Halal supply chain and halal tourism industry in forming economic growth

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ABSTRACT

The purpose of this research is to investigate the influence of the halal supply chain on the halal tourism industry and economic growth. The idea was tested using quantitative methodology in this study. The research instrument was a questionnaire filled out by the respondents. The participants in this study were MSME actors in the tourism industry in Banten Province, Indonesia. For this study, 113 participants were selected using purposive sampling, and data were analyzed using a structural equation model (SEM). The findings from this study are that the halal supply chain has a positive and statistically significant effect on the halal tourism industry. In addition, the halal supply chain and the halal tourism industry affect economic growth. These findings contribute as additional literature for further research that the halal supply chain is an essential factor for the halal tourism industry in Indonesia.

Keywords: Halal supply chain, Halal tourism industry, Economic growth

1. Introduction

Islam is a complicated religion that, in reality, governs many aspects of human life, including worship and morality (Ebrahimi, 2017). The notion of halal is an essential study that every Muslim must comprehend (Hassan & Sengupta, 2019; Ismail et al., 2018). Understanding the notion of halal is a fundamental aspect of Islamic teachings that become a provision in daily life (Mursid, 2023). Initially developed to meet the demand for halal food and beverage products, but triggered by the increasing attention of Muslims to the status of halal-haram in all aspects of life (Aniqoh & Hanastiana, 2020; Krisna et al., 2023), the halal industry is now developing not only in food products but has penetrated other industries such as pharmaceuticals, medical care, cosmetics, logistics, finance, and tourism (Hasan, 2021; Hidayat et al., 2021).

Along with the emergence of the halal lifestyle as a fast-rising global trend, the halal tourism industry, also known as Muslim-friendly tourism, has become a global issue, with numerous nations taking it seriously (Ahasanul Haque & Kabir, 2022). According to the State of Global Islamic Economy Report 2019-2020, the halal tourist business is the fifth most valuable economic sector after banking, food, fashion, and media (Muryanto et al., 2022). Indonesia's halal tourist business has advanced to fourth place in the worldwide Islamic economic market, trailing only Malaysia, the United Arab Emirates, and Turkey (Musa et al., 2023). It demonstrates Indonesian halal tourism's capacity to compete in the global halal market (Muyassaroh et al., 2021). This skill could boost the competitiveness of the global halal industry's development (Mohd Nawawi et al., 2020).

Muslim-friendly tourism is a form of tourism that caters to the needs of Muslim visitors by providing halal cuisine, housing with prayer facilities, and activities that adhere to Islamic religious standards (Said et al., 2022). Because of the growing potential for halal tourism, many Muslim and non-Muslim nations are competing to offer halal destinations and tour packages to draw the attention of Muslim world visitors (Wibawa et al., 2023). It is also a fantastic potential for the tourism and commercial sectors of nations that can give facilities and services to Muslim visitors (Moshin et al., 2020). Malaysia, Turkey, the United Arab Emirates, and Indonesia, for example, are among the nations with the highest profits from Muslim-friendly tourism (Ainin et al., 2020). Tourism is vital to the global economy since it contributes to employment and economic prosperity.
in any country (Sokhanvar, 2019). As a result, tourism may be regarded as one of the most essential sources of GDP (Manzoor et al., 2019). The surge of Muslim tourists is both an opportunity and a challenge for the tourism industry (Yousaf & Xiucheng, 2018).

Halal supply chain management is an essential component of the halal ecosystem (Haleem et al., 2020). Halal supply chain management may be defined as ensuring halal items, from raw materials to completed products, reach customers (Cahyono et al., 2023). The entire process must adhere to Sharia rules to ensure the halal of these products. In this scenario, the scope of tourism as a service commodity is quite vast (Rasul, 2019). It means that the whole tourist procedure must be based on Sharia principles, from booking a vacation to returning home (Rahman et al., 2021).

There needs to be more research on the halal tourist sector supply chain, and there are no specific standards regulating the indicators of halal tourism from upstream to downstream. As a result, it is critical to comprehend the concept of the halal supply chain in the tourism industry, which includes transportation services, Sharia hotels, places of worship, halal food, working with Sharia financial institutions, information media, and entertainment, all of which must fall within sharia boundaries.

2. Literature review and hypothesis development

2.1 Halal supply chain

The halal tourism industry is a tourism sector that preserves Islamic ideals and satisfies the halal demands of Muslim travelers (Purwandani & Yusuf, 2021). Halal tourism encompasses all travel elements, including transportation, lodging, food and beverages, and tourism activities (Pamukcu & Sariisik, 2021). Supply chain management is critical in halal tourism since it includes multiple parties and integrated procedures. Tourism includes airline businesses, hotels, restaurants, and tourist attractions requiring food, beverages, and other supplies (Prayag, 2020). A well-managed supply chain may assist tourist businesses in optimizing manufacturing costs and increasing efficiency at each level of the supply chain (Zhao & Hou, 2021). Halal supply chain management ensures that all processes of products and services are halal, from upstream to downstream, till the items and services reach the recipient (Masudin et al., 2022). In this situation, each tourist sub-sector assures funding, company management, and how to provide services following Sharia standards (Rahman & Zailani, 2017). Each tourist sub-sector must have a regulatory concept as a guideline for conducting business (Musavengane, 2019). Halal Supply Chain is an essential component of Halal logistics. Every step in halal logistics assures the separation of halal and non-halal items, beginning with the planning, implementing, and supervising of the process of storing goods and services to satisfy the demands of clients—the method of preserving each product's halal status (Haleem et al., 2020). Competing in the same sector is also a competitive advantage for manufacturers (Wen et al., 2022).

2.2 Halal tourism industry

Halal tourism is a term that is frequently used to describe a tourist idea that is founded on ethics and Islamic law. Other terms, such as Islamic and halal tourism, are occasionally used (Rahman et al., 2020). Dabphet (2021) states that Halal tourism refers to any object or act of tourism permitted by Islamic law to be utilized or incorporated into the tourist industry by Muslims. Meanwhile, according to Vargas-Sánchez & Moral-Moral (2020), halal tourism is a type of travel or trip that adheres to Sharia law standards. According to the theory of economic actors, halal tourist operations contain three aspects (Suhartanto et al., 2021). The first is to assume the role of a consumer or service user, a person or group of individuals who spend money on products and services for amusement, fun, and refreshment. It is halal if the revenue source is halal and used in halal products and services transactions. The producer, or the person selling products or services, is the second party engaged, as are investors who invest their assets in authorized activities and subsequently apply them to legally lawful contracts under Islamic law. The government is the third party engaged, acting as a policymaker or economic agent for state-owned or regional enterprises, developing state-owned or regionally-owned firms, and regulating and facilitating the country's economic growth.

2.3 Economy growth

Tourism's economic impacts can be classified into seven major categories: it can be a source of foreign exchange, it can increase the income of communities surrounding tourism, it can create jobs, it can influence prices and tariffs, it can influence the distribution of benefits or profits, it can influence management and ownership, and it can influence the development of tourism areas (Li et al., 2019). Meanwhile, Williams and Baláž (2014) contend that tourism can impact economic circumstances in tourist sites in at least four ways: First, individuals work as hawkers or as staff at tourist sites (ticket sellers, security supervisors, garbage managers, and so on). Second, the influence of tourist development on people’s income will, of course, be felt by those with no income, so they have a monthly income. Third, other industries are expanding around tourism destinations, such as the construction of booths and motels owned and operated by the local community. Fourth, changes in food and beverage pricing can benefit merchants.

Based on the description above, the hypothesis proposed in the study and a conceptual framework for this study can be made, as shown in Fig. 1.
**H1:** Halal supply chain influences halal tourism industry.

**H2:** Halal tourism industry influences economic growth.

**H3:** Halal supply chain influences economic growth.

### 3. Research method

This study uses a quantitative approach. The population in this study includes MSME actors in the tourism industry in Banten Province. The sampling technique used in this study is purposive sampling and uses the Likert scale. The number of samples needed in this study was 113 respondents. Data collection is carried out by distributing questionnaires that have been compiled and refined. The data source used in this study is a primary data source. The questionnaires were distributed through social media such as Instagram, Twitter, WhatsApp, and Google Forms. Furthermore, online data collection is carried out to expand the data collection area. For data analysis techniques using multivariate analysis techniques. The measuring model contained 14 indicators, divided into five indicators for halal supply chain adopted by Dwianto et al. (2023), 5 indicators for halal tourism industry adopted from Sonjaya et al. (2020), and 4 indicators for economy growth adopted by Williams & Baláž (2014). Information based on a Likert scale with five points was collected (1 means strongly disagree, and 5 means strongly agree).

### 4. Results and discussion

We were able to determine the validity of the indicator by utilizing the convergent method, and this was ultimately communicated as the value of the external loading factor. It specifies that the value range of 0.50 to 0.70 for the loading factor is still sufficient for exploratory investigations, which are the early phases of establishing a measurement scale. Exploratory investigations are the first steps in the construction of a measurement scale. Within the context of this specific inquiry, the outer loading value of each indicator was greater than 0.70, which meant that it was able to meet the criteria for convergent validity (see Table 1).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Outer loading</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal supply chain</td>
<td>HSC1</td>
<td>0.945</td>
<td>0.941</td>
<td>0.965</td>
<td>0.954</td>
<td>0.807</td>
</tr>
<tr>
<td></td>
<td>HSC2</td>
<td>0.920</td>
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<td></td>
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<tr>
<td></td>
<td>HSC3</td>
<td>0.878</td>
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<tr>
<td></td>
<td>HSC4</td>
<td>0.887</td>
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<tr>
<td></td>
<td>HSC5</td>
<td>0.860</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economy growth</td>
<td>EG1</td>
<td>0.973</td>
<td>0.977</td>
<td>0.981</td>
<td>0.983</td>
<td>0.935</td>
</tr>
<tr>
<td></td>
<td>EG2</td>
<td>0.960</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>EG3</td>
<td>0.969</td>
<td></td>
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<tr>
<td></td>
<td>EG4</td>
<td>0.966</td>
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<tr>
<td>Halal tourism industry</td>
<td>HTI1</td>
<td>0.946</td>
<td>0.971</td>
<td>0.989</td>
<td>0.977</td>
<td>0.897</td>
</tr>
<tr>
<td></td>
<td>HTI2</td>
<td>0.935</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HTI3</td>
<td>0.933</td>
<td></td>
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<tr>
<td></td>
<td>HTI4</td>
<td>0.951</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>HTI5</td>
<td>0.960</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*): HSC=Halal supply chain; HTI=Halal tourism industry; EG=Economy growth
The second stage consisted of comparing the extracted square root coefficient of variance (AVE) from each latent factor to the correlation coefficient between the other factors in the model to determine whether a variable possessed discriminant validity. The purpose of this was to test whether or not the variable could differentiate between the different groups. The value of the AVE indicates that it is significantly higher than 0.5. According to Table 1, all of the constructs analyzed in this study had a discriminant validity higher than 0.50 (Fornell & Larcker, 1981). In the very final phase of the process, composite reliability is used to determine the value of the variable indicators. When both the composite reliability and Cronbach's alpha scored much higher than 0.70, it was determined that the results could be trusted (Chin, 2010). When the composite dependability was computed, the findings provided a range bigger than 0.70 and varied from 0.715 to 0.982. In other words, the range was higher than 0.70. It was evident that the indicators of the variable were trustworthy. All of Cronbach's alpha ratings were higher than 0.70, indicating that the indicators were reliable and should be considered free of mistakes. The scores ranged from 0.917 to 0.992 (Chin, 2010).

Fig. 2. Path Analysis Result

The results of processing the data with SmartPLS are depicted in Fig. 2, showing that all the construct manifestations examined in this inquiry have loading values of more than 0.70. It illustrates that the manifest variable with a loading value of more than 0.70 satisfies convergent validity due to its high level of validity. On the sample, each relationship is examined using a simulation based on the bootstrap approach. This test tries to reduce the incidence of anomalous research data. Test outcomes using the bootstrap approach (see Fig. 3).

Fig. 3. Bootstrapping Inner Model.

Evaluation of the path coefficient is used to show how strong the effect or influence of the independent variable is on the dependent variable. Fig. 3 shows that the most considerable path coefficient value is indicated by the effect of halal tourism industry on economic growth of 2.564, followed by the effect of halal supply chain on halal tourism industry of 2.431. Finally, the effect of halal supply chain on economic growth of 2.253. Examining the P-Values allows one to determine the significance level attached to accepting a hypothesis. The study hypothesis may be validated if the P-Values are less than 0.05. In SmartPLS, a bootstrapping procedure is performed on a model that is valid and trustworthy, and that satisfies the feasibility requirements to get the P-value of the model. It can see the results of bootstrapping in the table that follows (Table 2).
Based on the path coefficient derived between halal supply chain and halal tourism industry of 0.221 with a P-Value of 0.000 < 0.05, it can be stated that halal supply chain significantly influences halal tourism industry. A parameter coefficient with a positive value signifies that the greater the halal supply chain, the greater halal tourism industry; hence H1 is accepted. Given that the correlation between halal tourism industry and economic growth is 0.342 with a P-Value of 0.000 < 0.05, it can be concluded that there is a significant relationship between the two. Positive values for the parameter coefficients indicate that the higher the halal tourism industry, the higher the achievement of economic growth; therefore, H2 is supported. Moreover, given that the correlation between local government stakeholder and halal tourism industry is 0.209 with a P-Value of 0.000 < 0.05 it can be said that there is a significant relationship between the two variables. If the parameter coefficient is positive, then the hypothesis H3 that economic growth increases is accepted.

Adopting the halal supply chain ensures that all processes of products and services are halal, from upstream to downstream, until the goods and services reach the recipient. In this situation, each sub-sector of the halal tourist industry provides funding, company management, and the ability to provide services following Sharia standards. Each tourist sub-sector must have a regulatory concept as a guideline for conducting business. The halal tourism industry arises from the needs of Muslim tourists under Islamic teachings, namely following the Al-Quran and Hadith. Thus, halal tourism is an actualization of the Islamic concept; the values of halal and haram are the main benchmarks. It means that all aspects of tourism activities are inseparable from halal certification, which must be a reference for every tourism actor. The conclusions of this study confirm those of Haleem et al. (2020) and Hanifah's research (2020) research, which found that one of the strategic endeavors to grow the halal business in Indonesia is to use the halal supply chain management idea. What has to be done in halal supply chain management is to guarantee that various aspects of products and services, from raw materials to completed products in customers' hands, are safeguarded from items banned by Islamic law, such as ensuring that raw ingredients are halal, processed by persons who understand Sharia principles and do so in a lawful manner, where to convey them using whose services, who stores them, how transportation is used, and what sort of packaging is used until it is delivered to customers.

The tourist industry is impervious to economic crises; for example, during the 1998 Indonesian monetary crisis, transactions in the tourism sector were thought capable of bringing the economy down to the smallest unit. Furthermore, tourism has grown more immune to crises internationally, as seen by the fact that when the dollar exchange rate rises, this industry thrives. It is encouraged since this sector costs little income, and marketing and growth take less money. As tourism becomes a new trend as a lifestyle, the number of middle and higher-class people has grown because they have more money to travel. This study again proves that the tourism industry can increase economic growth by raising a particular theme about halal tourism. The growth of tourist potential is closely related to a region's economic prosperity. A region's economy will thrive if supported by progressively sophisticated tourism development, particularly for small, medium, and big enterprises located near tourist attractions. The local government's sincerity in regulating halal tourism through proper laws will boost people's welfare via economic growth and advancement. Not only does it contribute to Regional Original Income, GRDP, Foreign Exchange, and National Income, but it also helps to expand and promote the creative economy in tourism areas and enhance regional infrastructure. Local governments must play a role in developing the halal tourism industry by providing Tour Guide training, facilitating the development of halal certification for culinary business MSMEs, organizing regional, national, and international tourism events, and awarding tourism industry activists and actors.

The tourist business must maintain tight control over the supply chain to strengthen its competitiveness and improve the industry's performance in the future. The tourist business must consider the presence of the supply chain to guarantee that supply chain control can drive the company's strategy. The halal tourism business must have a strategy to expand its operations to compete and become a market leader. With a competitive strategy held by the halal tourist sector to retain and win market share, which influences industry performance that is accomplished and in line with specified targets. The halal supply chain idea covers the process from raw materials to those who enjoy them or customers who must ensure their halal validity. It means that customers seek clarity or information disclosure to ensure that these items are not tainted with religiously forbidden substances.

The supply chain aims to increase value for both customers and supply chain members. As a result, boosting the functioning of the halal tourist business benefits not only specific industries but also the entire chain of players. Supply chain practices involve the execution of a set of actions that may be characterized by activities performed in the tourist sector for effective supply chain management. Furthermore, the purpose of implementing halal supply chain practices is to improve the performance of the halal tourism industry through a supply chain that necessitates multi-functional integration within the halal

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**Table 2**  
Path Coefficient Result

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Constructs*)</th>
<th>Original Sample</th>
<th>Standard Deviation</th>
<th>T Statistics</th>
<th>P Values</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>HSC → HTI</td>
<td>0.221</td>
<td>0.091</td>
<td>2.431</td>
<td>0.015</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>HTI → EG</td>
<td>0.342</td>
<td>0.133</td>
<td>2.564</td>
<td>0.011</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>HSC → EG</td>
<td>0.209</td>
<td>0.093</td>
<td>2.253</td>
<td>0.025</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

*) HSC=Halal supply chain; HTI= Halal tourism industry; EG=Economy growth
tourism industry and outside the company with suppliers and business partners, with implications for increasing economic growth.

5. Conclusion

This study provides empirical support for a theory that recognizes the link between the halal supply chain's effect on the halal tourist sector and economic growth. This research has answered at least three research questions: (1) Does the halal supply chain impact the halal tourist industry? (2) Does the halal tourism sector impact economic growth? (3) Does the halal supply chain impact economic growth? To thoroughly study this issue, a valid and trustworthy instrument was utilized to evaluate the application of the designed halal supply chain in the tourist business in Banten, Indonesia. This instrument was put through thorough statistical testing, which included convergent validity, discriminant validity, reliability, and concept validation. This study provides empirical data to support conceptual and prescriptive comments in the literature concerning the impact of halal supply chain implementation. Based on the research, the following proposals for further research on the development of halal tourism in Indonesia and its influence on economic growth are made: First, this research was conducted using a qualitative technique; future research might utilize quantitative ways to examine the findings of visitor opinions, current halal tourism attractions, and the Indonesian government in particular. Second, there must be precise regulations regulating halal tourism in Indonesia from the central government and the Ministry of Tourism. Third, to obtain more balanced and objective information about the preservation of halal tourism development, the government must assist in the creation or promotion of events in collaboration with tourist attractions and Indonesian halal tourism facilities, where promotions or advertisements can be watched and seen. Discussing halal tourism in Indonesia, which is popular among both local and foreign travelers.

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