7 are examined, it is observed that organizational commitment has a high relationship with factors influencing cultural diversity and has a moderately low relationship with wellbeing (H1: Estimate=5.23, S.E.=0.30, C.R.= 17.475; H3: Estimate=.265, S.E.=.052,

C.R.=5.040). Therefore, hypotheses H1 and H3, “organizational commitment has a positive and significant relationship on factors influencing cultural diversity and wellbeing,” were accepted. Similarly, a high relationship was found between factors influencing cultural diversity and well-being (H2: Estimate=.404, S.E.=0.72, C.R.= 5.613). Hence, hypothesis H2, “factors influencing cultural diversity has a positive and significant relationship on wellbeing,” was accepted.

## **Implications**

From the researchers' conclusions, they recommend that for the Shipboard Human Resource, researchers recommend using the result as a guide in conducting an orientation upon boarding, addressing the benefits and drawbacks of having a loose culture in the workplace. Discussing this topic reminds crew members to value the importance of engagement and commitment in the workplace and maintaining a proper work-life balance that allows crew members to enjoy their life on board while producing good results at work.



For Filipino Cruise Seafarers, researchers recommend using this study as a source of information, specifically for newly employed cruise seafarers without prior shipboard experience. This can be done by accessing and visiting online publication sites with open access to have a deeper and recent understanding of current work conditions encouraged on board as well as interpersonal behaviors of crew members, factors that need to be taken into consideration for their engagement, and the continuous improvement of their wellbeing.

Researchers recommend using this study as their basis or additional holistic and relevant information source for the Filipino Cruise Community. Since this is a timelier and updated research study about cultural diversity on board cruises, the organizational commitment of Filipino cruise seafarers, specifically in hotel operations, and the status of their wellbeing in the context of COVID-19, this will help in honing present and future generations of Filipino cruise seafarers and have a deeper grasp of what is happening and strengthens awareness about the life of being a Filipino cruise seafarer on board.

For Educational Institutions, researchers recommend using the result of the Structural Equation Model produced in this study to include in their multicultural diversity subjects as a credible and valid illustration in discussing the relationship of factors influencing cultural diversity in workplace onboard culture to the level of commitment and wellbeing of Filipino cruise seafarers. This helps cruise line operation students to be equipped with sufficient knowledge in the field.

For Future Cruise Seafarers, researchers advise using this study as a source of information to understand different types of working environments and crew member behaviors aboard cruise ships. This includes Cruise Line Operation in Hotel Services students who will soon be employed on board to be equipped with skills needed to work in various hospitality work within the expanding cruise line industry. As a result, the model developed in this study adequately explains how to evaluate varied onboard cultures and variables influencing the level of dedication and the well-being of cruise seafarers.

For Future Researchers who will conduct the same study, researchers recommend further exploring using a qualitative approach such as documentary analysis, interview, observation, and other methods in investigating this study area. They can also use variables such as utilizing



profile, job retention and satisfaction, self-efficacy, work-life balance, and other variables relevant to diversity to find additional results or outcomes. They can strive for different methods or techniques or discover new information that can add to the body of knowledge.

## Conclusions

In presenting the lifestyle of respondents, researchers found that most cruise seafarers are adventurous, taking chances through new experiences. With physical activities, respondents mostly do aerobics to improve their movement when working on board. Regarding devices, most respondents use smartphones when communicating due to portability, fast internet connection, and multitasking functionality features.

In identifying the perspective of Filipino cruise seafarers on factors influencing cultural diversity on board, data reveals that all factors influence the work culture onboard, showing that the uncertainty avoidance index greatly influenced onboard culture. This suggests that workplace culture encourages a high uncertainty avoidance index with cruise seafarers adhering to the company's structured system since it allows them to reduce the risk of outside factors harming the organization's overall operation.

In the assessment of organizational commitment, data shows that all variables influence the level of commitment of crew members at work, emphasizing that affective commitment significantly affects cruise seafarers. This implies that crew members believe that the company's objectives align with their personal beliefs and interests, and they feel at ease within the company.

In determining the formation of the seafarer's well-being, data presents that all variables were in good appearance, pointing out that mental and physical well-being were greatly valued. This implies that working crews on board gives an advantage, especially in the present generation since cruise ships are becoming more open and modern— facilities and programs for crew members have highly improved.

In assessing significant differences, the study reveals a significant difference in cultural diversity under factors influencing cultural diversity except for gender sensitivity and time-bound. For the time-bound organizational commitment, there is a significant difference when grouped according to continuance and normative commitment, as well as avoidance



index under cultural diversity when grouped according to lifestyle. On the other hand, there is no significant difference in well-being when grouped to their psychographic profiles.

Out of all variables, researchers conclude that there is a high relationship between the level of organizational commitment and level of well-being, which means that as the level of organizational commitment increases, the level of well-being of respondents tends to increase as well and the other way around.

According to the result of this research, Structural Equation Modelling revealed that cultural diversity mediates the relationship between organizational commitment and well-being. Cultural diversity contributes to or plays a significant role as it further strengthens the level of association between organizational commitment and well-being.



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## APPENDIX A

### SURVEY QUESTIONNAIRE

#### Letter to the Respondent

Dear Respondent,

We are students of Bachelor of Science in International Hospitality Management specialized in Cruise Line Operations in Hotel Services from Lyceum of the Philippines–Laguna. We are currently conducting a study sought to assess casual factors influencing cultural diversity of Filipino cruise seafarers. As an effect of globalization, cultural diversity in the workplace is referred to as major differences in an individual's behavior displayed in a culture.

The result of this study shall identify challenges and opportunities experienced by Filipino seafarers towards their workmates with different nationalities. Within different cases of crew on-board ships, specific demands leverage barriers posed by cultural diversity. This study will benefit the totality of cruise companies to provide in-depth descriptions and results of primary concerns encountered by majority of crew on-board in terms of workforce management. This can also be their guide to craft new techniques and their own approached to strategize in the workforce.

As researchers, we believe that in order for the study to gain a good grasp on chosen variables, your participation, being a seafarer who is persistently working in the cruise line industry amidst challenges was chosen and fit to be one of the subjects of the said study. We want to augment that your participation will be voluntary and all efforts to protect your identity by keeping all the information confidential shall be taken into great consideration.

We have enclosed a consent form for your review. Please read the form and feel free to contact us if you have any questions about the study. If you choose to participate, please sign, initial, and date the consent information form and return it along with the completed questionnaire in the envelope. We look forward to learning about your experiences in working in the cruise industry. Your participation will be greatly appreciated.

Sincerely,  
**The Researchers**



## **Informed Consent**

Before agreeing to participate in this research study, it is important that you read and understand the following explanations of proposed procedures. It describes the objectives and your right to withdraw from the study at any time.

**Objective of the Study:** This study aims to assess casual factors influencing cultural diversity of Filipino cruise seafarers.

## **Confidentiality of Research Records**

- In accordance with RA 10173 or the DATA PRIVACY ACT OF 2012, all personal and/or sensitive information solicited and disclosed from this questionnaire shall be only used for the study alone. Rest assured that only the researchers have access to information and responses.
- Your name will never be asked. However, if you feel free to include at least your initials, you may do so. Your responses will be recorded on a form that contains a code number created by the researcher.
- After administering the questionnaire and you found out that you want to decline to participate, the researcher will take a black marker and cross through your name and information. At the end of the study, the contact sheet will be shredded, leaving no possible way to match code numbers/responses with you.
- Your personal/individual responses will not be given to anybody in any position.
- During the study, all data will be kept in a locked and secured filing cabinet.
- By using code numbers, in the event that results were subpoenaed, your individual responses could not be singled out.

## **Voluntariness & Withdrawal from Study**

Your participation in this study is strictly voluntary and will not affect your current legal situation or result in adverse reactions from any court. Neither nobody will know who has or has not participated in the study.

## **Voluntariness & Withdrawal from Study**

- I have read, understood, and AGREE to participate in this study
- I have read, understood, and DO NOT AGREE to participate in this study



**PART 1: Psychographic Profile.** This section contains inquiries on your psychographic profile. People have different beliefs and “self-concept” therefore, this part of the survey indicates your understanding with regard your lifestyle, physical activities, and devices used to communicate. Kindly study this list carefully and then select one best attribute that suits you. All items will be held with utmost confidentiality.

**Lifestyle**

- Hedonistic lifestyle (pleasure seeking individual & always wants to feel satisfied)
- Adventurous lifestyles (wants new experiences)
- Individualistic (independent and wants to always be alone)
- Promethean (luxurious, extravagant lifestyle, and risk taker)

**Physical Activities**

- Aerobic (housework, swimming, jump rope, running/jogging)
- Strengthening (push ups, weightlifting, wall sits)
- Flexibility (stretching, tai chi, yoga, gymnastics, dancing)

**Devices used to communicate**

- Smartphones (iOS and Android Phones)
- Tablets (iPad and Tabs)
- Computing Machine (PC and Laptops)

**PART 2: Cultural Diversity.** This section contains statements regarding different factors influencing cultural diversity wherein it assesses the level of agreement regarding the different cultural differences of employees onboard. Please answer questions carefully. This is not a test of ability. Kindly check the column that indicates your answer based on the following scale: **Strongly Agree – 5; Agree – 4; Moderately Agree – 3; Disagree – 2; Strongly Disagree – 1.**

**Power Distance Index**

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
High-ranking seafarers are open to those in lower positions when making a decision.					
High-ranking seafarers consult opinions of those in lower positions too frequently.					
High-ranking seafarers have social interaction with those in lower positions.					



<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
High-ranking seafarers trust those in lower positions when delegating important tasks.					
Low-ranking seafarers must agree with decisions of those in higher positions.					

### Interpersonal Connection

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
Individuals only pursue their goals after considering the welfare of the group.					
Group loyalty is encouraged even if individual goals suffer.					
Individuals stick with the group even through difficulties.					
Group welfare is more important than individual rewards.					
Group success is more important than individual success.					

### Gender Sensitivity

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
Problems onboard usually are solved better by men’s logical analysis than by women.					
Problems onboard usually are solved better by women’s intuition than by men.					
Meetings are usually run more effectively when they are chaired by a man seafarer.					
It is more important for men seafarers to have a professional career than it is for women seafarers.					
There are some jobs onboard that a man can always do better than a woman seafarer.					

### Uncertainty Avoidance Index

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
Rules and regulations are important as they inform seafarers what the organization expects from them.					
Instructions being spelled out in detail are important so that seafarers always know what they are expected to do.					
Managers expect seafarers to closely follow instructions and procedures.					
Standard operating procedures are helpful to seafarers on the job.					
Instructions for operations are important for seafarers on the job.					



## Time Bound

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
The company takes advantage of every opportunity at the moment (Pheko et al., 2017).					
The company thoroughly assesses and considers potential consequences of their actions (Andrijauskienė & Dumčiuvienė, 2017).					
The company maintains personal steadiness and stability.					
The company introduces long-term planning.					
Giving up today's fun for success in the future.					

## Liberty Control

<i>I can say that in our workplace...</i>	(5)	(4)	(3)	(2)	(1)
The organization has strict social norms that limit seafarers from enjoying life and having fun (Gaweesh & Al Haid, 2018).					
Seafarers' enjoyment should be unlimited (Wu, 2006)2001.					
It is important to have a job that leaves sufficient free time (Wu, 2006)2001.					
There is ease in terms of controlling work-life balance (Walga, 2018).					
The organization has limitless leisure time (Link, 2019).					

**PART 3: Organizational Commitment.** This section contains statements regarding different components of organizational commitment wherein it assesses the level of agreement regarding different onboard commitment cultures. Please answer the questions carefully. This is not a test of ability. Kindly check the column that indicates your answer based on the following scale: **Strongly Agree – 5; Agree – 4; Moderately Agree – 3; Disagree – 2; Strongly Disagree – 1**

## Affective Commitment

<i>I can say that...</i>	(5)	(4)	(3)	(2)	(1)
I would be very happy to spend the rest of my career with this organization.					
I enjoy discussing my organization with people outside it.					
I could easily become as attached to another organization as I am to this one.					
This organization has a great deal of personal meaning to me.					
I feel a strong sense of belonging with my organization.					



## Continuance Commitment

<i>I can say that...</i>	(5)	(4)	(3)	(2)	(1)
I am ready to face what might happen if I quit my job without having another one lined up.					
It would be easy for me to leave my organization right now, even if I wanted to.					
It would be inexpensive for me to leave my organization now.					
I have a lot of options to consider leaving this organization.					
I stay in this organization since other organizations may not match overall benefits I have here.					

## Normative Commitment

<i>I can say that...</i>	(5)	(4)	(3)	(2)	(1)
I believe that a person must always be loyal to his or her organization.					
I stay in this organization since loyalty is important and therefore, I feel a sense of moral obligation to stay.					
If I got another offer for a better job elsewhere, I would feel it is right to leave my organization.					
I was taught to believe in the value of remaining loyal to one organization.					
Things were better during days when people stayed with one organization for most of their careers.					

**PART 4: Wellbeing.** This section contains statements about factors that affect seafarer's wellbeing when the pandemic happened wherein it assesses the level of agreement regarding welfare of workers onboard. This is not a test of ability. Kindly check the column that indicates your answer in terms of your level of awareness based on the following scale:

**Strongly Agree – 5; Agree – 4; Moderately Agree – 3; Disagree – 2; Strongly Disagree – 1**

## Mental And Physical Wellbeing

<i>I am aware that during the pandemic...</i>	(5)	(4)	(3)	(2)	(1)
A positive mindset can help me cope with challenges onboard (FGD from participants of Sliskovic, 2020).					
I must keep my problems to myself so they will not affect my own and my colleagues' work performance (FGD from participants of Sliskovic, 2020).					
I must maintain my physical health so that I can provide good performance (FGD from participants of Sliskovic, 2020).					

<i>I am aware that during the pandemic...</i>	(5)	(4)	(3)	(2)	(1)
I also give value to my colleagues' mental and physical states (FGD from participants of Sliskovic, 2020).					
Other cultural races influenced my diet so that my physical health will maintain a healthy working life environment (FGD from participants of Sliskovic, 2020).					

### Social Well-Being

<i>I am aware that during the pandemic...</i>	(5)	(4)	(3)	(2)	(1)
I have supportive family and friends who motivate me to work in a diverse environment (FGD from participants of Sliskovic, 2020).					
I engage myself with other people in the workplace (FGD from participants of Sliskovic, 2020).					
I have a balanced social and personal time (FGD from participants of Sliskovic, 2020).					
I am able to communicate clearly when dealing with conflicts (FGD from participants of Sliskovic, 2020).					
I expose myself to new ideas, people, and beliefs that are different from my own (FGD from participants of Sliskovic, 2020).					

### Economic Well-Being

<i>I am aware that during the pandemic...</i>	(5)	(4)	(3)	(2)	(1)
My financial situation with every day coming is worth and worth (FGD from participants of Sliskovic, 2020).					
My financial status is stable and refrains me from feeling frustrated and depressed (FGD from participants of Sliskovic, 2020).					
I am sure of my job security and paying mortgage onboard (FGD from participants of Sliskovic, 2020).					
I can still have the things I want in life despite my financial situation (FGD from participants of Sliskovic, 2020).					
I am concerned that the money I have or will save will not last (FGD from participants of Sliskovic, 2020).					



# The Mediating Effect Of Restaurant Attributes On Motivation And Dining Experience In Japanese Restaurants In The Philippines

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## Abstract

This research is anticipated to contribute to the field of hotel and restaurant management, as well as Japanese restaurant operators, by providing them with information about this study on the impact of Japanese restaurants on customers' dining experience. Filipinos select Japanese Restaurants based on ambiance, value, authenticity, quality, and menu variety. A descriptive research design indicates that as the level of push and pull increases, the level of DINESERV as a factor affecting the dining experience in the Japanese restaurant would also tend to increase, and vice versa. The result revealed that Japanese restaurants describe the relationship between two or more variables, and it was used to collect and assess data drawn from 250 respondents who have dined in a Japanese restaurant in the National Capital Region. Japanese restaurant customers agree that push and pull motivations correlate with DINESERV and are very satisfied with the restaurant's attributes. The Pearson correlation revealed a high relationship between push and pull motivations and DINESERV. Lastly, the CB-SEM or the Covariance-base Structural Equation Modelling using AMOS was utilized to determine the mediating effect between push and pull motivations, DINESERV of restaurant attributes on motivation, and dining experience in Japanese restaurants.

**Keywords:** Restaurant attributes, push and pull motivators, DINESERV, Japanese Restaurants Structural Equation Modelling



## Introduction

The Philippines is a multicultural country as it combines different cuisines together, Arago et al. (2019). Thus, as a developing country, profound changes to culinary systems have resulted in impacts from diverse nations, such as Spain, Korea, Japan, America, and China, which receive more recognition for their contributions to ethnic restaurants in the Philippines. Moreover, in relation to Montefrío et al. (2020), the global food industry is changing rapidly, and it has become a motive to offer exciting culinary food.

Although international cuisine in the Philippines is growing dramatically, this paper illustrates Japanese cuisine, particularly consumers' preferences. As stated by Santos (2021), Japan has brought a wave of the Philippines' cultural influence, where it has to be given a spotlight, from the popularity of anime, food, technology, fashion, and lifestyle, effects of these products on Filipinos, their appropriation by cultural industries, and the level of influence they have in society should be investigated and analyzed. Thus, the Japanese restaurant has become more popular. It is continually developing in the Philippines, and this study is focused on the cuisine and how much it influenced the country. In contrast, this paper examined customers' behavior, motives, and dining experiences through well-known Japanese restaurants in the Philippines. Nippon News (2017) reported that around 69,300 restaurants in Asia, elevated by 53 percent, compared to data analysis from 2015 and results for roughly 60 percent of all Japanese restaurants worldwide. Known for its taste and exoticism that gives a unique dining experience, it stimulates consumers' cultural interest in ethnic cuisine.

Customers' intentions to dine at a particular establishment are influenced by positive restaurant recommendations, which increase the likelihood that customers will do so. Understanding a customer's wants, needs, and perceptions is necessary for restaurateurs who wish to attract and keep customers, Jalilvand et al. (2017). The positioning of the restaurant's brand, customer base, repeat purchases, and profitability are all affected when the restaurant's service quality attributes meet or exceed customer expectations. The customers' perception of the restaurant's brand influences their dining choices. A restaurant's ability to cultivate a strong brand image helps it to stand out from its rivals. As stated by Nguyen et al. (2018a), the

fact characteristics of restaurants, such as the taste of food, the restaurant's value, physical environment, and availability of nutrition on a diet, were all indicated in keeping the excellent work part of the figure that says customers valued these aspects and were pleased with the restaurant's overall performance.

Crompton's push and pull motivators have been used in tourism studies to show how people decide where to visit. Push motivators are psychological motivators that predispose a person to do something, like dining out or traveling. Pull motivators draw people to a specific spot. Following the study of Kim et al. (2019), push factors drive or create desire. Push and pull factors are choices made in two different timeframes despite appearing conceptually different. In other words, the decision-making process consists of two distinct but sequential stages, and the choice can be made consciously or unconsciously. As a result, an internal motivation first compels (pushes) a consumer to take action. Then, the attraction (pulls) of external resources brings the consumer to the desired location (Kim et al., 2018).

Consumers' behavioral intentions can be boosted by DINESERV factors—fast-food restaurant components Quality of food and service are important considerations, but so are setting and decor as well as overall cost, ease, and value of the meal. Following the study of Abezie (2019), although the SERVQUAL Model includes 29 questionnaires, the DINESERV Model includes five service quality dimensions and 29 questionnaires for each (tangibles, reliability, assurance, empathy, and responsiveness).

Regarding restaurant attributes, customers are happy with the Japanese restaurant's service. Restaurant atmosphere directly affects a customer's dining experience. Unrelated factors affect consumer purchases more than the product itself. Tuzunkan (2016) stated that a good-looking physical environment could attract more customers with its aesthetic design; however, to achieve this goal, owners and managers will need to invest.

In the push and pull motivators, cleanliness/hygiene of the restaurant contributed to their decision to dine in a Japanese establishment. Consequently, they are attracted by a pristine environment, which significantly influences their behavior and decision-making, which encourages them to eat and produces a favorable response to returning. Additionally, cleanliness or hygiene's significance correlates with service



quality and product safety. The study of Truong et al. (2017) linked that cleanliness could motivate, enhance positive reactions, and adjust customer behavior through aspects such as the pleasure and satisfaction of the experience, trust in the service, and attribution of prestige to the customer.

Last, for DINESERV dimensions, every restaurant offers both food and service. When customers dine in a restaurant, they experience food and service interactions. Every server should be able to provide prompt service, mainly when serving a customer's needs, so that their perceptions of service quality are enhanced. In addition, Neupane and Devkota (2017) say responsiveness, which refers to employees' willingness and eagerness to serve and promptness of services, is another critical aspect of service that helps exceed customers' expectations.

In contrast, Liu and Felicen (2021) concluded that it creates a close connection between customers and the ethnic dining restaurant of their choice. Hence, a traditional Japanese restaurant has become an essential attraction for Filipino consumers. Its uniqueness and variation are often signified as authenticity. This feature enormously influences consumers' behavior, which is a significant facet of ethnic cuisine and distinguishes them from local foods (Gupta et al., 2021)

Therefore, to expound between consumers and the Japanese food industry, it is imperative to be conscious of local customers to understand the authenticity of Japanese cuisine, prominent factors of purchase decisions that are perceived in consumers' behavior, and determine their satisfaction level on a unique dining experience. According to Park et al. (2021), when a customer wants to purchase something, their primary determination to respond is the tangible product or service rendered by the business. This mentality of modern business helps marketing become aware of consumers, where their broadening aspect does not concern the price and the product intrinsically but with the capacity of the restaurant industry to deliver an enjoyable and exhilarating customer ambiance. This trend is conspicuous in the food service industry. Karamustafa and Blker (2020) stated that consumers usually realize that service quality can be gleaned from the restaurant's physical environment and the aesthetics of the place or ambiance. Therefore, this has become one of the variables of customers' influence on motivation and their thoughts about dining experiences. Consequently, Japanese cuisine, as an ethnic restaurant, is often used to



create an authentic dining experience for customers, such as music, ethnic art, and stereotypic cues. Overall, the physical atmosphere plays a significant role in the success of providing a well-off dining experience for customers (Bichler et al., 2020)

Moreover, as research shows by Chua et al. (2020), preferences change depending on a consumer—with who they are, how much income they have, and how much time they have. Also, in the study by Parsa et al. (2017), some customers tend to choose the elevated ambiance and service establishments offer even if they perceive them to be at extortionate rates. Therefore, to provide a better understanding, this paper seeks a practical management approach to the progress of a Japanese restaurant.

Limited research has explored restaurant attributes affecting customer satisfaction and dining experience in Japanese restaurants in the Philippines, which are of central interest to Japanese operators. Internationally, there have been only a small number of studies focusing on restaurant attributes in Japanese restaurants that influence customer perception, satisfaction, and behavioral intentions (Lee, 2015; Lim, 2010; Thanavisarnkajon & Jankaew, 2020; Fanelli & Nocera, 2018; Sung-Min, 2016). An additional research gap is a sample of the population. In Japanese restaurants' context, COVID-19 has restricted the food and service industry. The government issued social distancing in reacting to reduced restaurant demand drivers. Moreover, the economic slowdown in supply chain interruption has also affected dining circumstances, whereas COVID-19 has significantly affected the restaurant industry. This correlates with products offered in a Japanese restaurant's menu, which would also tend to increase its price. In addition, consumers staying at home because of safety protocols and restrictions against the pandemic relates to lower disposable incomes. The problem is that customers may affect their perceived quality and intention to dine in a restaurant. A massive uncertainty towards a restaurant may differ from the context of what it used to be in a normal situation. Therefore, the case during the midst of the pandemic may alter their motivations and behavior intentions, from how consumers order restaurant food to their perceptions of dining out during this unprecedented time. Finally, external factors that may impact customer perceptions make it impossible to reach a conclusive verdict.



The Japanese restaurant in Manila offers a variety of dishes, including many types, textures, and flavors, and this restaurant has become popular in Metro Manila due to its authentic Japanese cuisine. Moreover, as Lai et al. (2020) stated, each local cuisine embodies a city's intangible heritage. Tourists can better comprehend a destination's culture by sampling the local cuisine. Every regional cuisine represents an area's intangible cultural heritage; thus, sampling the local fare is a good way for visitors to learn about the local way of life. Aside from the fact that more people are looking for healthier foods, many people want to dine in Japanese restaurants since the traditional foods they serve are high in vegetables and low in sugar.

The purpose of this study is to propose a strategy for Japanese restaurant operators to use when discovering the wants and needs of their customers, whereby the researchers would also find the explanation as to why Filipinos constantly desire to try different cuisines. It is helpful for other studies to serve as background or information about the impact of Japanese restaurants in the Philippines and factors influencing customers' dining decisions. It likewise determined whether push and pull motivators have a relationship with DINESERV factors when it comes to customers' dining experiences.

This research is expected to contribute, and it is anticipated that the study's findings will benefit students, consumers, future researchers, the field of hotel and restaurant management, and Japanese restaurant operators. It assesses their understanding by providing information from the study on the effect of the Japanese restaurant on customers' dining experience. Therefore, this study could provide a springboard for future research on this topic or ethnic restaurants. It assists them in better understanding the customer's experience when dining in an ethnic restaurant. Moreover, this research helps enhance their prospects, especially when tackling Japanese restaurants. They can benefit from this because it is set as proof and evidence for future studies and as a reference for their papers. Therefore, if one's topic is related to the study of every customer's insights on restaurants in the Philippines, this research may help them with their studies and learn more about the influence of Japanese restaurants in the Philippines. This endeavor also shows Japanese restaurants in the Philippines ways to develop marketing and operational effectiveness, thereby improving lucrativeness.

## Literature Review

### *Food and beverage service industry*

Food and beverage services can be considered the whole process of creating, presenting, and serving food and drinks to customers. This, however, is one of many factors to satisfy the customer. In line with Nam et al. (2018), customer loyalty depends on effective management. More precisely, assessing the customer experience and its associated touchpoints is critical to provide adequate services from the customer's perspective. Moreover, based on the study of Velazquez et al. (2017), the type, quantity, and quality of food and beverages consumed can be affected by individual perceptions of the food environment and its physical features, which can affect dietary quality and health outcomes overall. Davis et al. (2018) stated that food and beverage service is only one aspect of the more significant hospitality industry.

Ragimun and Widodo (2019) expressed that most of the food and beverage industry's development is crucial for the community since it helps meet the country's demand for processed foods and beverages and contributes significantly to the added value of primary agricultural products. Since COVID-19 affects business, however, experts predict that the pandemic will have a profound and long-running economic, political, social, and cultural impact on the world Al-Marzouqi and ben Yahia (2021). Additionally, they concluded that adapting to the new normal has become critical because the COVID-19 crisis has lasted so long.

Therefore, it correlates with the industry, which is the process of producing goods and services. It is also the bearer of production and the organized activity of making goods and services. Thence, as stated by Donthu and Gustafsson (2020), numerous businesses have been forced to close due to the COVID-19 pandemic, resulting in unheard-of disruptions across almost all industry sectors. Moreover, the study additionally says that consumers developed an ability to adapt quickly and improvise to circumvent government-imposed constraints. These industries had to adjust to new social norms capacity standards, and control time limits (Ntounis et al., 2021).

Numerous guidance documents and assets have been established at the local, national, and global levels, both in the private and public sectors,



to assist the food industry during this unexpected period. They are constantly updated in light of new knowledge Nakat and Bou-Mitri (2021) Additionally, shifts in consumer acceptance of relatively new preparations are likely to spur the creation of new products (Santeramo et al., 2018). In the medium and long term, the industry will have to deal with the nearly complete integration of customers into their processes (Bartodziej, 2017)

### *Foodservice industry in the Philippines*

The food service industry market in the Philippines is primarily driven by an increase in price-conscious customers willing to try new restaurants with a diversified menu trying to offer interesting cuisines from around the world and those accommodating progressively busy lifestyles. Following Baluyot and Pampolina (2021), customer satisfaction is one of the most pressing issues in today's foodservice industry. In this pandemic, customer satisfaction and service quality are becoming increasingly crucial in supporting an industry's economic position. This is not limited to customer satisfaction. Kim and Qu (2020) stated that successful businesses in the service sector have been predicted to depend significantly on the intangible nature of provided services and the customer-focused nature of the workforce.

COVID-19 has suffocated many restaurants, causing income and job losses, while others rely on government assistance Juan et al. (2021). Considering that the COVID-19 pandemic shocked the whole world, it also caused job loss for many workers. The pandemic's impact on the hospitality industry includes job loss, revenue loss, loan availability, emerging new markets, market demand, hostile behavior toward foreigners, and issues affecting hospitality workers and hotel cleaners Davahli et al. (2020). After several months, the food industry has begun to function. Requiring these food handlers to obtain sanitary, business, and operating permits is critical to ensuring the safety of consumers purchasing their products via online platforms (Limon, 2021).

### **Cuisines**

Lai et al. (2020) state that each local cuisine embraces a city's intangible heritage. Experiencing local cuisine enables tourists to understand a destination's culture better. Every local cuisine represents a destination's intangible heritage, so trying the local cuisine is a good way for tourists to

comprehend the culture of a destination. Additionally, customers can obtain authentic cultural experiences through ethnic cuisine. Some people make efforts to travel and seek food that they desire. In contrast to food neophobia, Akyuz (2019) says involvement in food has been shown to enhance a person's motivation to try domestic foods and travel in search of novel food experiences.

The majority of people try different cuisines due to the shows they watch. In line with Basaran and Sunnetcioglu (2021), participants stated that the animes they watched reflected various aspects of Japanese culture. Elements of popular culture are incorporated into animes to preserve a general cuisine, culture, values, norms, and knowledge of Japanese culture. Such rice is a primary food in Japanese cuisine that accounts for a sizable portion of the diet. Japanese restaurants typically serve cooked rice baked rice, make sushi, fry fish fillets, and boil and fry their food's ingredients (Jeong & Shin, 2016; Koga et al., 2017).

## Restaurant attributes

Positive recommendations are made in the restaurant industry, and customers' intention to dine at particular establishments rises, influencing referent beliefs. Additionally, restaurant owners must thoroughly understand their customers' needs, wants, and perceptions to attract and keep customers in this fiercely competitive industry (Jalilvand et al. (2017). Wu et al. (2020) state that a restaurant's service quality attributes impact customer satisfaction, loyalty, brand positioning, and profitability if they meet customer expectations. The critical part of brand image is due to its influence on customers' future dining decisions. As a result, a strong brand image helps differentiate a restaurant from its competitors (Erkmen & Hancer, 2019).

## *Push and pull motivators*

Crompton's push and pull motivators have been utilized in various tourism studies to demonstrate processes that lead to an individual's personal decision to visit a particular location. A push motivator is a psychological motivator in which a person is predisposed to do something, such as dining out or traveling. In contrast, a pull motivator attracts people's attention to a specific spot Lin et al. (2021). As stated by Kim et al. (2019), push factors are regarded as influences that drive or produce a desire. Therefore, it is imperative to remember that push and pull factors are two choices made in two disparate timeframes, even though they appear to be conceptually



distinct from each other Valls et al. (2018). In other words, the choice is formed in two different but sequential stages and can be made either consciously or unconsciously.

## DINESERV

DINESERV is an adapted model to understand consumers' behavioral intentions in food service industries Akpan and Aderele (2020). These are factors to be considered affecting customers' dining experience, specifically in Japanese restaurants. In light of Abezie (2019), DINESERV is reliable for assessing customer perceptions of service quality. Unlike the SERVQUAL Model, DINESERV includes 29 questionnaires conducted into five service quality dimensions (reliability, assurance, tangibles empathy, and responsiveness). Candido et al. (2020) agreed that service quality is the distinction between customers' expectations of the service and their perspectives of actual service performance throughout five quality dimensions (tangibles, reliability, assurance, empathy, and responsiveness).

### Theoretical Framework

The researchers used DINESERV, which regards the theoretical concept of the study. Hence, a DINESERV theory is based on the restaurant industry adaptation of the SERVQUAL scale that uses the knowledge gained during the development and refinement process of the restaurant Candido et al. (2020). Moreover, Stevens et al. (1995) were researchers who originally drafted DINESERV. DINESERV factors are reliability assurance, empathy, tangibles, and responsiveness, which are integrated with service quality standards. Therefore, DINESERV is pertinent in the restaurant industry that influences customer satisfaction. Therefore, DINESERV aims to gather data and distribute it to restaurant operators and owners so that they can measure and evaluate, as well as take action to close the gap and adjust to the needs and demands of consumers.

Moreover, this DINESERV factor is reliable and is used as a simple tool for determining how consumers perceive the quality of a restaurant. Per Abezie (2019b), the five DINESERV methods are reliable for assessing customer perceptions of service quality. On top of theoretical findings, DINESERV is the appropriate instrument for measuring the mediating effect of restaurant attributes on motivation and dining experience in Japanese restaurants.



## Method

This study intends to be quantitative research to understand factors influencing customers' dining experiences in Japanese restaurants. The descriptive research design was used in the paper to analyze the research data. The researchers conducted a predictive causal method study to carry out the study's purpose. Moreover, a predictive causal method study aims to describe the relationship between two or more variables, and it was used to collect and assess data.

The study was conducted in NCR, Metro Manila. This locale was selected using Tatler Asia and TripAdvisor's dining or travel guide (2022); all top and best Japanese restaurants are in this region. Both media companies are identical in form. They share a similarity in construing the best Japanese restaurants. Researchers did not divulge the name of the Japanese restaurant due to data privacy. McNamara (2018) found that Asia Tatler Group is the region's leading luxury media company. Filieri et al. (2015) discovered that TripAdvisor influences customers due to other users' advice fostered through positive word-of-mouth. It is concluded from their studies that these travel or dining guide websites are known as the most trusted brands to connect with influential customers across the region. Thus, these helped researchers gather numbers of Japanese restaurants and determine if they were appropriate to understand customers' efficiency in conducting the study. This location was ideal for the researchers to survey and to gather information about customers' authentic dining experiences.

Furthermore, the researchers used G\* Power, a statistical software, to determine the sample size of the given population. Based on the G\* Power, the respondent's target sample size is 111, with an effect size of 0.30, the margin of error is 0.05, and the actual power is 0.95. However, 250 responses were utilized to fit and be accepted in the modeling technique. The researchers used the questionnaire as a data-gathering tool. A combination of researcher-made and adapted survey questionnaire was used for this study to exploit the mediating effect of restaurant attributes on motivation and dining experience in Japanese Restaurants in the Philippines. The survey questionnaire for restaurant attributes was adapted from Liu & Tse (2018). Following this, the researchers also adapted the instrument from the study from Josiam et al. (2015) to assess the 'push and pull motivation'. Lastly, a DINESERV model by Hassan (2021) was adapted to determine its



dimensions. The researcher-made survey questionnaire, which was from the related works of literature, is used to collect data about the behavioral intentions and motivation of the customers towards Japanese Restaurants in the Philippines. The three industry experts validated and ran the instrument in pilot testing. Below is the result of the Cronbach alpha:

**Table A. Result of Reliability Analysis**

<b>Major Variables</b>	<b>Cronbach Alpha</b>	<b>Interpretation</b>
Restaurant Attributes	0.946	Excellent
Push and Pull Motivators	0.814	Good
DINESERVE	0.955	Excellent

**Legend:**  $\alpha \geq 0.9$  excellent;  $0.9 > \alpha \geq 0.8$  good;  $0.8 > \alpha \geq 0.7$  acceptable;  $0.7 > \alpha \geq 0.6$  questionable;  $0.6 > \alpha \geq 0.5$  poor;  $0.5 > \alpha$  unacceptable

Researchers asked for respondents' consent before they were asked to proceed in answering questionnaires, which was indicated in the caption. Respondents were encouraged to respond freely because researchers explained the purpose of the study to assure them that their responses and expressed opinions remain confidential and that their private information is protected. Researchers also complied with the requirement of R.A. No. 10172 or the Data Privacy Act 2012, stating that all shared information gathered from respondents was treated with strict confidentiality and only used for research purposes.

Weighted mean was used to determine restaurant attributes, assess push and pull motivations, and determine DINESERV dimensions of Japanese restaurants. Pearson correlation was used to determine the significant relationship between push and pull motivations and DINESERV. The CB-SEM through AMOS was used to confirm whether restaurant attributes mediate the relationship between push and pull and DINESERV as factors that affect the dining experience in Japanese restaurants.

## RESULTS AND DISCUSSION

**Table 1. Summary Of Attributes Of Japanese Restaurants Attributes**

<b>Statement</b>	<b>Weighted Mean</b>	<b>Interpretation</b>
Food quality	4.41	Very satisfied
Satisfaction	4.24	Very satisfied
Physical environment	4.30	Very satisfied



<i>Statement</i>	<i>Weighted Mean</i>	<i>Interpretation</i>
Return patronage intentions	4.27	Very satisfied
<b>Composite Mean</b>	<b>4.34</b>	<b>Very satisfied</b>

*Legend: 1.00 – 1.49 Strongly Disagree; 1.50 – 2.49 Disagree; 2.50 – 3.49 Moderately Agree; 3.50 – 4.49 Agree; 4.50 – 5.00 Strongly Agree*

It can be cleaned from Table 1 that Japanese restaurants are excellent in providing the needs and wants of customers in terms of restaurant attributes (4.34). This indicates that customers appreciate their dining experiences. Japanese restaurants prepare appetizing foods with pleasant flavor and scent and serve guests at the correct temperature (4.41), ranked first among indicators. This means that the staff of Japanese restaurants are well-trained and knowledgeable about their work and Japanese culture. The Japanese restaurant has also effectively satisfied its patrons (4.40), second among factors. This suggests that chefs and the entire staff of Japanese restaurants are well-trained in serving high-quality food. In addition, the physical setting of the Japanese restaurant contributed significantly to client happiness (4.30). This indicates that Japanese restaurants satisfy consumers' expectations of what they will see, feel, and experience in Japanese culture. Last, despite being the least significant among indicators, return patronage intentions also had a positive outcome (4.27). This indicates that customers are very satisfied with the service in Japanese restaurants regarding restaurant quality.

**Table 2. Summary Of Push And Pull Motivations Of Japanese Restaurants' Customers**

<i>Motivations</i>	<i>Weighted Mean</i>	<i>Interpretation</i>
Cleanliness Hygiene	Weighted Mean	Interpretation
Practicality of restaurant	4.21	Agree
Value	4.20	Agree
Social supper	4.13	Agree
Social aspect	4.02	Agree
Kitchen challenge	2.89	Moderately agree
<b>Composite Mean</b>	<b>Composite Mean</b>	<b>Agree</b>

*Legend: 1.00 – 1.49 Strongly Disagree; 1.50 – 2.49 Disagree; 2.50 – 3.49 Moderately Agree; 3.50 – 4.49 Agree; 4.50 – 5.00 Strongly Agree*

As shown in the summary in Table 2, respondents strongly agree that cleanliness/hygiene is the most significant motivator, which is ranked highest (4.66), followed by practicality of restaurant with a verbal interpretation of agree (4.21), whereas this was essential to their decision-making as it



increased their desire to participate or dine. Moreover, respondents also agree that value (4.20) is crucial because they consider price or portioning as both factors that affect purchasing motives. In addition, it is noteworthy to mention that social supper is also imperative. In contrast, respondents agree (4.13) that this indicator is a social motivation with an interest to socialize, enjoy, and create a bonding experience altogether. On top of that, respondents also agree with the social aspect (4.02) because when they hear people talk about the restaurant, it also catches their attention to dine. Last, regarding the kitchen challenge, respondents moderately agree (2.89) that they are motivated to dine. Overall, the composite mean of the assessment of push and pull motivations of Japanese restaurant were verbally interpreted as agree (4.01).

**Table 3. Summary Of Dineserv Dimensions Of Japanese Restaurants**

<i>Statement</i>	<i>Weighted Mean</i>	<i>Interpretation</i>
Empathy	4.49	Very satisfied
Responsiveness	4.39	Very satisfied
Assurance	4.36	Very satisfied
Reliability	4.35	Very satisfied
Tangibles	4.14	Very satisfied
<b>Composite Mean</b>	<b>4.35</b>	<b>Very satisfied</b>

*Legend: 1.00 – 1.49 Strongly Disagree; 1.50 – 2.49 Disagree; 2.50 – 3.49 Moderately Agree; 3.50 – 4.49 Agree; 4.50 – 5.00 Strongly Agree*

In summary, among DINESERV dimensions, customers are very satisfied with empathy (4.49), and it is ranked first. It is a good thing since not all restaurants can provide this service. Implementing a health protocol when dining in and ensuring food safety for customers makes them safe. It, however, showed that overall, customers are very satisfied with responsiveness (4.39). It was also determined that respondents are very satisfied regarding assurance (4.36). Respondents are likewise very satisfied (4.35) in terms of reliability. Data shows that in terms of tangibles, respondents are also very satisfied (4.14), although it got the lowest rank among given indicators. Every Japanese restaurant provides comfortable seats to enhance dining experiences and satisfy a customer's needs, making customers more relaxed while dining in. The overall composite means shows customers are very satisfied (4.35).

**Table 4. Relationship Between Push And Pull And Dineserv As Factors That Affect The Dining Experience In Japanese Restaurants**

		<i>Push and pull</i>	<i>DINESERV</i>
Push and pull	Pearson correlation		0.491** (High relationship)
	Sig. (2-tailed)		0.000
	N	200	200
DINESERV	Pearson correlation	0.491** (High relationship)	
	Sig. (2-tailed)	0.000	
	N	200	200

\*\*\*. Correlation is significant at the 0.01 level (2-tailed).

1 – perfect relationship; 0.80 to 0.99 very high relationship; 0.60 to 0.79 moderately high relationship; 0.40 to 0.59 high relationship; 0.20 to 0.39 moderately low relationship; 0.01 to 0.19 very low relationship; 0 – no relationship

Based on Table 4, there is a high relationship between the level of push and pull and the level of DINESERV. This means that as the level of push and pull increases, the level of DINESERV as a factor that affects the dining experience in Japanese restaurants would also tend to increase or vice versa. This can be supported by the study of Lin et al. (2021) on customer behavior, where motivation is a factor that influences a customer to do a specific activity, such as relying on hospitality services, where customer motivation benefits hospitality businesses. According to research, several motivation theories explain why a customer interacts in a particular behavior, so factors of the push and pull framework affect them, and this helps businesses understand their competitive analysis based on consumer preferences. In this study, push factors are internal drives that encourage customers to interact in a specific behavior. While pull factors, on the other hand, are external factors that influence the value of consumer behavior. Likewise, push and pull motivation originated from a study of motivation in which these pull factors are used in consumer restaurant selection. Many restaurants use this push-and-pull motivation to see if it affects customer selection when they visit a restaurant. Some researchers conducted studies and discovered that attributes are also factors that influence a consumer's restaurant selection, which, in theory, are related to pull factors. Kivela et al. (1999) state that this attribute is a new tool for analyzing a restaurant's dining services. It demonstrates that these restaurant attributes are essential in different restaurants that affect diner selection. Whereas DINESERV is

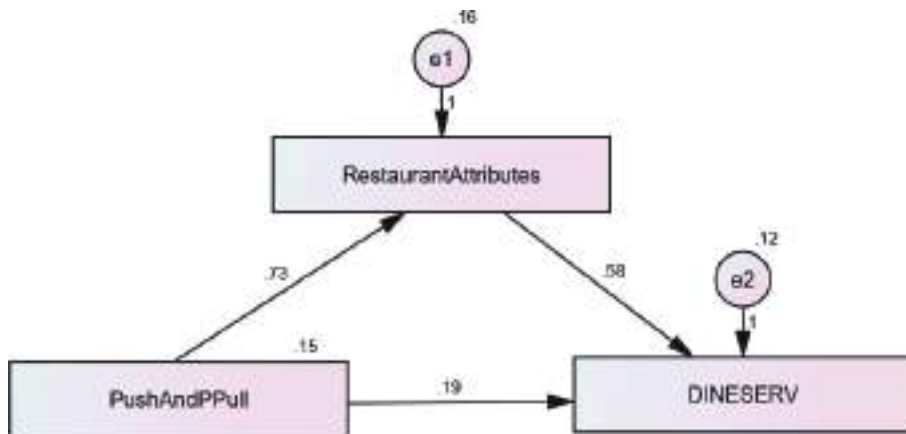


relevant to other businesses, it will also assist other restaurants in identifying their competitive advantages over competitors.

**Table 5. Summary Of Model Fit Indices**

<i>Model Indices</i>	<i>Values</i>	<i>Standard Values</i>	<i>Interpretation</i>
Chi-square/degrees of freedom	0.000	< 5	Good fit
Goodness of fit index (GFI)	1.000	> 0.80	Good fit
Normal fit index (NFI)	1.000	> 0.90	Good fit
Comparative fit index (CFI)	1.000	> 0.90	Good fit
RMSEA	0.641	< 0.05	Poor Fit

The researcher evaluated the model based on multiple indices. These are chi-square, chi-square/df, Goodness of Fit Index (GFI), Normal Fit Index (NFI), and Comparative Fit Index (CFI); the result of the model fit is shown in the table below.



**Figure 1. SEM model**

Researchers evaluated the model based on multiple indices. These are chi-square, chi-square/df, the goodness of fit index (GFI), normal fit index (NFI), and comparative fit index (CFI). The result of the model fit is shown in Table.

Researchers hypothesized that restaurant attributes mediate the relationship between push and pull motivators and DINESERV. Therefore, this model answers the objective to confirm whether restaurant attributes mediate the relationship between push and pull and DINESERV as factors

that affect the dining experience in Japanese restaurants. The model shows that there is a relationship between push and pull and restaurant attributes (0.73). Prior studies indicate consumption motives and suggest that their choice depends on the goal (Brendl et al., 2003; Van Osselaer et al., 2005). Correspondingly, attributes are more important for specific motives, whereas customer attributes are more likely to be pondered pertinent to the service and product. Chernev (2004) indicates that customers are more prone to focus on attributes that match their goal-oriented nature or motives.

On the other hand, there is a weak relationship between push and pull and DINESERV (0.19). Table 5 shows a high relationship between push and pull and DINESERV because restaurant attributes are not presented and are only termed as generic for Japanese restaurants without their attributes. It means that restaurant attributes are more likely associated with five dimensions of DINSERV, which must be relevant to service quality. Meanwhile, this model shows that there is a strong direct relationship from restaurant attributes going to DINESERV.

Restaurant attributes affect the service quality of the customer's dining experience. Thus, according to Kim et al. (2009), service quality was one of the most critical elements affecting customer satisfaction and revisit intention. Also, it determines the value proposition and provides appropriate serving size from its food quality attributes, which leads to customer satisfaction with the overall value of their dining experience in Japanese restaurants. This is in line with push and pull motivators. Therefore, it is concluded that restaurant attributes mediate, which heightens to provide a more excellent dining experience between push and pull and DINESERV of Japanese restaurant customers.

Restaurant attributes are the most vital factors in the dining experience of Japanese restaurants. Therefore, when it comes to service quality from DINESERV dimensions, considering restaurant attributes helps intensify customers' dining experience. It is hypothesized that these attributes enhance customers' dining experience between food quality, physical environment, and service quality. This is consistent with the findings of Ponnampalani and Balaji (2014), where food-related attributes and restaurant atmosphere are relevant attributes of service quality that significantly affect the customer experience in dining restaurants. Thus, the model confirmed a mediating effect on restaurant attributes.



The model is well-made, as all standard values are interpreted as a good fit. This means data are consistent that the model behavior is reasonable on value where the model predicts responses accurately. RMSEA is 0.587, which indicates an act of poor model fit. It helps in measuring the goodness of model fit, and it is essential to determine whether models with minimal degrees of freedom are effective at obtaining the value of an indicator. It suggests that it frequently mistakenly indicates a poorly fitting model when getting the RMSEA with a small number of degrees of freedom (df) or a small sample size. Kenney states that RMSEA values of 0.05 or less indicate a close model fit, whereas values of 0.08 or less indicate a fair approximation error. However, RMSEA with 0.01, 0.05, and 0.08 are shown as excellent and good. These criteria were not intended to distinguish between models that fit well and those that do not, but rather to evaluate model fit and determine the SEM's test of precise fit. It measures the goodness of model fit, and it is essential to determine whether models with minimal degrees of freedom are effective at obtaining the value of an indicator. Based on the indices used in the model, restaurant attributes mediate the relationship between push and pull and DINESERV as factors that affect the dining experience in Japanese restaurants. It further implies that even though there is a strong relationship between push and pull variables and DINESERV indicated on the model, Table 20 shows an indirect relationship between restaurant attributes and other variables. Even though push and pull motivators to restaurant attributes had highly significant roles with DINESERV. For push and pull to DINESERV, however, there is a low-lying relationship indirect correlation between these two variables. The mediator, however, is vital to correspond with push and pull motivators and DINESERV dimensions.

**Table 6. Hypothesis Test Results**

<i>Hypothesis</i>	<i>Relationship</i>	<i>Estimate</i>	<i>S.E.</i>	<i>C.R.</i>	<i>P</i>	<i>Result</i>
H1	R.A <---P&P	.726	.074	9.791	***	Accepted
H2	D <---P&P	.187	.077	2.431	.015	Not accepted
H3	D <---P&P	.578	.060	9.582	***	Accepted

*Legend: R.A- Restaurants Attributes, P&P-Push and Pull, and D-DINESERV*

From a research model in Figure 1 and the hypothesis results in Table 6, it is observed that restaurant attributes of Japanese restaurants are perceived by customers, which has a significant correlation effect on push



and pull and DINESERV. According to the data, regression weights of hypothesis 1 on push and pull to restaurant attributes are equal to 0.726, indicating a positive and significant impact on customer motives and dining experience in Japanese restaurants. The higher the quality of Japanese restaurants, the more significant, in turn, leads to customer satisfaction and loyalty. On the contrary, the poorer the quality of delivered service in Japanese restaurants, the higher the perceived risk of trust and brand it becomes, and vice versa.

On the other hand, regression weights of hypothesis 2 pertaining to push and pull and DINESERV were not accepted to have a positive and significant effect on each other, with a weight of 0.187. This indicates that push and pull as motivation does not affect or positively influence customer perception of Japanese restaurants. However, the regression weight of hypothesis 3 between the restaurant attributes and DINESERV is equal to 0.578. This signifies that the higher the quality of delivered service, the higher it leads to a positive motivation of behavioral intention of return, satisfaction, and dining experience, and vice versa, which was accepted.

Hence, as aforementioned, without the mediator or restaurant attributes, hypothesis 2 between push and pull and DINESERV will appear as dependent on one another. In contrast, they would have a directly significant relationship with each other. Therefore, the study's results indicated that each relevant restaurant quality attribute has a positive influence and significant effect on customer behavior intentions ( $H1=0.726$ ;  $H3=0.578$ ). Moreover, important attributes in common positively influence customer expectation and perception of delivered service.

Future researchers in the same field on this study can further continue to expand more factors that are possible to be mediated. It is to discover, to a greater extent, to create a more profound and more comprehensive view of customer motives, satisfaction, and dining experience in restaurants. Authors hope new studies will lead to innovative discoveries in this area.

## **RECOMMENDATION**

For Japanese restaurant operators, results implied that restaurant attributes and DINESERV dimensions had not obtained the total ability because customers are not extremely satisfied. On the other hand, for push



and pull motivators, this study found that customers generally agreed that there is also room for improvement to increase their motivation to dine in. Therefore, Japanese restaurants should consider the following to improve and increase customers' dining experience and motivation towards Japanese restaurants.

Japanese restaurants have to examine parking areas and building exteriors. Therefore, the owner of a Japanese restaurant may suggest that an underground parking area be constructed for the convenience of diners. Considering that some Japanese restaurants have limited parking, they should improve the given space for their customers to park; they may also provide a parking location nearby or other parking areas for the restaurant's customers only. It should be provided by the restaurant, given that Japanese restaurants are located in the city of Manila, which is one of the most important factors to have to visually attract more customers by providing a place to park their cars, where it will affect customer's restaurant dining experiences if they should have made this improvement for the benefit of their restaurant. They should consider giving customers anticipation to achieve a more authentic dining experience. In contrast, the physical environment of Japanese restaurants should feature a more traditional feel like Japan, with a low table set on tatami flooring and more decoration of unique Japanese flowers, artwork, scrolls, and traditional music.

To increase dining preference with a group of companions, Japanese restaurants should consider offering discounts or providing sets of bundles by offering two or more individual menu items as a package deal with a slight discount. This would encourage customers to dine when there is a special occasion, and customers mostly appreciate value.

Therefore, the outcome findings of this study allow them to better understand consumers' decision-making motivations and dining experiences by providing them with assessed and determined information on the effect of the Japanese restaurant on customer dining experience. In contrast, its result features data to have know-how on the course of action to comprehensively improve consumers' involvement and stimulus towards it. A specific Japanese restaurant was included in the study.

Restaurateurs, however, should consider the variables used because restaurant attributes, push and pull motivators, and DINESERV dimensions are significant elements to measure the restaurant's overall performance.



Thus, other Japanese restaurants are highly vouched to consider this study as their basis if they are confident that it is in line with its products and services or if it is authentic Japanese cuisine. Moreover, restaurateurs should track customers' motivation and dining experience by measuring the perceived quality of relevant variables.

Finally, for future researchers, this study can provide a springboard to assist them in understanding the customer's dining experience in Japanese restaurants. This study may help supplement their prospects, which they can use to set out as proof and evidence for future studies on their reference paper. Even though a great deal of findings within this study are significant, it is essential to consider the study's limitations. This study was limited to respondents being only gathered in Metro Manila because consumers may have different perceptions of purchasing power to dine in due to income in respective provinces. Thus, to increase the likelihood that results can be generalized to a larger population and to improve the confidence in findings, future researchers should aim to collect a larger random sample from various locations.

## **Conclusions**

This study demonstrated that determining restaurant attributes is vital in gaining insights into customers' needs and wants. It produced a salient aspect of the customer's decision-making process. Therefore, it can be concluded that understanding restaurant attributes allows Japanese restaurant operators to invest assertively in ways that show the outstanding aspects of these variables that influence the decision-making process. Customers place a positive sentiment on food quality, physical environment, satisfaction, and return patronage intention.

On the other hand, diner motivations were assessed in a push-and-pull framework. This study helped investigate why customers eat out and how they select restaurants by giving them a deeper understanding of the customer's perspective. This study found that customers were pushed to dine out in Japanese restaurants, where inclusively, it placed more emphasis on the social supper. In contrast, there was only a medium involvement in kitchen challenges. Meanwhile, on the pull factor, customers were pulled into Japanese restaurants, and overall, the study found that it placed a high involvement in value, social aspect, cleanliness or hygiene, and practicality of restaurant.



Moreover, this study also determined the DINESERV dimensions. The result confirmed that five DINESERV variables positively influenced customers' dining experience, given Japanese restaurant quality. Results revealed that empathy is the most vital factor influencing customers' satisfaction with Japanese restaurants' service quality among service quality factors. Thus, customers' dining experience put more value on empathy by validating their emotions and feelings, which leads to satiated customers, followed by responsiveness, assurance, and reliability. At the same time, tangibles were the least significant factor found in the study.

This study also identified the significant relationship between push and pull and DINESERV as factors affecting the Japanese restaurant dining experience. Pearson correlation clearly shows the level of customers' perception of their dining experience. The result proves that there is a high relationship between the level of push and pull and the level of DINESERV. This means that as the level of push and pull increases, the level of DINESERV as a factor affecting the dining experience in Japanese restaurants also tends to increase. It is concluded that these two variables are dependent on one another.

Finally, the study confirmed that restaurant attributes indicate a strong relationship between push and pull and DINESERV as factors that affect the dining experience in Japanese restaurants. A structural equation model (SEM) was employed. The result shows that restaurant attributes contribute a significant role between push and pull and DINESERV as factors that affect the dining experience in Japanese restaurants. It is concluded that restaurant attributes are the most critical variables. Regarding restaurant attributes correlating from its base to DINESERV, there is a relevant attribute between these significant variables. Food-relevant attributes, environment, and fulfillment are related to DINESERV dimensions, whereas they parallel one another, leading to satisfied customers and loyalty. Meanwhile, push and pull motivators are also highly associated with restaurant attributes, whereas attributes are more relevant for specific motives of customer desires. Hence, restaurant attributes influence consumers' intention to increase their intention to dine in Japanese restaurants. Overall, restaurant attributes provide a solid base between push and pull and DINESERV as factors that affect the dining experience in Japanese restaurants.

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## Appendix A: QUESTIONNAIRE

**Directions:** Please read all questions carefully. The survey has been designed to facilitate easy answering. The answer requires either a check mark (✓) or an indication of the appropriate response. All surveys are confidential. Only researchers will see and process the questionnaire.

### PART I. Restaurant Attributes

The following questions pertain to restaurant attributes. Please indicate how much you are satisfied or not satisfied with each statement. Use the scale to assess: **5 – Extremely Satisfied; 4 – Very Satisfied; 3 – Moderately Satisfied; 2 – Slightly Satisfied; 1 – Not Satisfied at all.**

<b><i>Food Quality</i></b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. Food arrived on time.					
2. The ingredients that the restaurant uses are fresh.					
3. Servings are substantial/reasonable in size.					
4. The food was excellent.					
5. Food is presentable.					
<b><i>Physical Environment</i></b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. Quality of dining equipment (cutlery served hot and sanitized).					
2. Spacing chairs & tables in the new normal followed safety protocols.					
3. The temperature of air-conditioning was pleasant.					
4. The ambiance (lighting, decoration, aroma enticing) is excellent.					
<b><i>Satisfaction</i></b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. I had a pleasant dining experience at the restaurant.					
2. I appreciated the staff's service.					
3. The overall feeling I got from the restaurant was satisfactory.					
<b><i>Return Patronage Intentions</i></b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. I intend to return to the restaurant.					
2. I recommend restaurants to family, friends, and co-workers.					
3. The staff works with urgency.					

### PART II. Push and Pull Motivations

**Direction:** Use the scale to assess push and pull motivators:

**5 – Strongly Agree; 4 – Agree; 3 – Moderately Agree; 2 – Disagree; 1 – Strongly Disagree**





<b>Push</b>					
<b>Kitchen Challenge</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. I lack knowledge of recipes, so I rather dine in.					
2. I do not know how to cook.					
3. I do not like to cook.					
4. Cooking is too much effort for me.					
5. I do not have the equipment to cook.					
<b>Social Supper</b>					
1. My friends want to go out to eat.					
2. There is a special occasion.					
<b>Pull</b>					
<b>Value</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. Portion size is noteworthy.					
2. The value I receive is practical.					
3. The price of the food is relatively good.					
4. Overall value for a dining experience is satisfactory.					
<b>Social Aspect</b>					
1. Hear people talking about it.					
<b>Cleanliness/Hygiene</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. The food is safe.					
2. The restaurant is clean.					
<b>Practicality of Restaurant</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. The location of the restaurant is accessible.					
2. The restaurant offers a variety of food types/selections.					
3. The restaurant accommodates my needs.					

**PART III. DINESERV**

**Direction:** Kindly rate the DINESEV in a Japanese Restaurant. Please use the scale to assess: **5 – Extremely Satisfied; 4 – Very Satisfied; 3 – Moderately Satisfied; 2 – Slightly Satisfied; 1 – Not Satisfied at all.**

<b>Tangibles</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1. The Japanese restaurant has a parking area, and building exteriors are visually attractive.					
2. The Japanese restaurant dining area is visually attractive.					
3. Japanese restaurant seats in the dining room are comfortable.					



<b><i>Reliability</i></b>	<b><i>5</i></b>	<b><i>4</i></b>	<b><i>3</i></b>	<b><i>2</i></b>	<b><i>1</i></b>
1. Japanese restaurant food was served at the time promised					
2. The Japanese restaurant bill provided to me was accurate					
3. A Japanese restaurant quickly corrects anything wrong.					
<b><i>Responsiveness</i></b>	<b><i>5</i></b>	<b><i>4</i></b>	<b><i>3</i></b>	<b><i>2</i></b>	<b><i>1</i></b>
1. Japanese restaurant maintains their speed quality during busy times.					
2. Japanese restaurant provides prompt and quick service.					
<b><i>Empathy</i></b>	<b><i>5</i></b>	<b><i>4</i></b>	<b><i>3</i></b>	<b><i>2</i></b>	<b><i>1</i></b>
1. A Japanese restaurant makes you feel special.					
2. Japanese restaurant anticipates your individual needs wants during COVID-19.					
3. Japanese restaurant has employees who are sympathetic and reassuring if something is wrong.					
<b><i>Assurance</i></b>	<b><i>5</i></b>	<b><i>4</i></b>	<b><i>3</i></b>	<b><i>2</i></b>	<b><i>1</i></b>
1. A Japanese restaurant makes you feel personally safe, especially against the health protocols of COVID-19.					
2. Japanese restaurant has employees who can answer questions thoroughly.					
3. Japanese restaurant has staff who seem well-trained, competent, experienced.					



## Tourism Carrying Capacity of Community Based Ecotourism: Case Study of Olo-Olo Mangrove Forest, and Eco-Park in Lobo, Batangas, Philippines

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### ABSTRACT

The purpose of this research is to analyze the Tourism Carrying Capacity of recreational activities in a community-based tourism destination and determine the sustainability of the ecotourism management in Olo-Olo Mangrove Forest and Eco Park in Lobo, Batangas, Philippines, by calculating the physical ecological and social carrying capacity of the recreational activities of the community-based ecotourism site. The method utilized in this research is mixed, measuring quantitative analysis of Carrying capacities using Boullon's Model applied with the Limits of Acceptable Change (LAC) framework. A qualitative approach was used in determining the social and ecological carrying capacity and recorded preferences of the site manager and the visitors. The study reveals that the total physical carrying capacity may range from 79 to 2488 tourists per day; ecological- solid wastes capacity of 333 tourists daily; ecological- water availability capacity of 20 tourists daily; and social carrying capacity of 900 to 1200 tourists daily. The combined tourism carrying Capacity of OMFE shows that the mangrove park can accommodate a wide range of tourists per day depending on which LAC scenario. The current tourist influx in OMFE is only 26 visitors daily on average, which is far below the computed combined carrying capacity. It is still directed towards sustainable ecotourism.

**Keywords:** Tourism Carrying Capacity, Mangrove Eco Park, combined carrying capacity, Community-Based Ecotourism



## INTRODUCTION

Ecotourism attractions continuously face overcrowding issues (Chávez et al., 2022). As these destinations become increasingly popular, there is a growing concern about the negative impacts on their natural environments and local communities. It is crucial to carefully manage and monitor these areas to ensure sustainable tourism practices are in place. This involves considering factors such as carrying capacity, visitor typology, and conservation efforts to protect the ecological integrity and the social and economic well-being of surrounding communities (Cheung & Jim, 2020; Yotsumoto et al., 2017). Considering these concerns, determining the tourism carrying capacity of ecotourism attractions has become a key component in their management. Determining the tourism carrying capacity of ecotourism attractions is vital to their management. Studies conducted in various countries, including Brazil, Zanzibar, and Vietnam, have highlighted how urban coastal mangrove forests can serve as an excellent platform for ecotourism and eco-education initiatives benefiting local communities. These initiatives have created job opportunities while promoting cultural-based tourism through activities such as traditional house preservation (Asrial et al., 2022). However, as the popularity of mangrove ecotourism continues to grow, it is crucial to assess these areas' carrying capacity to ensure visitors' sustainability and comfort. In order to effectively manage and develop mangrove ecotourism, it is necessary to determine the carrying capacity of these areas (Towoliu et al., 2020).

On the other hand, it is essential to acknowledge that population growth and crowding can positively impact ecotourism destinations. While these factors may pressure natural resources and the environment, proper planning and management strategies can mitigate any adverse effects. Sustainable practices are crucial in preserving environmentally sensitive areas, particularly within community-based tourism destinations more vulnerable to increased tourist activity potential impacts. Nature-based attractions, such as Mangrove forests, have been developed through community-based tourism. These ecosystems are often found alongside popular tourist destinations, like sandy beaches and coral reef areas. In specific locations, snorkeling expeditions allow visitors to observe the diverse array of species found in the mangrove area. Along with providing recreational services for tourists, these

forests also offer various activities and products that benefit residents and visitors alike (Askar et al., 2021).

Mangrove forests' complex ecological, physical, or socioeconomic functions make them an essential ecosystem in coastal areas (Suprakto et al., 2014). These unique attributes of the mangrove ecosystem have pushed many countries with abundant marine and coastal resources to tap into the development of a community-based ecotourism market. Tourism management in mangrove ecosystems is crucial to ensure the sustainable development and conservation of both environmental resources and the well-being of local communities (Sari et al., 2023).

Olo-Olo Mangrove Forest and Ecopark (OMFE) is a mangrove forest promoted as a community-based ecotourism site in Olo-Olo, Lobo, Batangas. This 21-hectare mangrove forest was recently developed in 2017 and intended for ecotourism activities. It is managed by the Olo-Olo Seaside Workers' Association (OSWA). Visitors can enjoy various recreational and nature-based tourism activities. As the area of a mangrove ecosystem gradually becomes famous as a new nature-based tourism destination, a sustainable management system should be comprehensively developed to effectively manage the natural resources and limit the threats of potential deterioration and exploitation. Interest in meeting tourist and economic demand directly or indirectly impacts the natural environment and local community.

Managing tourist numbers is crucial in balancing development and the environment, which is vital to achieving sustainable tourist destination management. Hence, it is necessary to determine the tourism carrying capacity of the site. However, tourism carrying capacity is more than just a notion of physical space. Tourism carrying capacity must be viewed as an interacting, dynamic concept. Furthermore, complexities and interacting dimensions of the destinations' attributes must be integrated into the system, such as the physical, ecological, economic, and social environment drawn from the tourists and local community. Such factors are also mentioned in the study (Calanog, 2015). The multidimensional and dynamic nature of carrying capacity has drawn attention in the literature, particularly on tourism, due to the complexity and varying attributes of tourism destinations in tourist-centric approaches and destination environment systems. In the study of Zelenka & Kacetl (2014), different research concludes that carrying



capacity varies in each destination. Furthermore, multiple interacting factors are considered based on the dynamic concept of the environment, social aspects, and visitor capacity.

Among these variables are dependent on converging factors that contribute not only to tourist satisfaction but more so to the synergistic interconnection of the protection of nature and landscape management, biodiversity promotion, types of tourism facilities and ways of their utilization and dimensions related to physical, ecological, socio-cultural and economic environment. Tourism activity also depends on its destination since it is dynamic regarding the space and time seasonality, area and type of activities, and non-tourism-related activities that may coincide. There is no fixed standard of measure in tourism carrying capacity due to the dynamic attributes of the environment of a specific destination (P6skov6 et al., 2021). It was recognized in the literature that the determination of tourism carrying capacity considers the physical, ecological, social, and economic aspects. Meanwhile, the Limits of Acceptable Change (LAC) considers that aside from putting a threshold on visitor number, management of an ecotourism area should be based on future conditions desired (i.e., resource, social and managerial conditions) for an area and the actions prescribed to protect or achieve those conditions, rather than on how much use such an area can tolerate.

Therefore, the present study sought to determine a community-based ecotourism destination's combined tourism carrying capacity using physical, ecological and social aspects of the carrying capacity of Olo-Olo Mangrove Forest and Eco Park in Lobo Batangas, Philippines. The study further investigated the potential use of the combined tourism carrying capacity framework in managing community-based ecotourism sites.

## **METHODOLOGY**

### **Study Design**

This research utilized a mixed-methods approach to assess the carrying capacity of the Olo-Olo Mangrove Forest and Eco Park, focusing on three vital recreational activities. By combining quantitative and qualitative data, the study aimed to provide valuable insights for sustainable management and planning of ecotourism activities in the area. The primary data collection involved several methods. Firstly, on-site observations were



conducted to identify the activities offered at the location. The study focused on three specific activities, recreational fishing, rafting, and eco-walking, which were frequently availed by visitors and assumed to be mutually exclusive regarding space utilization.

## Study Participants

A self-administered survey was conducted on participants using the convenience sampling method. Included in the study were 18 years old and above tourists visiting the ecotourism site. Additionally, interviews were conducted with two distinct groups of respondents: tourists who had visited Olo-Olo Mangrove Forest Ecopark (OMFE) and members of the local community who were also volunteers in the area. A focus group discussion consisting of seven local community members was organized to collect the responses about space preferences for each recreational activity and factors influencing satisfaction with each activity. The interviews with community members aimed to assess current livelihoods, perceptions of area crowding, and future organizational plans.

## Data Analysis

In calculating the carrying capacity, this study utilized a combination of two models: Boullon's (1985) carrying Capacity mathematical model and the Limits of Acceptable Change (LAC) model. Boullon's model evaluates carrying capacity at three levels: essential carrying capacity, potential carrying capacity, and real carrying capacity. The Basic Carrying Capacity (BCC) is computed by dividing the total area visitors use by the average or standard size/space requirement per visitor. The Potential Carrying Capacity (PCC) involves calculating the rotation coefficient (RC) for a specific tourism activity using Equation 2. The Real Carrying Capacity (RCC) represents the maximum permissible number of visitors using an area, considering the limiting factors (Lf1, Lf2,...Lfn) identified during interviews and on-site observations. The formula for the combined tourism carrying capacity is as follows:

Equation 1-3. The formula used in computing Basic Carrying Capacity (BCC), Potential Carrying Capacity (PCC), and Real Carrying Capacity (RCC) from Boullon's Carrying Capacity Mathematical Model (BCCMM)



$$\text{Basic Carrying Capacity (BCC)} = \frac{\text{Area used by visitors (m}^2\text{)}}{\text{Average area used by visitors (m}^2\text{)}}$$

$$\text{Potential Carrying Capacity (PCC)} = \text{BCC} \times \text{RC}$$

$$\text{Rotation Coefficient (RC)} = \frac{\text{Total no. of hours as the specific area is open for use}}{\text{Average no. of hours area is used by visitors.}}$$

$$\text{Real Carrying Capacity (RCC)} = \text{PCC} \times \frac{(100 - \text{Lf}_1)}{100} \times \frac{100 - \text{Lf}_2}{100} \times \frac{100 - \text{Lf}_3}{100}$$

$$\text{Limiting Factors (Lf) (Lf}_{1,2,\dots,n}\text{)} = \frac{(M_{a,b,\dots,n})}{\text{MT}} \times 100$$

Where:

$(M_{a,b,\dots,n})$  = limiting magnitude of the factor/variable, and

MT = Total magnitude of the factor/variable

## Study Area

The Olo-olo Mangrove Forest and Ecopark (OMFE) was developed in 2017 for ecotourism activities and managed by a people's organization (PO) – Olo-olo Seaside Workers Association (OSWA). Most activities are within the vicinities of *Bakawang Lalaki Point*, *Sihi Farm*, *Oyster Farm*, *Talabahan Bridge*, *Red Tilapia- Mudcrab-Milkfish Farm*, and the *Puktol Point*. *Bakawang Babae Point* is a tourist site for mangrove planting but is not yet fully accessible for tourism activities (i.e., eco-walking). OSWA is considering expanding the mangrove boardwalk up to *Bakawang Babae Point* to increase the recreational area for tourists.

At present, the 21 hectare- mangrove area caters to ecotourism activities such as recreational fishing, rafting, kayaking, stand-up paddle boarding, fish feeding, shell and crab harvesting, bird watching, mangrove planting, eco-walking and snorkeling/ SCUBA diving at seafront. For this study, only three (3) activities that are frequently availed by visitors—(1) *ecowalking*, (2) *rafting*, and (3) *recreational fishing*

were included in the computation for carrying capacity. On its current tourism operations, OMFE receives 500 visitors per week, including weekends and weekdays, during peak season and receives 20 visitors per week, usually only every weekend, during the lean season. The peak of tourism activities in OMFE is experienced for five (5) months, specifically from March to May and December to January. The remaining seven (7) months of the year are considered lean months for ecotourism activities in the area.



Figure 1. Location and landmarks/ features of the study site, Olo-olo Mangrove Forest Ecopark (OMFE) in Brgy. Olo-olo, Lobo, Batangas

## Key Indicators, Criteria, and Parameters Used in Assessing Each Carrying Capacity

### *Physical Carrying Capacity*

The physical carrying capacity of the three (3) recreational activities—eco walking, rafting, and fishing were computed separately. Tables 1, 2 and 3 present the data used in computing carrying capacity for each recreational activity. Each recreational activity's computed physical carrying capacity was summed up to have a total physical carrying capacity, which is possible since the chosen activities are mutually exclusive.



**Table 1. Parameters and data used for computing physical carrying Capacity for Eco walking.**

	<i>Parameters</i>	<i>Value</i>
Preferred distance of visitors from another group while eco-walking (m)	LAC-1 Business-as-Usual (BAU) or Practice on the site manager/OSWA	10
	LAC-2 preference of the tourist or visitor	25
	LAC-3 Computed preference/ meeting halfway the preference of the manager and the visitor	17.5
	LAC-4 Doubling preference of visitors.	50
Preferred distance/personal space of visitors belonging to the same group while eco walking (m)	LAC-1 Business-as-Usual (BAU) or Practice on the site manager/OSWA	1
	LAC-2 preference of the tourist or visitor	2
	LAC-3 Computed preference/ meeting halfway the preference of the manager and the visitor	1.5
	LAC-4 Doubling preference of visitors.	4
	Length of boardwalk used for eco walking (m)	210
	Average number of persons in a group	6
	No. of minutes eco walking is offered per day	480
	No. of minutes spent by a visitor for eco walking	60
	Rotation Coefficient	8
	No. of days OMFE is closed in a year	30
	No. of days in a year	365
	No. of persons that can be accommodated on designated holding area/ cottages for visitors	30
	No. of minutes the visitor stays on site	240

**Table 2. Parameters and data used for computing physical carrying capacity for rafting.**

	<i>Parameters</i>	<i>Value</i>
Preferred distance of rafts from one another while traversing/ moving in the river (m)	LAC-1 Business-as-Usual (BAU) or Practice on the site manager/OSWA	5
	LAC-2 preference of the tourist or visitor	15
	LAC-3 Computed preference/ meeting halfway the preference of the manager and the visitor	10
	LAC-4 Doubling preference of visitors.	30

preferred no. of passengers in a raft	LAC-1 Business-as-Usual (BAU) or Practice on the site manager/OSWA	20
	LAC-2 preference of the tourist or visitor	10
	LAC-3 Computed preference/ meeting halfway the preference of the manager and the visitor	15
	LAC-4 Doubling preference of visitors.	5
	Length of river used for rafting (m)	290
	Length of raft (m)	3
	No. of minutes rafting is offered per day	480
	No. of minutes spent by a visitor for rafting	60
	Rotation Coefficient= (No. of minutes rafting is offered per day) / (No. of minutes spent by a visitor for rafting)	8
	No. of rafts available	2
	No. of life vests available	10
	No. of available personnel/ rafting tour guides per day	10
	No. of required rafting tour guide every trip	2
	No. of ports/ boat anchorage	3
	No. of days river is closed in a year	30
	No. of days in a year	365
	No. of persons that can be accommodated on designated holding area/ cottages for visitors	30
	No. of minutes the visitor stays on site	240
	No. of minutes OMFE is open per day	480

**Table 3. Parameters and data used for computing physical carrying capacity for fishing.**

<i>Parameters</i>		<i>Value</i>
Preferred distance of a visitor from another visitor while fishing	LAC-1 Business-as-Usual (BAU) or Practice on the site manager/OSWA	2
	LAC-2 preference of the tourist or visitor	10
	LAC-3 Computed preference/ meeting halfway the preference of the manager and the visitor	6
	LAC-4 Doubling preference of visitors.	20
Area along streambanks and boardwalks that can be used for fishing (sq.m.)		290
standing area used per individual (sq.m.)		0.5



<i>Parameters</i>	<i>Value</i>
No. of minutes fishing is offered per day	480
No. of minutes spent by a visitor for fishing	60
Rotation Coefficient= (No. of minutes rafting is offered per day) ÷ (No. of minutes spent by a visitor for rafting)	8
No. of fishing rods available	10
No. of packs of bait available per day	20
Average no. of packs of bait being consumed by 1guest	2
No. of days OMFE is closed in a year	30
No. of days in a year	365
No. of tour guides that can assist for recreational fishing	5
No. of minutes the visitor stays on site	240
No. of minutes OMFE is open per day	480

### *Ecological Carrying Capacity*

Ecological status to carry out the optimum condition of the population, natural resources and environment are critical areas to address the sustainable development of a destination (Tsou et al., 2017). Two (2) main environmental problems/ issues identified were covered in this study, including (1) waste generation and management (2) water availability. In the Philippines, the estimated waste generation per person in urban areas is 0.5kg and 0.3kg daily (Castillo & Otoma, 2013), while water consumption is estimated to be an average of 300L daily (Hussein, 2018). The average monthly tourist influx was multiplied by 0.3kg of daily waste generation per individual to calculate the estimated monthly waste generated by tourists in the area. Similarly, the 300L daily water consumption will be multiplied by the number of tourists to estimate water consumption.

### *Social Carrying Capacity*

Social interaction and quality of life of tourist and host destination are critical factors considered in the social carrying capacity (Yusoh et al., 2021). Generally, the social carrying capacity of a tourist site is set as the optimum number of visitors per day to which the maximum social utility due to congestion corresponds. Two different points of view specifically define the SCC of a tourist area. From the point of view of residents, the SCC represents the social interaction between residents and visitors, and it is the maximum number of visitors (MNV) tolerated by the host population



without reducing their quality of life. This study focused on analyzing the social carrying capacity in the Eco-park based on the level of social space preference and satisfaction of the tourists and the community stakeholders.

Overall, the combined tourism carrying Capacity of the Olo-olo Mangrove Forest Ecopark was obtained through an operational research approach by relying on linear programming of the eco-parks physical, ecological and social carrying aspects.

## RESULTS AND DISCUSSION

### *Physical Carrying Capacity*

In Table 4, results showed that applying the distance of 10 m between groups of six persons with an allowable 1-meter personal space for each visitor (LAC1), the eco-walking activity could accommodate as many as 286 visitors a day. If there is a 25 m distance between groups of six persons with a 2-meter personal space for each visitor (LAC2), the number of visitors that can be accommodated is only 132 per day. At a 17.5 m distance with 1.5-meter personal space for each visitor in a group of six (LAC3), the computed carrying capacity is 176 daily visitors. For a 50 m distance between groups (LAC4) with 4-meter personal space for each individual, the allowable limit is computed at 66 visitors only per day.

Physical Carrying capacity for rafting shows that for the rafting activity, if the Business-as-Usual (BAU) practice is implemented, with a distance of 5 m between boats and a maximum of 20 passengers per raft (LAC1), 1862 visitors per day can be accommodated by rafting alone. However, if visitors prefer a 15m distance between rafts and a maximum of 10 passengers will be implemented, this means that 219 visitors a day can be accommodated by rafting activity. Meeting halfway the preferences of the site manager and the visitors, a 10 m distance and a maximum of 15 passengers (LAC3) resulted in 648 visitors a day. Moreover, we doubled visitors' preferences, with a 30 m distance requirement between boats and a maximum of 5 passengers (LAC4). In that case, OMFE can only cater to rafting up to 10 visitors per day.

It was shown that applying LAC 1 in recreational fishing in OMFE can accommodate a maximum of 340 fishing visitors. If visitors' preferences will be considered(LAC2), only 35 fishing tourists should be accommodated daily. Meanwhile, averaging the site manager and visitors' preferences





(LAC3), 89 tourists can avail of the fishing activity daily. However, if visitors' preferences are doubled, compromising the distance between fishing visitors (LAC4), the maximum number of fishing tourists that OMFE should cater to is only six per day.

**Table 4. Physical Carrying Capacity for Eco-walking in OMFE.**

<i>Level of Carrying Capacity of Eco Waking</i>	<i>LAC 1</i>	<i>LAC 2</i>	<i>LAC 3</i>	<i>LAC 4</i>
Basic Carrying Capacity	78	36	48	18
Potential Carrying Capacity	624	288	384	144
Realm Carrying Capacity	286	132	176	66
<i>Level of Carrying Capacity of Rafting</i>	<i>LAC1</i>	<i>LAC2</i>	<i>LAC3</i>	<i>LAC4</i>
Basic Carrying Capacity	720	160	330	45
Potential Carrying Capacity	5760	1280	2640	360
Real Carrying Capacity	1862	219	648	10
<i>Level of Carrying Capacity of Recreational Fishing</i>	<i>LAC 1</i>	<i>LAC 2</i>	<i>LAC 3</i>	<i>LAC 4</i>
Basic Carrying Capacity	116	28	45	14
Potential Carrying Capacity	928	224	360	112
Real Carrying Capacity	340	35	89	3

#### *Total Physical Carrying Capacity for OMFE*

Each recreational activity's computed physical carrying capacity was summed up to have a total physical carrying capacity. This was possible since the three (3) activities are mutually exclusive regarding space. Moreover, an average stay of four (4) hours was included as a limiting factor in computing the fundamental carrying capacities of eco-walking, rafting, and fishing in OMFE. The physical carrying capacity of the three (3) activities is presented in the Table below.

**Table 5. Physical Carrying Capacities of the Three (3) Activities–Ecowalking, Rafting, and Recreational Fishing offered in OMFE.**

<i>Level of Carrying Capacity</i>	<i>LAC 1</i>	<i>LAC 2</i>	<i>LAC 3</i>	<i>LAC 4</i>
Ecowalking	286	132	176	66
Rafting	1862	219	648	10
Recreational Fishing	340	35	89	3
Total Physical Carrying Capacity	2488	386	913	79

Based on computations, the total physical carrying capacity of the Olo-olo Mangrove Forest Ecopark (OMFE) ranges from 79 to 2488 tourists per day, depending on the type of management intervention, particularly on space preferences applied. Notably, the Business-as-Usual (BAU) scenario or the site managers' preferences produced the highest physical carrying capacities for all recreational activities. However, shedding importance on considering the visitors' preferences on space requirements shows a significant decline in its physical carrying capacity, from 2488 tourists per day in LAC 1 to only 386 tourists per day in LAC 2. A more drastic decline in carrying capacity is observed when visitor preference doubles, resulting in a maximum of 79 tourists daily. The LAC 3, a computed preference of the site manager and the visitors, provides a considerable physical carrying capacity of 913 tourists daily.

### *Ecological Carrying Capacity*

Ecological carrying capacities considering two (2) main environmental concerns that may affect tourism in OMFE– (1) waste generation and management (2) water availability identified were computed separately in this study. The solid waste generation of tourists was estimated based on the actual tourist influx record in the previous months of operation of OMFE (Table 9). Estimates were obtained by multiplying the number of tourists by 0.3 kg. This was a standard value for a Filipino's estimated daily waste generation, according to Otoma, S. (2013).

Based on the results, on average, tourism in OMFE generates 7.76 kg. of solid waste daily and 232.90 kg of solid waste monthly. As per the interview with the Olo-olo Seaside Workers Association (OSWA) officials and the observations on the actual site visit, the park has only two (2) sacks serving as trash bins. One (1) sack is placed near the Tourist Receiving Area before the boardwalk, while the other sack is located on the other end of the boardwalk near the resting areas/ cottages. Each sack has a storage capacity of 50 kg, which could contain seven (7) times more than the computed estimate of daily tourist waste generation in OMFE, 7.76kg/ day. Suppose the computation is based on the calculated physical carrying capacity with different Limits of Acceptable Change (LAC). In that case, the current ecological carrying capacity of the mangrove eco park is only 333 tourists daily, generating approximately 99.9 kg of waste. This is when the practice



of only two (2) sacks, with a total of 100 kg storage capacity, will remain as a means of storage and collection of solid wastes in OMFE.

**Table 6. Estimates of monthly and daily solid waste generation in Olo-olo Mangrove Forest Ecopark (OMFE) based on tourist influx from March 2019 to October 2019.**

<i>Month</i>	<i>Monthly Number Of Tourists</i>	<i>Estimated Monthly Waste Generation (Kg)</i>	<i>Estimated Daily Waste Waste Generation (Kg)</i>
March 2019	1,032	309.6	10.32
April 2019	1,488	446.4	14.88
May 2019	1,402	420.6	14.02
June 2019	495	148.5	4.95
July 2019	385	115.5	3.85
August 2019	479	143.7	4.79
September 2019	389	116.7	3.89
October 2019	540	162.0	5.4
<b>TOTAL</b>	<b>6,210</b>	<b>1,863.0</b>	<b>62.1</b>
<b>AVERAGE</b>	<b>776</b>	<b>232.9</b>	<b>7.76</b>

Based on solid waste generated, this ecological carrying capacity is below the computed physical carrying capacity of 2488 visitors daily when LAC 1, Business-as-Usual (BAU), or site managers' preference is applied on OMFE (Table 10). The 2488 visitors will incur an estimated 746.4 kg. of waste, requiring approximately 15 sacks of 50kg storage capacity placed within OMFE. A similar was observed when LAC 3, computed preference of physical carrying capacity will be applied, which is 913 tourists daily, resulting in 273.9 kg. of waste generated. This will need 5.5 sacks to be able to store the accumulated solid wastes. Meanwhile, applying LAC 2, based on visitor's preference, the 386 tourists daily, equating to 115.8 kg of waste, slightly exceeded the storage capacity of the currently placed two sacks in OMFE. Moreover, this ecological carrying capacity of 333 tourists daily is still within the recommended physical carrying capacities when LAC 4, doubled visitor preference management interventions, will be applied. With 79 tourists daily, solid waste accumulated is estimated to be only 23.7 kg daily and can fill up only 0.5 sacks of waste.

**Table 7. Potential Waste Generation of OMFE and 50-kg sacks for trash bins based on computed physical carrying capacities in OMFE**

<b>Level of Carrying Capacity</b>	<b>LAC 1</b>	<b>LAC 2</b>	<b>LAC 3</b>	<b>LAC 4</b>
Total Physical Carrying Capacity	2488	386	913	79
Estimated Solid Waste Generated Daily (kg)	746.4	115.8	273.9	23.7
No. of Sacks (50kg - capacity) Needed	14.9	2.3	5.5	0.5
No. of TC60NDS Trash Bins (28.86 kg-capacity) Needed	25.9	4.0	9.5	0.8

Meanwhile, as OMFE is a recreational site, structured trash bins can be recommended to replace sacks. Structured trash bins are more noticeable than sacks. Figure 4 is the TC60NDS trash bin, an example of a garbage bin usually seen in establishments that are also color-coded to facilitate the segregation of solid wastes. It has dimensions: width: 330 mm, length 330 mm, height 889 mm, and storage capacity of up to 60 L volumes of waste, or equivalent to 28.86 kg. of waste. Assuming an average of 7.76 kg of waste generated daily, the bin can store more than thrice the estimated daily waste generation from tourists alone. However, when applied with LAC management interventions, 25.9 trash bins for LAC 1, 4 trash bins for LAC 2, 9.5 trash bins for LAC 3, and 0.8 trash bins for LAC 4 will be needed to store the potential waste generation based on computed physical carrying capacity. This will cost the OSWA site managers a lot to provide several trash bins, and at least two (2) bins should be placed next to each other to facilitate waste segregation, at least between biodegradable and non-biodegradable wastes.

However, the problem of solid waste is not just about storing and segregating. No schedule of waste collection was noted. Based on the interview, the solid wastes, when collected, are placed in an open space in front of the residential area or one of the residential lots and are burned together with the accumulated solid wastes from the locales of the barangay. From here, the implementation of ecological solid waste management should be strengthened in the area. Barangay Olo-olo is estimated to have a population of 1,420 (Lobo et al. Office, 2016), with an estimated total solid waste generation of 426 kg monthly and 14.2 kg daily. Since there is an estimated hefty volume of waste, a waste collection schedule and active participation of tourists and locales on proper waste segregation is encouraged. It is suggested that the community must have its own Material Recovery Facility (MRF), which could serve as a temporary station where they can receive, separate, or sort



recyclable materials for marketing to end-user manufacturers to lessen residual waste collected by municipal garbage collectors.

### **Ecological Carrying Capacity for Water Availability**

Water availability is crucial for tourist satisfaction and recreational experiences at a site. To estimate the water requirement of tourists at OMFE, actual tourist influx data from previous months (Table 10) was used, assuming 300 liters as the daily water consumption per tourist, as Hussein (2018) reported. The results indicate that, on average, tourists in OMFE consume 7762.5 liters of water daily and 232875 liters monthly. OMFE has two comfort rooms, but only one can access a flowing water source from a nearby house. According to OSWA, tourists typically use about 20 gallons (75.7 liters) of water, specifically in the comfort rooms. When this is averaged for the actual tourist influx (26 tourists daily), each tourist consumes only three (3) liters of water during their visit, significantly below the projected daily water consumption of 7762.5 liters for OMFE.

The observed low demand for water at OMFE is due to several factors: many tourists do not use water during their activities in the Eco Park, they do not require the use of comfort rooms, and some have short stays at OMFE, leaving them with little time to use water sources. Only a small percentage of tourists visiting OMFE utilize the bathing/showering facilities on site. Interestingly, the top three recreational activities—eco walking, rafting, and fishing—do not directly require water usage, thus not increasing the demand for water availability at the site.

When inquired about the maximum volume of water that can be stored within OMFE and made available for tourists, especially in comfort rooms, OSWA members mentioned that there are six (6) drums with a capacity of 1000 liters each, providing a total storage capacity of 6000 liters.

***Table 8. Estimates of monthly and daily water demand in Olo-olo Mangrove Forest Ecopark (OMFE) based on tourist influx from March 2019 to October 2019.***

<b><i>Month</i></b>	<b><i>Monthly Number Of Tourists</i></b>	<b><i>Estimated Monthly Waste Generation (Kg)</i></b>	<b><i>Estimated Daily Waste Waste Generation (Kg)</i></b>
March 2019	1,032	309.6	10.32
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<i>Month</i>	<i>Monthly Number Of Tourists</i>	<i>Estimated Monthly Waste Generation (Kg)</i>	<i>Estimated Daily Waste Waste Generation (Kg)</i>
May 2019	1,402	420.6	14.02
June 2019	495	148.5	4.95
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October 2019	540	162.0	5.4
<b>TOTAL</b>	<b>6,210</b>	<b>1,863.0</b>	<b>62.1</b>
<b>AVERAGE</b>	<b>776</b>	<b>232.9</b>	<b>7.76</b>

The current ecological carrying capacity of the mangrove eco park, considering the availability of water for tourists, is only 20 tourists daily, estimated to use up approximately 6000 liters of water. This is far below any of the computed physical carrying capacities with LAC options. Computing the water demand for different physical carrying capacities of LAC management interventions (Table 11), OMFE's current capacity having six (6) drums with 6000-liter storage capacity is seen to fall short by projected tourism water demand when any of the four (4) LAC management interventions are applied because these scenarios will require 746.4 drums, 115.8 drum, 273.9 drums, and 23.7 drums respectively, is able to provide at least 300 liters of water available for each potential tourist.

Although OMFE is not yet experiencing high water demand with their recreational activities, it is suggested that the community must have enough water supply for the expected number of tourists that will be catered on-site, and preferably a higher volume of water available than the computed water demand per day.

**Table 9. Potential Water Demand of Tourists of OMFE and Demand for Drums for Water Storage based on computed physical carrying capacities in OMFE**

	<i>LAC 1</i>	<i>LAC 2</i>	<i>LAC 3</i>	<i>LAC 4</i>
Total Physical Carrying Capacity	2488	386	913	79
Estimated Water Demand Daily (liters)	746400	115800	273900	23700
No. of Drums used for storage (1000 liter capacity) Needed	746.4	115.8	273.9	23.7



## Social Carrying Capacity

### *Alternative Livelihood*

The advantages of tourism activity in the local community of Barangay Olo Olo, as perceived by participants, included improved quality of life for the members of the people's organization, Olo-Olo Seaside Workers' Association (OSWA), by providing an alternative source of income apart from their usual work. Most of the organization's members are the locals residing in the barangay. Farming and fishing are their primary source of livelihood. Relative advantage varies depending on the seasonality and number of park visitors. They reported that income was divided among the rest of the members of the OSWA that manage and maintain the park, and the number of tourist visits and the amount of their donation determine the members' equity. Participants describe that 40 percent of the donation will be allotted for the member's equal share, and 60 percent will be used for maintenance and management of the park. Many participants shared that they are grateful for having an alternative source of income because of the current situation in agricultural farming. They said they are happy being a member of the organization and having alternative sources. The activity area, especially the water body, allowed them to harvest shellfish, crabs, and fish and sell them in the market or to make their meal for the day. According to the locals' perception, the advantages of the tourist activity help them benefit from alternative sources of income and livelihood. The support from the members of each organization in the park contributes to the management and maintenance of the park and succeeding tourism activity.

### *Potential Risks and Benefits with Increased Tourist Arrivals*

Respondents reported that increasing tourist arrivals could meet Olo Olo Park's and its stakeholders' needs. Tourist donation for the park's maintenance and management helps them have a better income share. Community organizations were asked to identify the number of guests they could accommodate individually, and most answered 15 guests, or 25% of the total number of OSWA members. The more significant number is preferred, but only a maximum of 20, which is 33.33% of OSWA members, can be entertained simultaneously. Although respondents reported beneficial effects on tourist arrivals, The problem with garbage disposal of tourists is observed. The respondents have reported inadequate trash bins and lack of garbage collection in the park as one of the problems they encountered in



managing the park. The local member suggested that part of the waste management implemented in the eco-park was dumping the trash in a pit and combusting. This can pose a further problem in managing the eco-park in the future.

### *Capacity of Olo-Olo Seaside Workers Association (OSWA) in Handling Increased Tourist Arrivals*

The Olo-Olo Seaside Workers Association (OSWA) currently comprises 60 members. Through interviews, it was found that each OSWA member preferred to cater to 15 to 20 tourists per hour. They expressed feeling comfortable and undisturbed while interacting with tourists within this range. Table 14 presents a hypothetical allocation of tour guides to tourists. Based on the actual tourist influx in OMFE, OSWA members handle an average of 26 daily tourists, translating to approximately three (3) tourists per hour. When groups of fifteen (15) members visit, only two (2) tour guides are required, with one (1) local guide accompanying them during their tour in the mangrove eco-park.

The total physical carrying capacity, considering the top 3 activities enjoyed by tourists and four (4) scenarios of the limit of acceptable change (LAC), are presented in Table 14 as follows: LAC1 (Business-as-Usual or Practice on the site manager/OSWA) is 2,488; LAC2 (based on the views/preference of the visitors or users) is 386; LAC3 (Computed preference/meeting halfway the preference of the manager and the visitor) is 913; and LAC4 (doubling preference of visitors) is 79.

When implementing Limits of Acceptable Change (LAC) management interventions (Table 15), each of the 60 OSWA members will accommodate 42 tourists in LAC 1, 6 tourists daily in LAC 2, 15 tourists daily in LAC 3, and 1 tourist daily in LAC 4. On an hourly basis, the LAC 1 scenario will result in 311 tourists per hour, equating to 5 tourists per hour per OSWA member. For LAC 3, 114 tourists per hour implies that each OSWA member will handle two tourists per hour. On the other hand, LAC 2 and LAC 4 would have one or less than one tourist per hour assigned to each OSWA member. Since the total carrying capacity for LAC 2 and LAC 4 is less than the total number of OSWA members, not all workers could have individual guests simultaneously. They may choose to work as a group in assisting the guests. Tasks could be distributed equally among members,



including the option of accepting an uneven number of tourists to assist or interact.

Overall, the estimated total carrying capacity is still highly acceptable for the workers based on their preferred rate of social acceptance in accommodating and interacting with guests. Applying the limit of encountering 15 to 20 individuals in a group of tourists at a rate of one hour, the social carrying capacity of the local community/OSWA, which consists of 60 members, ranges from 900 to 1200 tourists per day.

**Table 10. Potential need/ allocation of tour guides to tourists based on computed carrying capacities in OMFE.**

	<i>LAC 1</i>	<i>LAC 2</i>	<i>LAC 3</i>	<i>LAC 4</i>
Total Physical Carrying Capacity Daily	2488	386	913	79
Average Number of Tourists per Hour <sup>a</sup>	311	48	114	10
Estimated Number of Tourists assigned to OSWA members per day	42	6	15	1
Estimated Number of Tourists assigned to OSWA members per hour	5.2	1	2	0.2
No. of OSWA member needed daily when tourists are grouped	166	26	61	5

Legend: a- 8 hours OMFE operation hours; b- 60 OSWA members; b- 15 visitors in a group

### *Combined Tourism Carrying Capacity*

Utilizing an optimization approach, the Tourism Carrying Capacity of Olo-olo Mangrove Forest and Ecopark (OMFE) is determined, considering physical, social, and ecological considerations. The optimal combined carrying capacity is the number of tourists visiting OMFE that minimizes resource degradation, such as waste generation and water demand, while promoting positive local community engagement in ecotourism activities and enhancing tourist experiences. Additionally, ecological constraints and social capacities are incorporated into the optimization process.

The optimized scenario for the combined carrying capacity is illustrated in Table 18, wherein OMFE is recommended to accommodate 151 tourists per day, comprising 67 tourists for eco walking, 74 for rafting, and ten for fishing. This equates to a monthly total of 4530 tourists, with 67 tourists for eco walking, 74 tourists for rafting, and 10 tourists for fishing.

**Table 11. Example of optimized minimum number of tourists monthly and daily that can be accommodated by OMFE.**

	<i>Ecowalking</i>	<i>Rafting</i>	<i>Fishing</i>	<i>Total</i>
No. of tourist (monthly)	2010	2220	300	4530
No. of tourist (daily)	67	74	10	151
Ranges of Physical Carrying Capacity Daily (depending on LAC)	66- 286	10-1862	3-340	79-2488
Estimated Daily Solid Waste Generation (kg)	20.1	22.2	3	45.3
Estimated Daily Water Use (liters)	20100	22200	3000	45300
No. of Tour Guides/OSWA member to be assigned	5	5	1	10

Among the three activities, fishing is the most limiting due to the availability of only ten fishing rods. Even if the number of fishing tourists could be increased, practical constraints hinder the possibility of accommodating more than ten tourists fishing simultaneously. In contrast, rafting allows flexibility in adhering to visitor preferences, including maintaining longer distances between rafts and reducing passenger numbers.

Ecowalking faces its challenge since its lower fee generates less revenue, making it insufficient to sustain the operational needs of the eco-park. Although the optimized tourist influxes only partially meet the doubled visitor preferences set by LAC 4, the accommodation of 151 tourists daily remains acceptable when compared to upper limits set by other LAC scenarios. Assessing the ecological aspect, the estimated solid waste generated by the visitors can be accommodated by two sacks with a total storage capacity of 100 kg. However, it is essential for site managers to ensure adequate availability of solid waste handling and storage facilities to avoid exceeding the ecological carrying capacity. Installation of additional trash sacks and the establishment of a Material Recovery Facility (MRF) should be considered.

On the other hand, water demand for 151 tourists daily amounts to 45,300 liters, surpassing the Capacity of OMFE's current water storage facilities, which holds a total of 6,000 liters. Water availability emerges as the most restrictive factor among all computed carrying capacities. The current facility can only support 20 tourists, with a maximum water allotment of 300 liters each. Dividing the available 6,000 liters among the proposed 151 tourists resulted in an individual allocation of 39.7 liters, a substantial



amount compared to the computed water use of tourists in OMFE, which was only 3 liters per individual.

Regarding the social carrying aspect, guided tours with 15 to 20 visitors at a time are recommended, with ten tourist guides available within the eco park's organization of 60 members. Staff rotation can ensure task performance, including construction of boardwalks, repair of pathways, installation of additional temporary trash bins and MRF, and training of members for environmental briefings with tourists.

## CONCLUSION

The establishment of the Mangrove Eco Park aimed to achieve ecological and economic sustainability for the local community. Given the increasing importance of sustainability in ecotourism management, comprehending natural limits and constraints in the physical, ecological, and social environments becomes crucial for guiding sustainable ecotourism practices.

This study highlights that applying a combined Tourism Carrying Capacity using the Limits of Acceptable Change (LAC) framework can offer valuable recommendations at any stage of ecotourism area development. In the case of Olo-olo Mangrove Forest and Ecopark (OMFE), the subcategories of Tourism Carrying Capacity, namely physical, ecological, and social carrying capacities with LAC opportunity classes, play a significant role in planning and policy interventions, tourism operations and management, environmental conservation, and monitoring the impacts and benefits of ecotourism.

Community-based ecotourism sites like OMFE are encouraged to incorporate public participation and use LAC-based planning for tourism destination management. This approach allows local community managers to implement policy interventions in providing recreational services and goods to visitors while safeguarding their socioeconomic welfare, resources, and immediate environment.

Promoting active community involvement and environmental awareness among stakeholders and tourists is crucial, as most eco-park and community development rely on ecotourism activities. Lastly, the study emphasizes that physical, ecological, and social carrying capacities are essential for estimating waste generation and developing appropriate waste management plans to address current and future ecological challenges.

## **Limitations and Suggestions for Future Research**

The framework for assessing the combined tourism carrying capacity of community-based ecotourism destinations could be a good reference for future studies. However, the study is subject to limitations in terms of size and scope. One of the main limitations identified in the study was limited in terms of the number of participants. Therefore, it would be necessary for further valuation studies to consider an adequate sample size to improve the generalization of the results and their implications. Future research should also focus on the economic carrying capacity of the Olo-Olo Mangrove Forest and Eco-Park. This would involve assessing the economic viability of tourism activities in the area and identifying the limits beyond which tourism development becomes unsustainable or detrimental to the local economy.



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