



CHSE-Based Tourism and Culinary Recovery Strategy with Information System Support: Case Study DPSP Borobudur

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Abstract

Purpose: This study explores the impact of the CHSE protocol and recovery strategies on tourism and culinary businesses at the Borobudur DPSP destination amid the Covid-19 pandemic.

Research Methodology: Qualitative analysis was conducted through discussion and direct observation involving key and supporting informants from government, associations, communities, academics, and the Ministry of Tourism. Quantitative analysis used SEM with variables CHSE, recovery strategy, and information design.

Results: The implementation of CHSE in Borobudur DPSP includes certification, health protocols, sanitation facilities, and monitoring of tourists. Culinary businesses apply CHSE through hygiene practices and service adjustments.

Conclusions: An information system design helps identify CHSE indicators and supports policy implementation by government and stakeholders in tourism and culinary sectors.

Limitations: This study has limitations, including its focus on DPSP Borobudur, which may limit generalizability to other tourism destinations, does not explore factors like market dynamics or long-term trends, and its cross-sectional design limits the ability to assess the long-term impact of CHSE and recovery strategies.

Contributions: The study provides insights into the effectiveness of CHSE implementation and recovery strategies, offering recommendations for other tourism destinations and culinary businesses to enhance post-pandemic recovery. The findings contribute to the understanding of tourism recovery strategies and the role of information systems in supporting destination management.

Keywords: CHSE Implementation, Culinary Entrepreneurs, DPSP Borobudur, Tourism Destination Management

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1. Introduction

Covid-19 is a global outbreak that has negatively impacted human and social dimensions. After spreading from China, the pandemic quickly spread to 210 countries, including Indonesia. The Covid-19 pandemic has caused a significant shock to the global economy, including Indonesia. The economy is in decline for at least the first half of the year and possibly longer if Covid-19 containment measures are not effective. The Covid-19 pandemic has caused disruptions to global and domestic supply chains, financial market volatility, consumer demand shocks, and negative impacts in key sectors (Elistia, 2020; Nuraeni et al., 2022). The existence of Covid-19 has resulted in the cessation of various sectors, including the economic,

social, and political sectors. The tourism sector was the most affected by the pandemic. Currently, it is estimated that 75 million jobs in the tourism sector are experiencing shocks, and the tourism industry is at risk of losing its turnover.

Currently, in Indonesia, the tourism, creative economy, and culinary sectors are still under pressure, where the number of tourist visits, both foreign and domestic, has not recovered. For foreign tourists for the 2019-2020 period, it decreased by 75% yoy, and for domestic tourists for the 2019-2020 period it decreased by 29.7% yoy although currently it has shown improvement with the level-based PPKM relaxation although it is still not optimal due to Indonesian people who are reluctant to travel, because they are worried about the impact of Covid-19 (Parmenas, 2022; Utami & Kafabih, 2021) and are required to undergo an antigen swab test to ensure physical conditions are in good health and continue to carry out the health protocols set by the Indonesian government both when traveling and when returning to their original area (Lumi & Yosef, 2022; Nuruddin et al., 2020).

The DPSP Borobudur Temple is one of Indonesia's tourist sites that has been affected by the Covid-19 pandemic. Borobudur Temple in Borobudur District, Magelang Regency, Central Java is a favorite tourist destination for the community. In normal times, the largest Buddhist temple in the world is almost certainly packed with tourists on holidays or long holidays. However, the crowded atmosphere has changed since the Covid-19 pandemic hit the world in March 2020. Prior to the Covid-19 pandemic, tourism income in the informal sector in Borobudur was estimated by multiplying the number of visitors by the average expenditure per visitor. In 2017, there were 3,795,300 visitors to Borobudur (200,616 international and 3,594,684 domestic visitors). The DPSP Borobudur Temple is one of Indonesia's tourist sites that has been affected by the Covid-19 pandemic. Borobudur Temple in Borobudur District, Magelang Regency, Central Java is a favorite tourist destination for the community. In normal times, the world's largest Buddhist temple is almost certainly packed with tourists on weekends and holidays. However, the crowded atmosphere has changed since the Covid-19 pandemic entered Indonesia. According to statistics, visitors to the Borobudur Temple DPSP decreased by 2.7 million people in 2020, or approximately 74.2% (Bappenas et al., 2020).

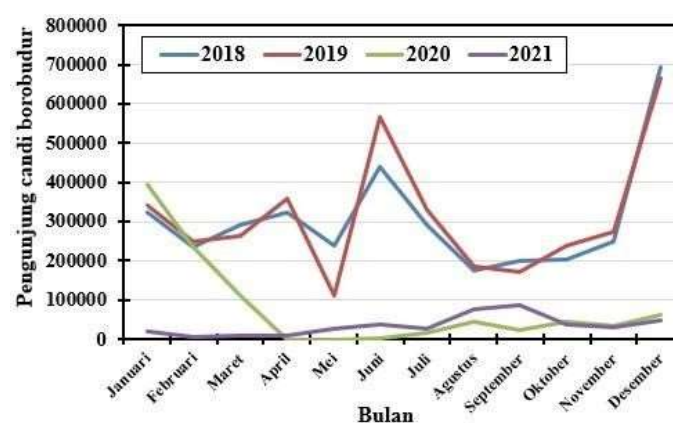


Figure 1. Data on the Number of Tourist Visits 2018-2021

Source: Magelang Regency Tourism Office, (2022)

The number of tourists visiting the Borobudur Temple in Magelang Regency, Central Java, fell drastically in 2020 compared to the previous year due to the Covid-19 pandemic. It was clearly explained that the number of tourist visitors to Magelang Regency in 2020 decreased by 77.3%. According to data from the Central Statistics Agency (BPS) of Magelang Regency, in 2019, the number of domestic tourist visits in Magelang Regency reached 3,747,757. However, the data for 2020 only recorded 965,699 visits. This

decrease in the number of tourists not only impacts the temple tourism center managed by PT. Temple Tourism Park, as well as SMEs and creative industries around Borobudur Temple tourist sites. There were 361 places to eat/restaurants, 22 star hotels, 148 hostels/inns, and 416 shops that were directly affected by the decline in tourists as a result of the Covid-19 pandemic.



Figure 2. Synergy of Tourism Development And Creative Economy (Kemenparekraf, 2022)

Source: BPS Kabupaten Magelang, (2020)

This tourism location greatly affects the existence of creative industry SMEs, especially tourism as a creative industry. The creative economy and tourist destinations are two things that influence each other and can synergize if managed properly. The concept of tourism activities can be defined by three factors, namely there must be something to see, something to do, and something to buy. Something to see is related to attractions in tourist destinations, something to do is related to tourist activities in tourist areas, and something to buy is related to typical souvenirs purchased in tourist areas as personal tourist memorabilia. In these three components, the creative economy can enter through something to buy by creating innovative products typical of the region (Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia, 2021) Data sourced from <https://satudata.dinkop-umkm.jatengprov.go.id/data/umkm-kabkota/Kabupaten%20Magelang> states that there are 1075 MSMEs registered with the Small and Medium Enterprise Cooperative Office of Central Java Province.

The phenomenon of the impact of the corona virus has also made entrepreneurs in various district cities concerned about business sustainability. This phenomenon also occurs among culinary business actors in Magelang Regency. Magelang Regency is a Regency that also has a lot of economic potential that can help build the Indonesian economy. Among the creative industries affected are the creative economy sub-sectors in the form of crafts, fashion, and culinary. With the corona virus phenomenon and government policies related to restrictions on community activities and crowding, all aspects of the creative industry are trying to survive in competition and the lack of face-to-face intensity with the community (Atmojo & Sulistyowati, 2021; Hernawan et al., 2022).



Figure 3. Decreasing Creative Economy Growth Rate

Source: Kemenparekraf, (2021)

The domestic culinary industry is one of the sectors affected by the Covid-19 pandemic. Many culinary businesses worldwide have been forced to close temporarily or even go bankrupt. The food and beverage (F&B) industry is the most affected by the corona virus. This was followed by the service industry and retail. Of the 17 cities observed, 13 cities experienced a significant decrease in daily income due to Covid-19 (Ezizwita & Sukma, 2021; Nuraeni et al., 2022). Culinary products are a sub-sector of the creative economy that are among the three largest contributors to the national Gross Domestic Product (GDP). This decline in income from the culinary product sector occurred in line with the lockdown policies imposed by the central and regional governments of Indonesia (Lumi & Yosef, 2022). Although the Covid-19 pandemic has caused many sectors to slump, it has also created new trends in society, especially in the Indonesian culinary product sector (Abidin et al., 2022a; Parmenas, 2022; Susanti, 2021). In 2021, there may be a major change in the map of industry that will be faced, and perhaps the largest in the history of human civilization during this period. The Covid-19 pandemic has shattered all the joints of the economy, forcing us to enter a completely new world, namely entering a new world or a whole new world. In 2021, we will face a shift; how can we see the map of that shift? In this case, there are three major groups: mega, macro, and micro.

- 1) Mega is a shift that includes major changes in the fields of technology, politics, regulation, social, economic, and environment fieldsal.
- 2) Macro is a major change that produces a new competition map in the pandemic era which produces a new industrial landscape characterized by four characteristics: Hygiene, Low-Touch, Less-Crowd, and Low mobility (competition).
- 3) Micro is a major change that occurs in society, marked by the birth of a new society full of empathy, compassion, and social solidarity. virtual/digital medium working-living-playing activities due to social restrictions (customers).

With the existence of these three major groups, a new breakthrough is needed to save the tourism industry and the creative economy industry players in the vicinity. There are three “rescue” phases carried out by the Ministry of Tourism and Creative Economy/Tourism and Creative Economy Agency (Kemenparekraf/Baparekraf): Emergency Response, Recovery, and Normalization. The Emergency Response phase is focused on health, such as initiating social protection programs, encouraging creativity and productivity during WFH, coordinating tourism crises with tourism areas, and preparing for the recovery. The next phase is the Recovery phase, where the gradual opening of tourist attractions in Indonesia is carried out. The preparations are very thorough, starting from the application of the CHSE (Cleanliness, Health, Safety, and Environmental Sustainability) protocol in tourist attractions

(Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia, 2021).



Figure 4. Tourism Recovery Trends

Source: Kemenparekraf, (2021)

The last is the Normalization phase, namely the preparation of destinations with the CHSE protocol, increasing market interest, and discounts for tour packages. One of the programs that have been implemented is the Virtual Travel Fair from August to September 2020 (Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia, 2021). In the emergency response phase, the government's efforts, which are supported by the community, in dealing with the Covid-19 pandemic and encouraging national economic growth, have begun to show improved results. As one of the sectors affected by the pandemic, tourism and the creative economy sectors also received support from the government to recover. According to the 2020-2024 RPJMD, from 244 tourist villages, 150 are located in five Super Priority Destinations, including DPSP Borobudur, and will be expanded. National Economic Recovery (PEN) support for tourism and the creative economy is channeled through various programs, namely, Proud to Travel in Indonesia, Proud to be Made in Indonesia, and Indonesia Care/I Do Care in the hotel and tourism sector. Support has also been given to film activities, Government Assistance for Tourism Business (BPUP), and hotel accommodation support for health workers. The government, through the PEN fund, has also allocated 7.67 trillion rupiah this year to support the development of national tourism strategic areas and training of tourism human resources (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021).

The Government Incentive Assistance Program (BIP) for tourism sector players and the creative economy this year has also increased the budget to 60 billion rupiah. This means an increase of almost three times compared to 2020, which had a budget of 24 billion rupiah. The target audience for BIP is the seven sub-sectors of the creative economy: applications, game developers, crafts, fashion, culinary, film, and tourism.

Furthermore, in the recovery phase, there are three main pillars for the recovery of tourism and the creative economy: innovation, adaptation, and collaboration. The government, through the Minister of Tourism and Creative Economy, Sandiaga Uno, has set three main pillars. For the innovation pillar, among others, big data can be used to map the potential of various aspects of the tourism sector and the creative economy. Next is 360-degree innovation as the basis for accelerating the development of five super-priority destinations, target segment innovation, tour packages, attraction products, accessibility, and activities. This innovation is achieved through a big data approach, artificial intelligence, machine learning, the tools we use, and the Internet of Things, so that tourism can be of higher quality and environmentally sustainable. Next is collaboration, in which Kemenparekraf acts as an active facilitator, collaborating with the creative tourism ecosystem to create the widest possible employment opportunities (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021).

In the normalization phase, guidelines for the implementation of cleanliness, health, safety, and environmental sustainability of tourist areas, called the CHSE protocol, were created. This guide has several coverages, including a guide on tourist attractions and the creative economy sector. With this guide, it is hoped that the growth rate of the Borobudur tourism sector can return to normal during this pandemic. This change in tourist behavior after Covid-19 is also a challenge for the recovery of Indonesian tourism, especially regarding the importance of Cleanliness, Health and Safety. Guidelines for the Implementation of Cleanliness, Health, Safety, and Environmental Sustainability (CHSE) or hereinafter referred to as Guidelines for the Implementation of Cleanliness, Health, Safety, and Environmental Sustainability in Tourist Attractions is part of the government's breakthrough. Operational guidelines from the Decree of the Minister of Health Number HK.01.07/Menkes/382/2020 concerning Health Protocols for the Community in Public Places and Facilities in the Context of Prevention and Control of Corona Virus Disease 2019 (Covid-19).

This CHSE protocol guide was formed on the basis of increasing awareness of the people of Indonesia and the world on cleanliness, health, safety and environmental sustainability, due to the very large Covid-19 pandemic, the pattern of demand and behavior of tourists in the future will be greatly influenced by awareness of cleanliness, health, safety, and high environmental sustainability. The tourism industry must be prepared to guarantee high levels of cleanliness, health, safety, and environmental sustainability for the products and services provided to tourists.

This guide can be a reference for the Provincial Government, Regency/City Government, Village/Kelurahan Government, including Traditional Villages, business and professional associations related to tourist attractions, and Tourism Mobilization Groups/Tourism Awareness Groups to conduct socialization, tutorials/education, simulations, trials, assistance, guidance, monitoring, and evaluation in the application of cleanliness, health, safety, and environmental sustainability to increase the confidence of the parties as well as the reputation of businesses and tourism destinations ([Hernawan et al., 2022](#); [Tandilino, 2020](#)).

The CHSE health protocol, which prioritizes cleanliness, health, and safety, has been implemented strictly in the Borobudur Temple area in Magelang Regency. PT Taman Wisata Candi Borobudur, as the area manager, simulated the application of health protocols since July 1, 2020. Tourists visiting the area are arranged from the point of arrival to the exit of the Borobudur Temple Area ([Abidin et al., 2022b](#); [Rahayu, 2021](#)). According to the Director of Marketing and Services PT. The TWC stated that the implementation of accelerated certification with PT. Sucofindo is required to complete CHSE certified units with a target of 37 work units covering restaurants, restaurant galleries, museums, and regional platforms. Development of the tourism sector and the creative economy at the Borobudur Super Priority Tourism Destination (DPSP), some of the programs carried out are the development of amenities and accessibility in the Authoritative Area of the Borobudur Authority Agency, including the development of human resource competencies and the tourism industry, promotion and publication of tourism products and activities as well as the revitalization of destinations tourism, as well as a stimulus program for tourism businesses and the creative economy to be able to rise from the Covid-19 pandemic. Furthermore, the Ministry of Tourism and Creative Economy facilitates the digitization of creative economy actors. This digitalization program aims to improve capabilities and competencies, not only to scale up (improve) human resources but also to encourage creative and creative human resources to produce quality products.

In the process of implementing a recovery strategy in the tourism industry at DPSP Borobudur and creative economy business actors, the use of information design becomes important. Information design can be defined as the drawing, planning, and sketching or arrangement of several separate elements into a unified and functioning unit ([Verawati et al., 2021](#)).

Information design includes the activities of collecting and organizing data so that they become meaningful information. In carrying out the design of information design, design tools are needed such as Context

diagrams, data flow diagrams, entity relationship diagrams, flowcharts, and database implementations. In general, the information design tool serves to describe the flow of data from the source of the data provider (input) to the data output (output) of an information flow (Baranova et al., 2020).

The development of an information design that involves the role of the government, tourism sector business actors, academics, and the community in the application of the CHSE protocol aims to create innovation so that the tourism and creative economy sub-sector culinary industry can continue to run during the Covid-19 pandemic. With the design of this information system, it is expected that the delivery of information related to health protocols to various segments of the national tourism industry can be maximized. Local and foreign tourists can also find tourism information anytime and anywhere through the Internet. Thus, tourist visits are expected to increase. This study emphasizes policies on the Borobudur DPSP tourism sector during the Covid-19 pandemic condition by studying the data and actions that have been taken. It is proposed that policies can be applied, referring to the results of this research, either in whole or in part. This is important because tourism involves a large workforce, and the Indonesian government encourages its role in the economy. The difference with this research is that the handling of the Covid-19 outbreak requires policies and appropriate actions in various sectors. This change in tourist behavior after Covid-19 is also a challenge for the recovery of Indonesian tourism, especially on the importance of aspects of Cleanliness, Health and Safety.

The government must also consider the steps in the recovery of culinary industry players. It is hoped that this effort can be an aspect of revitalization, both in terms of creative space competence and product innovation for culinary industry players, so that culinary industry players can strengthen destination management through competency certification with various guidance efforts from the central and local governments. Problem Formulation: 1) How can tourism recovery be analyzed with CHSE on Borobudur DPSP destination management ?; 2) How is the recovery of culinary business actors at the DPSP Borobudur analyzed through the implementation of CHSE ?; 3) How to recommend a recovery strategy through: Discussions, interviews with stakeholders and data management in compiling efforts to restore the management of tourist destinations and culinary businesses at the Borobudur DPSP (with NVIVO analysis and SMART-PLS analysis)?, b. Planning an information system to support efforts to restore the management of tourist destinations and culinary businesses at the Borobudur DPSP.

Research Objectives ; 1) To find out and analyze tourism recovery with CHSE on the management of Borobudur DPSP destinations, ; 2) To find out and analyze the recovery carried out by culinary business actors at the Borobudur DPSP through the implementation of CHSE, ; 3) To recommend recovery strategies through: a. Discussions, interviews with stakeholders, and data management in compiling efforts to restore the management of tourist destinations and culinary businesses at the Borobudur DPSP (with NVIVO and SMART-PLS analyses). b. Planning an information system to support efforts to restore the management of tourist destinations and culinary businesses in the Borobudur DPSP.

2. Literature Review & Hypothesis Development

2.1 Borobudur Temple

Borobudur Temple is the largest Buddhist temple in the world, recorded as one of the Seven Wonders of the World, and has been recognized by UNESCO as a world cultural heritage site. Therefore, Borobudur Temple is a mainstay tourist attraction in Indonesia. This tourism attraction must be developed and properly prepared because it serves as a driver of regional and national economic growth (Wiyono, 2019). Borobudur is a phenomenal Buddhist temple and a symbol of Indonesia, representing the work of the Buddhist community with aesthetic, cultural, artistic, architectural, and spiritual values. As a sacred stupa used as a place of worship, Borobudur reflects a structured architectural order that symbolizes human life and the afterlife (Yatno, 2020).

The word Borobudur itself is based on the first written evidence recorded by Raffles, the Governor-General in Java, who named the temple. There is no older written evidence referring to the name Borobudur than this record. The oldest document indicating the existence of this temple is the *Negarakretagama*, written by Mpu Prapanca in 1365, which states that the temple was used as a place of Buddhist meditation. Borobudur was built around 800 AD during the reign of the Syailendra Dynasty by followers of Mahayana Buddhism. The founder of Borobudur Temple was King Samaratungga from the Syailendra dynasty (Yatno, 2020).

Borobudur Temple is located in Borobudur, Magelang, Central Java, Indonesia, approximately 100 km southwest of Semarang, 86 km west of Surakarta, and 40 km northwest of Yogyakarta. This stupa-shaped temple is the largest Buddhist monument in the world (Yatno, 2020). The structure consists of six square terraces and three circular platforms, decorated with 2,672 relief panels and originally 504 Buddha statues. The main stupa, located at the center, is surrounded by 72 perforated stupas, each containing a seated Buddha statue in a lotus position (Yatno, 2020).

- a) Zone 1 which directly accommodates Borobudur Temple, Mendut Temple, Pawon Temple is managed by the Borobudur Conservation Center (BKB) which is the Technical Implementation Unit (UPT) of the Ministry of Education and Culture.
- b) Zone 2 is managed by PT. Taman Wisata Candi Borobudur, Prambanan, and Ratu Boko under the Ministry of SOEs.
- c) Zone 3 is managed by the Magelang Regency Government.
- d) Zones 4 and 5 are protected areas that are not regulated by the authorized management; therefore, the area is automatically under the authority of the Magelang Regency Government. However, the Magelang Regency Government did not follow the JICA version of the master plan; therefore, developments in these two zones were not under control.



Figure 5. Zone Division

Source: ITMP BYP, (2021)

2.2 Tourism

Tourism, as a global phenomenon, has become a basic need and desire of hundreds of millions of people (Galvani et al., 2020). As a basic need, travel should be part of human rights that should be respected and protected. Tourism is an activity of traveling out and staying in places outside the traveller's environment, not more than one year for leisure, work purposes, and other purposes with no intention of working in the places visited (Patwary et al., 2021). Several experts have provided definitions of tourism, including etymological definitions and general definitions of tourism. The following will explain the definition of tourism from several experts (Moreno-Luna et al., 2021).

1. Understanding Tourism Etymologically

According to Sanskrit, tourism consists of the words 'pari' and 'wisata'. 'Pari' means many times, round and round, and complete, while 'wisata' means travel or journey. Thus, tourism can be interpreted as a trip that is done many times or in circles from one place to another.

2. General Definition of Tourism

Tourism is a phenomenon based on the need for health and change of air. It also creates a conscious and growing appreciation of the beauty of nature and increases the association of various nations and classes of society.

The Law of the Republic of Indonesia Number 10 of 2009 concerning Tourism explains several basic things, namely, tourism is a travel activity carried out by a person or group of people by visiting certain places for recreational purposes, personal development, or studying the uniqueness of tourist attractions visited in a temporary period ([Patwary et al., 2021](#)). Some of these explanations are:

1. Tourists are people who engage in tourism.
2. Tourism is a variety of tourism activities and is supported by various facilities and services provided by the community, entrepreneurs, the Government, and the Regional Government.
3. Tourism is all activities related to tourism and is multidimensional and multidisciplinary in nature that arise as a manifestation of the needs of each person and country as well as interactions between tourists and local communities, fellow tourists, the Government, Regional Governments, and entrepreneurs.
4. Tourist attractions are everything that has uniqueness, beauty, and value in the form of a diversity of natural, cultural, and man-made wealth that is the target or purpose of tourist visits.
5. Tourism destination areas, hereinafter referred to as Tourism Destinations, are geographical areas located within one or more administrative areas in which there are tourist attractions, public facilities, tourism facilities, accessibility, and communities that are interrelated and complement the realization of tourism.
6. The Tourism Industry is a collection of tourism businesses that are interrelated in the context of producing goods and/or services to fulfill the needs of tourists in the implementation of tourism.

Tourism includes all activities of people who travel to and live in places outside their daily environment for a period of not more than a year for leisure, business, and other purposes. Tourism consists of activities such as cultural, health, culinary, educational, religious, business, industrial, convention, political, social, honeymoon, nature reserve, research, and marine tourism., nature reserve and adventure tourism ([Ying et al., 2021](#)).

The tourism sector plays an important role in improving the economy of a country, especially in reducing the number of unemployed and increasing productivity. The tourism sector is one of the strategic sectors that must be utilized for tourism development as part of the national development. The ultimate goal of tourism development is to increase people's income, which can improve community welfare and economic growth ([Ying et al., 2021](#)).

Tourism plays an important role in the economic development of nations worldwide. Increasing progress and prosperity have made tourism a major part of human needs or lifestyle, and moved people to get to know nature and culture in other countries. So indirectly, the movement of people will affect the economic chain that is mutually sustainable into a service industry that contributes to the world economy, the economy of nations, and the improvement of economic welfare at the local community level. The world of tourism is always increasing and bringing something new to its development ([Arokiasamy et al.,](#)

2021).

Traditionally, a tourism destination is defined as a geographical area, such as a country, island, or city. A destination is defined as a geographical area that can attract tourists to stay temporarily and consists of various tourism products, thus requiring various prerequisites to realize it (Andrea & Santoso, 2020). Destinations or tourist objects are the embodiment of human creation, way of life, arts and culture, and the history of the nation and places or natural conditions that have an attraction for tourists to visit. Natural tourism objects are tourism objects whose attractiveness comes from the beauty of natural resources and environmental management (Boonmalert et al., 2020).

Tourism development is a series of efforts to realize integration in the use of various tourism resources and integrate all forms of aspects outside tourism that are directly or indirectly related to the continuity of tourism development. Tourism development includes all activities and coordinated efforts to attract tourists and provide the necessary infrastructure, facilities, goods, and services to serve tourists. Tourism activities and development cover aspects of life in society, ranging from transportation, accommodation, tourist attractions, food and beverages, souvenirs, and services. This effort is to encourage and increase the flow of foreign and domestic tourists, thus enabling the domestic economy to advance and develop (Santoso, Fatmawati, et al., 2021).

Aspects are needed to support tourism development. There are four components that must be owned by a tourist attraction, namely:

1. Attractions, such as attractive nature, charming local culture, and performing arts.
2. Accessibility, such as local transportation and terminals.
3. Amenities such as accommodation, restaurants, and travel agents.

The 4A aspect of developing an object or tourist destination is (Attraction, Accessibility, Amenities, Ancillary service).

1. Attraction

Attractions or tourist attraction objects (ODTW) are a significant component in attracting tourists. Things that can be developed into tourist attractions are called tourism capital or resources. There are three capital attractions that attract tourist arrivals:

- a) Natural Resources such as mountains, lakes, beaches, and hills;
- b) Cultural tourism attractions such as the architecture of traditional houses in the village, archaeological sites, arts and crafts, rituals, festivals, people's daily life, hospitality, food;
- c) artificial attractions such as sporting events, shopping, exhibitions, conferences, and others.

Tourism capital can be developed into a tourist attraction where it is found (in situ) and outside its original place (ex situ). Tourist attractions are further divided into retaining and tourist-catching attractions.

2. Accessibility

Tourism accessibility refers to all facilities that provide convenience for tourists to reach a destination or related tourist destination. Factors that are important and related to the aspect of tourism accessibility include directions, airports, terminals, time required, travel costs, frequency of transportation to tourist sites, and other devices.

3. Amenities

Amenity includes "a series of facilities to meet the needs of accommodation (lodging), the provision

of food and beverages, entertainment venues (retailing), and other services. Amenities are not an attraction for tourists, but the lack of amenities will make tourists avoid certain destinations.

4. Ancillary Service

Ancillary services are more about the availability of public facilities and facilities used by tourists who also support the implementation of tourism activities, such as banks, ATMs, telecommunications, and hospitals. Ancillary services include the existence of various organizations to facilitate and encourage the development and marketing of tourism at the destination concerned.

2.3 The Creative Economy

The creative economy is a concept that aims to achieve sustainable economic development based on creativity. Utilization of resources that are not only renewable, even unlimited, namely ideas, ideas, talents or talents, and creativity. In the creative era, the economic value of a product or service is no longer determined by raw materials or production systems, as in the industrial era, but rather by the utilization of creativity and the creation of innovation through increasingly advanced technological developments.

Industries can no longer compete in the global market by relying solely on price or product quality; they must compete based on innovation, creativity, and imagination ([Purnomo, 2016](#)). The creative economy is an economic activity that prioritizes creative thinking to create something new and different that has value and is commercial in nature. In an economic context, creativity indicates the formulation of new ideas and the application of these ideas to produce works that come from artistic and cultural products, functional creations, scientific discoveries, and the application of technology ([Anggarini, 2021](#)).

The creative economy is an economic era that has entered the fourth economic wave after the first economic wave, namely the agricultural economy wave, the second wave of the industrial economy, and the third wave of the information economy. The wave of the creative economy is predicted to help economic growth in Indonesia, where most actors in the creative economy are small and medium-sized businesses ([Santoso, Natanael, et al., 2021](#)). There are several economic aspects that can be observed through creativity, namely, the contribution to entrepreneurship, driving innovation, increasing productivity, and driving economic growth. According to the Design Power working group of the Ministry of Trade of the Republic of Indonesia, in the Development of the Indonesian Creative Economy 2010-2014, the Creative Economy is a new economic era that prioritizes information and creativity by relying on ideas and knowledge (stock of knowledge) from human resources as the main production factor in activities. economy ([Santoso, Natanael, et al., 2021](#)).

There are 16 sectors of the creative economy that have been developed, namely application and game development, architecture, product design, fashion, interior design, visual communication design, performing arts, animated films and videos, photography, culinary arts, music, publishing, advertising, fine arts, and television and radio ([Santoso, 2020](#)). The creative industry plays an important role in the national and global economy because it contributes to aspects of life, both economically and non-economically. Economically, the creative industry plays a role in creating a business climate, achieving employment, fostering innovation and creativity, creating renewable resources, and contributing positively to the gross national income (Gross National Product) ([Atmojo & Sulistyowati, 2021](#)).

Creative economy plays a role in the economy of a nation, especially in generating income (income generation), creating jobs (job creation) and increasing export earnings (export earnings), improving technology (technology development), increasing intellectual property (intellectual property), and the role of other social. Therefore, the creative economy can be seen as a driver of economic growth and development of a nation (engine of economic growth and development) ([Santoso, 2020](#)).

2.4 Culinary

Culinary is the activity of preparing, processing, and serving food and beverage products that make the elements of creativity, aesthetics, tradition, and/or local wisdom the most important elements in enhancing the taste and value of these products to attract purchasing power and provide experiences for consumers. The term culinary comes from the Latin word *culinarius*. *Culinarius* refers to materials related to the cooking process. The word culinary comes from commodities related to cooking and food consumption activities. Culinary can be interpreted as a pattern of use based on food and dishes. Culinary tourism makes food a subject and medium. Food is also a tourist destination and an instrument for increasing tourism in itself. Culinary tourism requires the cooperation of all five senses, including the tongue, nose, sense of touch, and eyes (Santoso, Natanael, et al., 2021).

2.5 Operation Management

Operations management is a series of activities that generate value in the form of goods and services by converting inputs into outputs. Operations management as the application of management science to regulate production or operation activities so that they can be carried out efficiently. Operations and production management as a process that continuously and effectively uses management functions to efficiently integrate various resources in order to achieve goals. Operations management is a field of management that specializes in the production of goods, and uses special tools and techniques to solve production problems. Operations management comes from the concept of production management, which concerns the production of real products. Thus, the operation is a transformation process from input to output, which has a higher value than the input (Lumanauw, 2020)

Strategic management is the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals (objectives). Strategic management is influenced by five factors: (1) the type and structure of the organization, (2) leadership style, (3) the complexity of the external environment, (4) the complexity of the production process, and (5) the nature of the problems encountered. Strategic management is divided into two activities:

2.6 Cleanliness, Health, Safety, & Environment Sustainable (CHSE) of the Ministry of Tourism and Creative

The CHSE protocol is a policy of the Ministry of Tourism and Creative Economy as a guide for entrepreneurs and/or managers, local tour guides, and employees of tourist attractions in adapting new habits in the form of guidelines for tourism businesses, tourism destinations, and other tourism products to apply guarantees to tourists for the implementation of Hygiene, Health, Safety, and Environmental Sustainability (Tandilino, 2020). The CHSE protocol is a health protocol based on cleanliness, health, safety, and environmental sustainability.

Cleanliness is an aspect that needs to be considered for business actors such as cleanliness of business premises, availability of handwashing soap or hand sanitizer for visitors, and ensuring that business premises are always clean from germs, bacteria, and viruses by spraying disinfectant. Healthiness is an aspect of maintaining health in the business area for both workers and visitors. These measures included checking body temperature, wearing masks, and implementing social restrictions by setting distance and minimizing crowds. Safety is an aspect of maintaining security. Business actors must prepare rescue procedures in case of unexpected emergencies. Environmental sustainability is an aspect that needs to be ensured that the business being conducted has implemented environmentally friendly conditions. This can be seen from the use of environmentally friendly equipment and materials to conditioning the area to feel comfortable for visitors (Resta, 2022).

The implementation of Cleanliness, Health, Safety and Environmental Sustainability (CHSE) or hereinafter referred to as Guidelines for the Implementation of Cleanliness, Health, Safety and Environmental

Sustainability in Tourist Attractions is an operational guideline from the Decree of the Minister of Health Number HK.01.07/Menkes/382/2020 concerning Protocol Public Health in Public Places and Facilities in the Context of Prevention and Control of Coronavirus Disease 2019 (Covid-19). This guide is intended for entrepreneurs and/or managers, employees, and local tour guides to meet the needs of visitors for clean, healthy, safe, and environmentally friendly tourism products and services during the Covid-19 pandemic ([Lumanauw, 2020](#)).

The CHSE (Cleanliness, Health, Safety, and Environmental Sustainability) Certification Program Cleanaa or Hygiene, Health, Safety, and Environmental Sustainability is the process of granting certificates to tourism businesses, other related businesses/facilities, the community environment, and tourism destinations for free. Therefore, it is hoped that every business and tourism actor can register immediately by taking a few steps ([Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia, 2021](#)). In accordance with the Regulation of the Minister of Tourism and Creative Economy concerning Standards and Certification of Hygiene, Health, Safety, and Environmental Sustainability of the Tourism Sector During the Handling of the 2019 Corona Virus Disease Pandemic Number 13 of 2020.

The provisions contained in this guide refer to protocols and other provisions set by the Government of Indonesia, the World Health Organization (WHO), and the World Travel & Tourism Council (WTTC) in the context of preventing and handling Covid-19. The preparation of the guide involved various parties, namely, business and professional associations related to tourist attractions, tourism village managers, Tourism Driving Groups/Tourism Awareness Groups, and academics. Specific guidelines for destination managers, destination visitors and destination employees can be divided into 7 flows and 148 implementation items which can be described as follows: ([Tandilino, 2020](#))

1. The Destination Entrance Flow consists of 27 implementation items
2. The Destination Counter Flow consists of 27 implementation items
3. The flow of tourism activities consists of 28 implementation items
4. The flow of facilities and public areas consists of 25 implementation items
5. The exit flow consists of 17 implementation items
6. Office flow consists of 12 implementation items
7. The employee room flow consists of 12 implementation items

An information system is a system within an organization that brings together daily transaction processing needs, supports operations, and managerial and strategic activities, and provides certain outside parties with the necessary reports ([Wildaningsih & Yulianeu, 2018](#)). The system is a network of interconnected procedures, gathered together to carry out an activity or complete a certain goal, a system within an organization that brings together the daily transaction processing needs, supports operations, and is a managerial and strategic activity of an organization. which provides certain external parties with the necessary reports. Information systems are always described, designed, and implemented using a systematic development process and are designed based on needs analysis ([Syachbana, 2011](#)). A system has several characteristics, namely components or elements (components), system boundaries (boundary), the environment outside the system (environment), interface (interface), input (input), processor (process), output (output), and target (objective). or goals (goals). Thus, the understanding of the system can be concluded as a procedure or element that is interconnected with each other, where in a system, there is an input, process, and output to achieve the expected goals ([Mulyanto, 2009](#)).

To overcome the impact of Covid-19 on the halal tourism sector, the government passed a new normal policy. During the transition to a new normal, the government prepared several strategies to restore

the tourism sector. The district government has also planned efforts to boost the tourism sector, which is supported by the Ministry of Tourism, by implementing prokes in the field of CHSE certification, namely Cleanliness (Cleanliness), Health (Health), Safety (Security), and Environment Sustainability (Environmentally friendly) ([Rahmawati & Parangu, 2021](#)).

Based on inputs submitted by experts in the tourism sector, efforts that can be made to restore the tourism sector are: ([Sutrisnawati et al., 2020](#))

1. Implementing the CHS (Cleanliness, Healthy and Safety) Program

The first step that can be taken to restore the tourism sector is to restore public confidence in safe travel. The government, through the Ministry of Tourism and Creative Economy, has implemented various programs aimed at suppressing the spread of the coronavirus in the midst of the new normal as an effort to restore the tourism sector. The CHS (cleanliness, health, and safety) program is a program from the Ministry of Tourism and Creative Economy to adapt to the "new normal" conditions in the tourism and creative economy sectors. The CHS concept in the tourism and creative economy sectors refers to the health protocol of the Ministry of Health, the concept of sustainable tourism development, and Sapta Pesona. The purpose of this CHS program is to increase tourist confidence in Indonesia's tourism destinations and industry after the COVID-19 pandemic to encourage increased tourist visits to Indonesia.

2. Implementing the New Age Health Protocol

In addition to implementing the CHS program from the Ministry of Tourism, it is very important to carry out the health protocols that have been instructed by the government through the Decree of the Minister of Health of the Republic of Indonesia NUMBER HK.01.07/MENKES/382/2020 concerning health protocols for the community in public places and facilities in the context of preventing and controlling the coronavirus disease 2019. This decree also describes in detail the health protocols in accommodation businesses such as hotels, homestays, and hostels, as well as food and beverage service businesses, namely restaurants. This decision letter describes the steps that must be taken by the manager, employees, and guests. The participation and discipline of the management, employees, and guests in complying with this health protocol is very much needed to restore the tourism industry and avoid the Corona virus.

3. Economic Stimulus

In March 2020, the government issued several economic stimulus policies to create stability in several sectors of the country's economy during the Covid-19 pandemic. Some of the policies given to the tourism sector are the policy of increasing tourist visits through the provision of incentive packages for airlines and travel agents of more than Rp. will go to or from 10 Priority Tourism Destinations (DPP), reaching 50 percent for each passenger, with a total of 25 percent of the total aircraft seats at a cost of around Rp. 490 to Rp. 500 billion. In addition, there is an additional discount of 15.8 percent Avtur from Pertamina and a 5.64 percent discount on flight fares from PT. Angkasa Pura Indonesia and the Indonesian Aviation Navigation Service Provider (Airnav Indonesia). However, the stimulus policy to increase tourist visits did not have a significant impact because the policy was set at the end of February 2020, just before the Covid-19 pandemic entered the country. During the Covid-19 pandemic, there were concerns about traveling both domestic and foreign tourists, so the use of this stimulus did not go well ([Pambudi & Masteriarsa, 2020](#)).

4. Fiscal Incentives

Another policy issued by the government during the Covid-19 pandemic was the government's fiscal incentives to save the tourism industry and workforce. The policies issued are hotel and restaurant tax exemptions for six months with compensation of Rp. 3.3 trillion, expansion of

exemption from PPh 21 borne by the government (DTP) for accommodation and restaurant sector workers, and pre-employment card assistance to workers in Indonesia, including tourism workers, as well as incentives of 600 thousand/month for workers registered with BPJS for employment with incomes below 5 million rupiahs per month. The policy to save the tourism industry was responded positively by several parties, but there are still some notes, where the tourism industry expects direct cash assistance from the government, rather than tax incentives. This is due to the fact that income from accommodation and food and drink has decreased significantly, so that the provision of tax incentives will be useless. The stimulus for government assistance to protect the tourism workforce has been effective, but has not been able to provide certainty to all tourism sector workers and cannot guarantee new jobs after Covid-19 (Sugihamretha, 2020).

2.7 Research Framework

The framework of this research is related to the identification of problems in the recovery of tourist destinations and the creative economy in the new normal period with the CHSE guidelines. The frame of mind in this research is the identification of problems related to the Covid-19 Pandemic, which requires a change in strategic direction to face the challenges of environmental change so that there is a need for transformation in the form of strategy formulations and strategic programs for the recovery of tourism destinations and MSME actors. Creative economy, especially in the culinary field. . This study focuses on the analysis of government policies, both regional and central, managers of tourist sites, and creative economy entrepreneurs around tourist sites. The research process used in this study is the first mapping of interview results from several related parties, followed by an analysis of the supply, linkage, and demand sides. This analysis is to see activities, namely the potential and constraints created from each side so that later it will require an

Innovation/Improvement. Therefore, a Decision Support System is required. Furthermore, the mapping results will be applied to the manufacture of information systems using the waterfall method. This study included several variables. The variables studied in this study are tourism information, tourism business infrastructure, and businesses managed by DPSP Borobudur which are carried out by supply side, linkage side, and demand side into big data which will then be developed so as to produce output in the form of an information system that will be developed and can be used. used as recommendations/strategy proposals to related parties

3. Methodology

3.1 Research Design

This study used mixed methods, descriptive research with qualitative and quantitative approaches. Mixed Methods or Mixed Methods is a procedure for collecting, analyzing, and "mixing" quantitative and qualitative methods in a study or series of studies to understand the research problem.

3.2 Data Collection

In the first stage, a qualitative analysis was conducted through discussions and observations (surveys) at the location. The key informants in this study were Magelang Regency Officials from the Tourism and Culture Office, and the Bappeda for the Management of DPSP Borobudur Culinary Business Actors at DPSP Borobudur. The supporting informants are the Association of Culinary Actors, Association of Tourism Actors, Communities, Academics, and the Ministry of Tourism and Creative Economy. The observation results obtained were then used as material for quantitative analysis.

3.3 Data Analysis

The quantitative approach is carried out using the SEM method using three variables that will be the reference in the research, namely CHSE, recovery strategy, and information design.

4. Results and Discussion

The level of achievement of CHSE implementation carried out by the central government began in 2019, namely the creation of CHSE guidelines, models, and the CHSE verification process by 50%. This is due to the pandemic, which has forced all community activities to turn into work from home, and has had an impact on the tourism sector. The emergence of 3M's policies, namely, washing hands with soap, wearing masks, and keeping a distance, can overcome the problem of the COVID-19 pandemic. The policy then becomes a reference for the central government in making CHSE guidelines so that it can be applied to businesses and tourism actors.

In 2020, the achievement of CHSE reached 90%. This is because the Ministry of Tourism and Creative Economy began to socialize the CHSE program in July 2020 through mass media and the Training of Trainers (TOT) program in several other parts of Indonesia that are developing the tourism industry by involving academics from several universities that have Tourism Studies Programs. Trainer candidates are trained by a special team from the Ministry of Tourism and Creative Economy and are then used as an extension of the government to socialize the CHSE program with all tourism stakeholders before a feasibility assessment is carried out by a team of auditors from the Tourism Business Certification Institute (LSU) appointed by the government. Until February 2021, the Indonesian government had carried out CHSE certification for thousands of hotels, restaurants, and other tourism businesses in 34 provinces. The implementation of this health protocol was then instituted by the central and local governments, among others, by establishing a CHSE task force in each region. The institutionalization of this certification task force is needed as part of the step to identify the tourism market, considering that several tourist destinations in the region are feared to lose their tourism market during the COVID-19 pandemic as part of efforts to increase consumer confidence both at home and abroad in the tourism and creative economy sectors.

The level of achievement of CHSE implementation carried out by local governments starting in 2020, namely the socialization of CHSE certification and supervising the CHSE certification process, was achieved starting in 2020, which was 70%. This is due to the adjustment process of policies issued by the government and the existence of guidelines on CHSE made by the ministry or central government. The CHSE guidelines made by the central government are then used as a reference by local governments to disseminate CHSE, which must be applied by business and tourism actors. The certification process carried out by the Ministry of Tourism and Creative Economy in collaboration with certification bodies in an effort to be able to verify the standards of the CHSE manual that have been set.

The level of achievement of CHSE implementation carried out by tourism intermediation in Magelang Regency which began in 2020, namely updating information related to government policies, communicating CHSE SOPs, providing training and simulating the implementation of CHSE SOPs, informing tourist visit restrictions and training teams to handle health emergencies. in 2020. However, the achievement in that year was approximately 50%. This is because the achievement of the implementation of the CHSE guidelines only began in 2020 in the intermediation order. In 2021, the achievement of CHSE in the Borobudur temple tourism area reached 70-80%. This is because Borobudur temple tourism was allowed to operate in 2021. However, the achievements of the intermediation party were only fully implemented in 2022. This comprehensive achievement can be seen in the implementation of all activity plans from the intermediation party to tourism and culinary business actors. The level of achievement of CHSE implementation carried out by tourist destination managers starting in 2020, namely managing

CHSE certification, disciplining the application of health protocols, informing health services, checking body temperature, providing hand washing facilities, and cleaning transportation, has been carried out up to 20%. In 2021, this achievement increased with the new normal, resulting in the reopening of tourist attractions. This impacts the higher achievement of CHSE implementation, especially for tourism managers. The status of COVID vaccination in 2021 was also checked at the Borobudur temple tourist attraction. In 2022, all CHSE implementations were carried out by tourism managers.

The level of achievement of CHSE implementation carried out by culinary business actors starting in 2020 is managing CHSE certification, providing hand washing facilities, cleaning tables and chairs, maintaining cleanliness of cutlery, and implementing effective food order management carried out in 2020 by 20%. Since the enactment of the new normal, the level of achievement of the CHSE indicator has increased, which is carried out by business actors in the Borobudur Temple area. In 2022, all CHSE implementations were carried out by culinary business actors.

Association of CHSE Strategies in Five Sectors

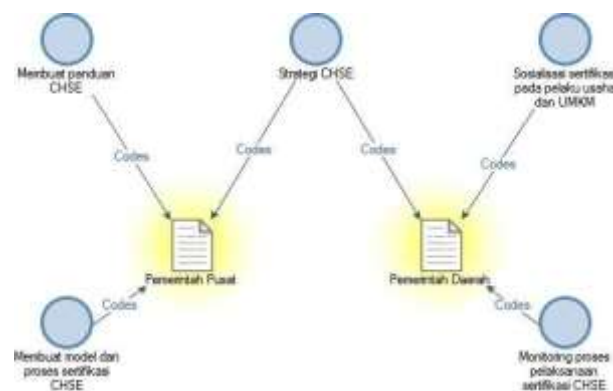


Figure 6. Association of CHSE Strategies Applied To The Central Government With Local Governments

Source: NVIVO Analysis Results

Source: Author's Data Processing, (2022)

The CHSE strategy carried out by the central government, namely making CHSE guidelines and containing models and the CHSE certification process with local governments, namely socializing CHSE certification and monitoring the CHSE certification implementation process, has a relationship based on the Pearson correlation analysis results on NVIVO of 0.870. The correlation between the CHSE strategy developed by the central and local governments was positive at 0.870. The better the strategy chosen and planned by the central government, the better the strategy that can be carried out by the local government. This indicates that the CHSE guidelines and certifications made by the central government can be carried out well by local governments through the CHSE socialization program and monitoring the CHSE implementation process carried out by the government.

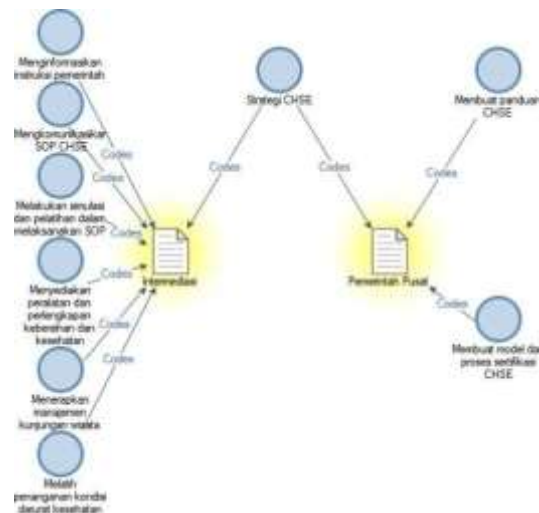


Figure 7. Association of CHSE Strategies Applied To Central Government With Intermediation Source:
NVIVO Analysis Results

Source: Author's Data Processing, (2022)

The CHSE strategy implemented by the central government is also linked to intermediary parties. The central government has a strategy of making guidelines and a CHSE certification process, while the intermediary party informs government instructions, communicates CHSE SOPs, conducts simulations and training, and helps prepare cleaning equipment and supplies. There is a positive relationship between government policies and intermediation (0.778). The central government's CHSE program positively impacted the information received by intermediaries. The central government's strategy for implementing CHSE is positively supported by intermediation in the Borobudur Temple tourist area. This positive aspect was then implemented in the strategy developed by the intermediary, so that the process of delivering CHSE information to Borobudur temple tourism managers and culinary business actors around the Borobudur temple tourism area went well.

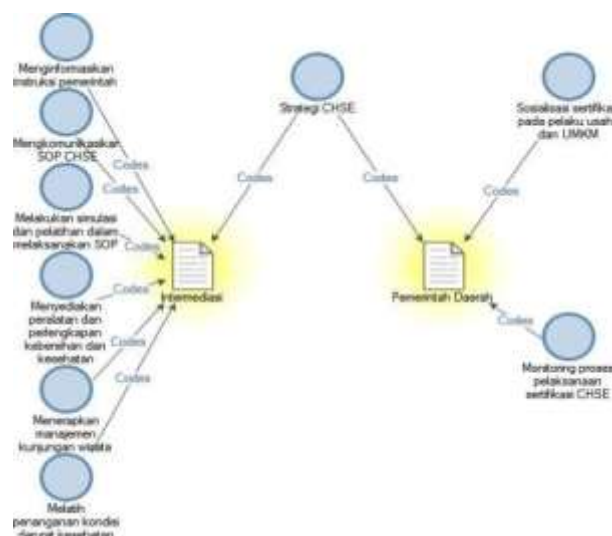


Figure 8. Association of CHSE Strategies Applied To Local Government With Intermediation Source:
NVIVO Analysis Results

Source: Author's Data Processing, (2022)

The CHSE strategy implemented by the local government is also related to intermediaries. The local government is represented by the head of the district tourism office. Magelang has a strategy of conducting socialization to business actors and monitoring the implementation of CHSE, while the intermediation party is represented by the head of the tourism and culinary association of the district. Magelang, namely, informing government instructions, communicating CHSE SOPs, conducting simulations and training, and helping to prepare cleaning equipment and supplies. There is a positive relationship between local government policies and intermediation (0.700). The local government's CHSE program positively impacted the information received by intermediaries. The encouragement from the local government towards the opening of the Borobudur temple tourist spot was welcomed by the intermediary. Therefore, the local government's strategy to socialize CHSE and monitor the implementation of CHSE certification is positively supported by intermediation in the Borobudur Temple tourist area.

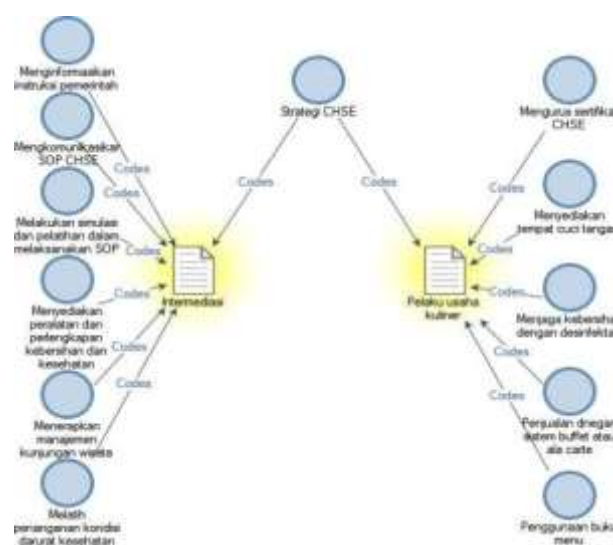


Figure 9. Association of CHSE Strategies Applied To Intermediation With Culinary Business Actors

Source: NVIVO Analysis Results

Source: Author's Data Processing, (2022)

The CHSE strategy implemented through intermediation also has a relationship with culinary business actors. The intermediation party has a CHSE strategy such as informing government instructions, communicating CHSE SOPs, conducting simulations and training, and helping to prepare cleaning equipment and supplies, while culinary business actors have CHSE strategies such as taking care of CHSE certification, providing handwashing facilities, and maintaining the cleanliness of dining areas and rooms. The correlation between eating and sleep was 0.650. The positive relationship indicates that the better the CHSE strategy made by intermediation, the better the culinary business actors implement health protocols through the CHSE concept. This shows that the performance of intermediation as an intermediary for policies made by local and central governments can be carried out well by culinary business actors.

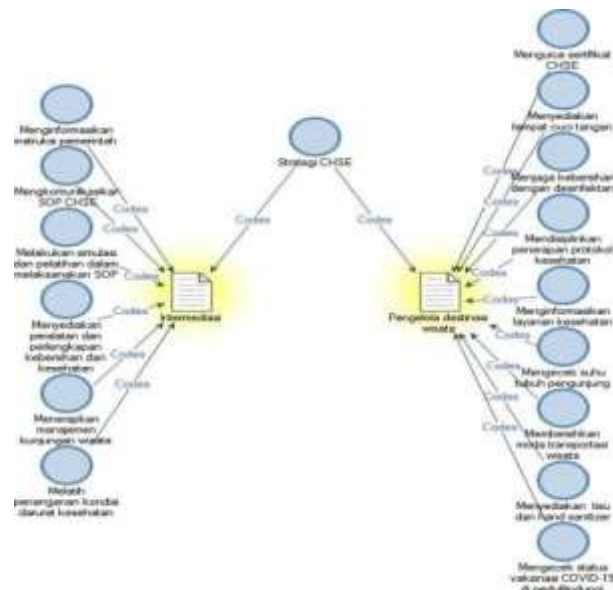


Figure 10. Association of CHSE Strategies Applied To Intermediation With Tourism Destination Managers Source: NVIVO Analysis Results

Source: Author's Data Processing, (2022)

The CHSE strategy carried out by intermediation is related to tourism destination managers. The intermediary has a CHSE strategy, such as informing government instructions, communicating CHSE SOPs, conducting simulations and training, and helping to prepare cleaning equipment and supplies, while tourist destination managers, such as taking care of CHSE certification, providing cleaning facilities such as hand washing, hand sanitizer, disinfectant, checking vaccination status, checking body temperature, and cleaning the mode of transportation, have a relationship of 0.690. A positive relationship indicates that a better CHSE strategy made by intermediation will also have an impact on the better CHSE implemented by the manager of the Borobudur temple tourist destination.

Linkage Analysis

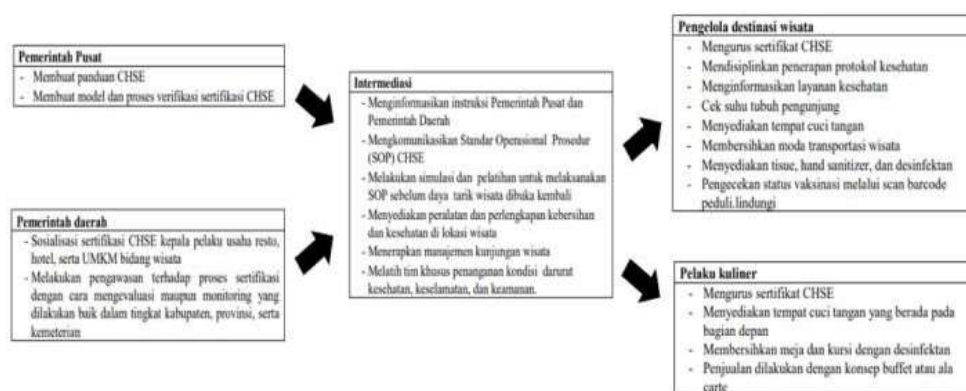


Figure 11. Relationships Between Sectors, Both Supply (Central Government And Local Government), Linked (Intermediation), And Demand (Tourist Destination Managers And Culinary Business Actors)

Source: Researcher, (2022)

The existence of a unified linkage between systems in the implementation of CHSE as an effort to restore the tourism sector found in the study contained 28 indicators. The indicators are divided into three categories: (1) supply, consisting of the central and local governments; (2) linked, as in the intermediation party; and (3) demand, consisting of tourism destination managers and culinary business actors. The indicators in detail consist of two indicators as makers of the CHSE strategy at the central government, two indicators as a tourism recovery strategy activity plan through CHSE, seven indicators as a strategist for the implementation of CHSE in intermediation parties, eight indicators as a compiler for CHSE for tourism destination managers, and seven indicators as a constituent of CHSE in culinary business actors. The indicators that comprise the five sectors are shown in Figure 6. The interrelationships between the indicators that make up the CHSE in the five sectors are then made a complete construct so that the influence between sectors can be seen as the results in the image below.

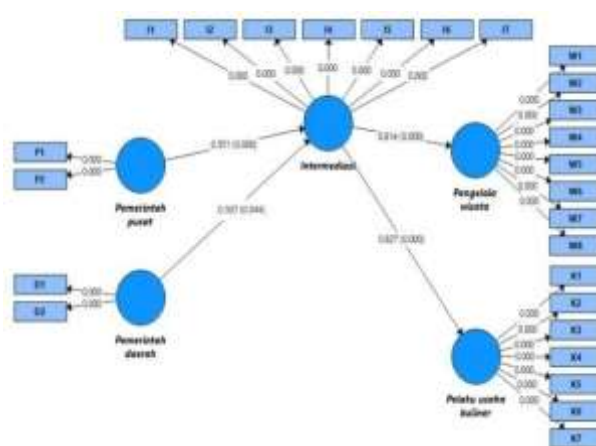


Figure 12. Construction of Tourism Recovery Strategy Through CHSE Source: SEM-PLS Analysis Results

Source: Author's Data Processing, (2022)

The results of the analysis of the relationship between the central government, local governments, intermediation, tourist destination managers, and culinary business actors through the SEM-PLS analysis shows that (1) there is a positive influence of the central government with intermediation of 0.551. The better the CHSE strategy developed by the central government, the better the CHSE strategy developed by the intermediary. (2) Local government has a positive influence with an intermediation value of 0.307. This shows that the great support from the local government in the implementation of the CHSE through planned activities will also have a positive impact on the intermediaries that will run the CHSE. (3) There is a positive influence of intermediation with tourism destination managers (0.814). The intermediation program positively impacts tourism destination managers' implementation of CHSE. (4) Intermediation with culinary business actors has a positive influence of 0.827. The CHSE program implemented by the intermediary will provide a positive impetus for the implementation of CHSE for culinary business actors. The strongest relationship is in intermediation with culinary business actors compared to other channel relationships. This shows that the intermediary has a strong positive impact on the implementation of CHSE by culinary business actors in the Borobudur Temple area.

CHSE Information System Design on Borobudur Temple DSPPS

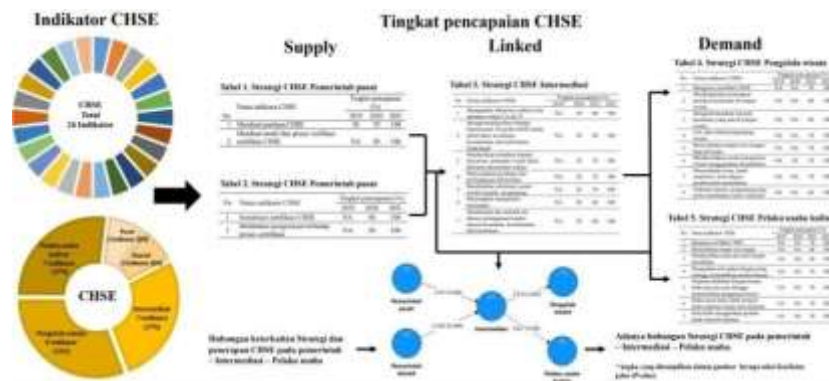


Figure 13. CHSE on DPSP Borobudur Temple Tourism

Source: Researcher, (2022)

Based on the results of interviews conducted by researchers, it was found that there were 28 CHSE indicators in five sectors, namely 2 indicators for the central government or 8%, 2 indicators for local governments or 8%, 7 indicators for intermediation or 27%, 8 indicators for tourism destination managers or 31%, and 7 indicators for culinary business actors (27%). These indicators are then explained in detail regarding the level of achievement that has been carried out each year. Based on Figure 4.10, most of the indicators were implemented in 2021, and 100% of the indicators were implemented in all sectors that are the object of research. The linkages between sectors in carrying out tourism recovery through the applied CHSE can be determined using SEM analysis, as shown in Figure 8. The results of the analysis show that there is a link between supply (central and local governments), linked (intermediation), and demand (tourist destination managers), and culinary business actors). With the CHSE applied to the Borobudur Temple tourist area, all tourist visitors can travel safely and healthily. A flowchart of the CHSE information system is shown in the following figure.

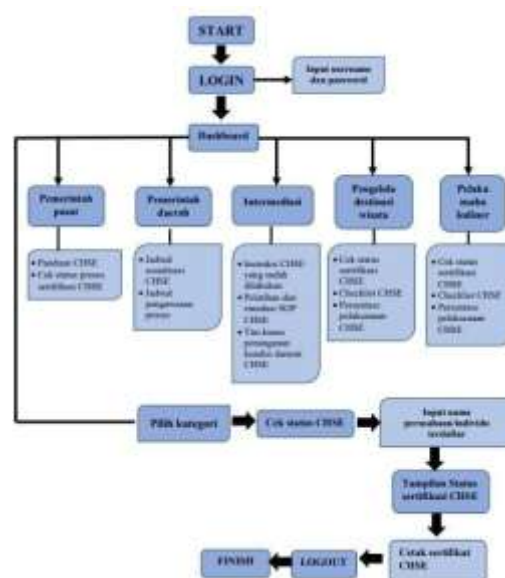


Figure 14. CHSE Information System Design on Borobudur Temple Tourism DPSP

Source: Researcher, (2022)

5. Conclusions

The tourism recovery strategy through the implementation of CHSE carried out in the management of the Borobudur DPSP destination includes obtaining CHSE certification, disciplining the application of health protocols, informing health services, checking body temperature, providing hand washing facilities, cleaning tourist transportation modes, and checking tourist vaccination status. The recovery strategy for culinary business actors in the Borobudur DPSP area involves the implementation of CHSE, such as administering CHSE certification, providing hand washing facilities, cleaning tables and chairs, and selling food using the buffet concept.

Information system design in an effort to restore the management of tourist destinations and culinary businesses of the Borobudur Temple DPSP in the form of an information system design so that the CHSE indicators that are applied and their direct influence on policies implemented by the central government and local governments on the CHSE protocol implemented by the intermediary, tourism destination managers, and culinary business actors are known.

5.1 Research Limitations

This study has several limitations. First, it focuses on a specific case study of DPSP Borobudur, which may limit the generalizability of the findings to other tourism destinations. Second, the study combines qualitative and quantitative methods but does not fully explore other factors that might affect tourism recovery, such as external market dynamics or long-term trends. Lastly, the study's cross-sectional approach limits the ability to assess the sustained impact of CHSE and recovery strategies on tourism over time.

5.2 Suggestions and Directions for Future Research

Future research could expand the scope to include multiple tourism destinations and culinary sectors to improve the generalizability of the findings. It is also recommended that future studies explore the long-term effects of CHSE protocols and recovery strategies using longitudinal data. Additionally, studies could examine the role of digital platforms and data analytics in enhancing recovery efforts and improving tourism destination management.

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Author Contributions

EW contributed to conceptualization, methodology, data collection, data analysis, writing of the original draft, and validation. SS contributed to methodology, data analysis, writing—review and editing, and supervision.

Conflicts of Interest

The authors declare no conflict of interest regarding the publication of this research. This study was conducted independently without any financial or personal influences that could affect the outcomes.

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