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A DEMATEL-ISM Integrated Modeling Approach of Influencing Factors Shaping Destination Image in the Tourism Industry

Ammar Y. Alqahtani [1,*,†] and Anas A. Makki [2,†]

[1] Department of Industrial Engineering, Faculty of Engineering, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia
[2] Department of Industrial Engineering, Faculty of Engineering—Rabigh, King Abdulaziz University, P.O. Box 80204, Jeddah 21589, Saudi Arabia; nhmakki@kau.edu.sa
* Correspondence: aaylqahtani@kau.edu.sa
† These authors contributed equally to this work.

Abstract: Tourism is an upcoming industry with a high potential for future growth. Many factors influencing destination image (DI) are affecting tourism development. Therefore, studying factors influencing DI is essential. This research study aims to model the factors influencing DI in the tourism industry. A total of 15 factors were the focus of the study. Data on the factors were collected from 10 tourism industry experts. An integrated modeling approach was adopted using the Decision-Making Trial and Evaluation Laboratory (DEMATEL) and Interpretive Structural Modelling (ISM). Interrelationships between the factors, causal effects, relative importance weights, ranks, and driving and dependence powers were analyzed to develop causal and interpretive structures. The developed model revealed that political stability is foundational to other aspects of DI. Then, factors related to safety and security, policy rules and regulations, tourism infrastructure, information and communication technologies, environment, economic development and affluence, fairs, exhibits, and festivals in a destination should be considered. These affect others related to health and hygiene, transport infrastructure, natural and cultural resources, human resources, quality of services, prices, hospitality, friendliness, and receptiveness aspects in a destination. The developed model provides a valuable framework for decision-makers in the tourism industry to enhance and shape the DI.

Keywords: tourism industry; destination image; influencing factors; DEMETAL; ISM; MICMAC

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1. Introduction

Many countries throughout the globe now heavily rely on tourism as a means of economic development and cultural interaction (Khan et al. 2020). In 2021, the tourism industry was responsible for 9.1% of all employment worldwide, and its growth rate of 3.8% was higher than the global economic growth rate (WTTC 2022). Therefore, the sector has become one of the major drivers of economic growth, income, and job creation in a wide range of nations. Competition for visitors' attention and spending has heated up in recent years due to the proliferation of accessible options and the expanding variety of tourist locations. Travelers with limited time and funds must carefully weigh their options when deciding where to go. A place's idealized portrayal in marketing and the media may significantly impact this kind of decision-making (Foroudi et al. 2018). The reputation and image of a place have become critical components of effective marketing strategies in today's highly competitive environment (Servidio 2015). Many studies (Foroudi et al. 2018; Akgün et al. 2020; Hassan and Mahrous 2019) have been undertaken to investigate the elements that influence travelers' expectations about their ultimate destination.

The notion of the Destination Image (DI) has been the focus of many studies in the field of tourism studies. Kani et al. (2017), Hasan et al. (2019), and Ragab et al. (2020)

considered DI as the mental representation that tourists develop about a destination, which includes numerous characteristics such as its scenic beauty, cultural history, hospitality, and overall appeal. The DI is crucial because it shapes travelers' expectations, affecting whether they choose to visit a location and enjoy their time there. Despite DI's importance in the tourist sector, destination management companies typically struggle to manage and efficiently promote it (Ageeva and Foroudi 2019; Ragb et al. 2020). This highlights the ever-growing significance of studying and comprehending the complexity of DI and its effect on the tourist experience. Therefore, researchers are constantly investigating new facets of DI to understand better how it influences vacationers' opinions, actions, and preferences (Prayag et al. 2017).

This study aims to determine and analyze the interrelationships between influencing factors shaping DI in terms of their causal effects, the weights of those effects, their ranks, and their driving and dependence powers. This is also to build their causal and interpretive structures. This study adds to the body of research on tourist DI using an integrated strategy combining the Decision-Making Trial and Evaluation Laboratory (DEMATEL) method with the Interpretive Structural Modeling (ISM) method. The research is broad in scope, looking at overall tourism rather than a single region, intending to identify universal elements that affect DI everywhere. Understanding the elements that impact travelers' views and actions has become crucial considering the rapidly evolving tourism sector, as indicated by the recent alterations in global travel trends and patterns. This research aims to build a strong conceptual framework using the DEMATEL and ISM methods to illuminate the most critical factors contributing to visitors' positive perceptions of destinations and their inclinations to return. In addition to advancing the subject of tourism studies, the findings of this investigation will be invaluable to destination administrators and promoters looking to improve their approaches to marketing and advertising their cities. Sustainable tourism policies, improved destination competitiveness, and culturally enriching travel experiences for tourists of all persuasions depend on a deeper understanding of the factors that shape travelers' perceptions of a place. Using DEMATEL and ISM together, this research sheds light on how to manage better and advertise tourist destinations in the future so that more people have positive and enriching experiences when traveling.

2. Literature Review

2.1. Tourism Destination Image (DI)

Significant shifts have occurred in the meaning of DI during the past years (Pascual-Fraile et al. 2022). Reviewing the current literature has shown that there is no universally recognized definition of DI exists. The ambiguity and complexity of the word image are to blame (Shani and Wang 2011). Therefore, the authors have extracted and classified the DI dimensions into three main categories, as listed in Table 1.

Table 1. Dimensions of Destination Image (DI) and associated references.

Dimension		References
Perceptual		Alcañiz et al. (2005); Gany (2017); Stylidis et al. (2017); Zhang et al. (2022)
Image	Cognitive	Shen (2012); Ingram et al. (2013); Kim et al. (2019); Huete-Alcocer et al. (2019); Garay (2019); Perpiña et al. (2019) Woosnam et al. (2020);
	Affective	Zhu (2011); Andersen et al. (2018); Kim et al. (2019); Huete-Alcocer et al. (2019); Garay (2019); Afshardoost and Eshaghi (2020);
	Collective	Artuğer et al. (2013); Mak (2017); Peralta (2019); Akgün et al. (2020); Papavasiliou (2022);
	Overall	Pramod and Nayak (2018); Papadimitriou et al. (2018); Lam et al. (2020); Stylidis et al. (2022)
Outcome		Kani et al. (2017); Zhang et al. (2018); Moon and Han (2019); Stylidis et al. (2022)

The perceptual dimension of a DI is extracted from the existing literature. Stylidis et al. (2022) emphasized that an image is seen by constructing an idea in one's head using data provided by an image formation driver. A destination's image is meant to alter or reinforce the stereotypes and expectations of its audience members about the location. It could be observed that researchers used terms such as belief, impression, perception, or mental representation to elaborate on the idea of a perceived DI under this dimension, suggesting that the term image is subjective.

The image dimension defines a DI as the visitor's preconceived notions about the place's qualities. Sub-dimensions of the image include cognitive pictures of the unusual (i.e., unique tourist attractions), the usual (i.e., pricing, quality, and cleanliness), and the atmospheric (i.e., the general feel of a location or its environment). An individual's affective or primal reaction to a place's characteristics is considered as a DI's affective sub-dimension. It refers to how a traveler feels about a location based on their experiences. On the other hand, the collective sub-dimension refers to when the components of DI should be understood by using collective ideas compared to a personal impressions approach. The DI is captured and explained from an overall point of view by synthesizing the cognitive and affective image components.

The outcome dimension is based on visitors' preconceived notions of a place that might impact their experience. Tourists' trust, loyalty, and contentment all play a role in how they feel about a location, which in turn influences their behavior and decision to suggest it to others, which is what the outcome dimension of the DI is all about. How a location is portrayed in the media affects how people feel about it, where they choose to vacation, and whether they come to appreciate the positive aspects of the area they are visiting. It could be observed from the above dimensions that different researchers have used different lenses to define the concept of DI and that there are several ways to clarify its meaning.

In this research study, dimensions and factors influencing DI form the basis of the study. Table 2 shows five critical dimensions and their fifteen factors influencing DI, which were extracted from the literature. A systematic literature review was conducted to identify the 15 factors influencing DI. The review included studies published in academic databases from 2010 to 2022. The first step was to identify a set of relevant studies. The researchers searched for articles that had been published on the topic of DI. The second step was to screen the identified studies to remove those irrelevant to the research question. The third step was to extract data from the remaining studies, including the factors that were identified as influencing DI. The fourth step was synthesizing the different studies' data to identify the fifteen most common factors influencing DI. Experience, infrastructure, services, perception, and cognitive image are dimensions. Additionally, a group of factors represents each dimension. The experience dimension refers to tourists' overall experience at a destination. This dimension is influenced by safety and security, health and hygiene, and policy rules and regulations. The infrastructure dimension refers to the physical structures and facilities that support tourism at a destination. This dimension is influenced by transport infrastructure, tourism infrastructure, and information and communication technology (ICT) factors. The services dimension refers to tourism and travel-related services available at a destination. Natural and cultural resources, human resources, and quality of services factors represent this dimension. The perception dimension refers to tourists' positive or negative opinions towards a destination. This is based on tourists' previous experiences and the information that they have gathered about the destination. The cognitive image dimension refers to tourists' knowledge and beliefs about the destination's attributes. Prices, fairs, exhibits, festivals, hospitality, friendliness, and receptiveness influence this dimension.

Table 2. Dimensions and factors influencing Destination Image (DI).

Acronym	Dimension	Description	Acronym	Factors	Reference
A	Experience	Motivations for travel and the ways destinations can create memorable experiences that satisfy the complex desires of tourists.	A1	Safety and Security	Millar et al. (2017)
			A2	Health and Hygiene	Moreno-González et al. (2020)
			A3	Policy Rules and Regulations	Ruan et al. (2017)
B	Infrastructure	The tourism industry stimulates investments in new infrastructure, most of which improve the living conditions of locals, residents, and tourists.	B1	Transport Infrastructure (Air, Road, Railways, and port)	Virkar and Mallya (2018)
			B2	Tourism Infrastructure	Haneef (2017)
			B3	Information and Communication Technology (ICT)	Ukpabi and Karjaluoto (2017)
C	Services	Tourism and travel-related services, including hotels and restaurants (including catering), travel agencies and tour operator services, tourist guide services, and other related services.	C1	Natural and Cultural Resources	Huete Alcocer and López Ruiz (2020)
			C2	Human Resource	Nguyen Viet et al. (2020)
			C3	Quality of Services	Puri and Singh (2018)
D	Perception	Tourist perceptions can be defined as tourists' positive or negative opinions towards certain things. It is based on tourists' previous experiences.	D1	Environment	Lee and Xue (2020)
			D2	Political Stability	Eid et al. (2019)
			D3	Economic Development and Affluence	Khan et al. (2017)
E	Cognitive Image	Explains DI as a tourist's knowledge and beliefs about a destination's attributes. The cognitive image involves unique (such as distinctive tourist attractions), common (such as prices), and atmospheric (e.g., atmosphere or moods related to destinations) images.	E1	Prices	Widayati et al. (2020)
			E2	Fairs, Exhibits, Festivals	Van Niekerk (2017)
			E3	Hospitality, Friendliness, and Receptiveness	Dabphet (2017)

The factors listed in Table 2 are not exhaustive, but they provide a good overview of the factors influencing DI. The relative importance of each factor will vary depending on the specific destination and the target market. Table 2 is based on a literature review of the DI. The references listed in Table 2 provide more detailed information about the factors that have been shown to influence DI.

2.2. Multi-Criteria Decision-Making (MCDM) in the Tourism Industry Context

Many researchers have advanced the subject of multi-criteria decision-making (MCDM) by focusing on the practical implementation of MCDM by adopting relevant models. As a result of its ability to evaluate several alternatives in light of a set of criteria, MCDM is a practical approach to solving complicated issues. MCDM methods were developed to provide mathematical models that aid in evaluating alternatives based on criteria and finding the best possible solution.

Various MCDM approaches have been developed and proposed to handle complicated business challenges in response to their rising popularity over the last several decades. However, some of those methods have drawbacks and restrictions. Therefore, it is necessary to choose the appropriate techniques that tackle a particular research issue (Bakir et al. 2020). There are many different methods for MCDM, but some of the most well-known ones are the analytic hierarchy process (AHP) method (Saaty 2008), the analytic network process (ANP) method (Saaty 1996), the complex proportional assessment of alternatives (COPRAS) method (Zavadskas et al. 1994), and the preference ranking organization method for enrichment evaluation (PROMETHEE) method (Brans and Vincke 1985). This is in addition to modern MCDM methods, such as the multi-attribute ideal-real comparative analysis (MAIRCA) method (Gigović et al. 2016), the stepwise weight assessment ratio analysis (SWARA) method (Keršuliene et al. 2010), the additive ratio assessment (ARAS) method (Zavadskas and Turskis 2010), and the multi-objective optimization on the basis of ratio analysis (MOORA) method (Brauers and Zavadskas 2006), to mention a few. It is worth mentioning that some of the methods above are used to prioritize a set of alternatives based on a set of criteria, and some are used to determine the weights of each criterion.

A number of MCDM approaches and techniques have been followed and used in studies concerning the tourism industry. Such techniques are Case-based Reasoning (CBR), the Decision-Making Trial and Evaluation Laboratory (DEMATEL), the Natural Resources Management Region (NRM), VlseKriterijumska Optimizacija I Kompromisno Resenje (VIKOR), (TDC), Simple Additive Weighting (SAW), the Technique for Order Preference by Similarity to Ideal Solution (TOPSIS), the Star Additive Utility Method (UTASTAR), the Best Worst Method (BWM), Interactive Multi-Criteria Decision-Making (TODIM), Support Vector Regression (SVR), and the Seasonal Autoregressive Integrated Moving Average (SARIMA). Summaries of previous studies where MCDM methods have been used to streamline decision-making with the recent surge in tourism industry interest are listed in Table 3. It could be observed that MCDM methods have been used in the tourism industry research context to aid decision-making. However, researchers have often focused their attention on selecting eco-tourism venues. Consequently, other researchers have used MCDM techniques to explore the topic of tourist behavior (Maymand et al. 2017; Papić et al. 2023).

Table 3. Previous Multi-Criteria Decision-Making (MCDM) studies in the tourism industry context.

Study	Methods	Summary
Jafari-Moghadam et al. (2017)	DEMATEL, ANP	Enhance the tourism entrepreneurship policy by suggesting a hybrid MCDM approach.
Koens et al. (2018)	Qualitative investigation	Examined the over-tourism issue using a qualitative research approach with 80 stakeholders across 13 European towns.
Martín et al. (2018)	Descriptive statistical methods	Studied what is driving the general anti-travel sentiment in Barcelona.
Ocampo et al. (2018)	Fuzzy set theory, DELPHI	Used the fuzzy Delphi technique to create eco-tourism sustainability indicators.
Stević et al. (2019)	SAW, TOPSIS	Cultural tourism assessment using MCDM techniques.
Simancas Cruz and Zaragoza (2019)	Observation method	Determined the limitations of the density of tourist accommodations as a measure of tourist congestion in Spain.
Perkumienė and Pranskūnienė (2019)	Integrative review	Investigated the tension that might arise between visitors' and locals' needs in overly visited areas.
Mi et al. (2019)	ISM	Employed an ISM to create a hierarchical structural model to explore hot spring tourist satisfaction factor interactions.
Rashmi et al. (2019)	Fuzzy-AHP, TOPSIS	Developed a Fuzzy-AHP and TOPSIS approach for selecting the best state for tourism in India based on multiple criteria.
Nilashi et al. (2019)	DEMATEL, Fuzzy TOPSIS	Used a mixed-methods MCDM approach to identify the most important factors for medical tourism adoption in Malaysia.
Zhang et al. (2020)	UTASTAR	Selection of low-carbon tourist destinations using a prioritization-based intuitionistic multiplicative UTASTAR algorithm.

Table 3. *Cont.*

Study	Methods	Summary
Yang et al. (2020a)	Bayesian BWM, Rough DEMATEL	Formulated a new two-stage MCDM paradigm to integrate sustainable development into sports tourism.
Aydoğan and Özmen (2020)	Rough SWARA and TODIM	Used a hybrid MCDM approach that combines rough SWARA and TODIM to provide policymakers and stakeholders with accurate tourism and travel industry data.
Yang et al. (2020b)	Bayesian BWM, VIKOR	Used the Bayesian BWM and VIKOR to argue for the value of sustainable sport tourism and provide ideas for places to visit.
Ren and Ren (2020)	DEMATEL	Used the DEMATEL methodology to identify the most critical barriers to the growth of the tourism business.
Ayhan et al. (2020)	ELECTRE	Used the ELECTRE procedure to speed up the land-use suitability analysis for rural tourism.
Abellana et al. (2021)	SVR-SARIMA; PROMETEE II	Used a mixed-method MCDM to choose the most accurate tourist demand forecasting model for the future.
Weng et al. (2021)	Element Event Analysis Method (EEAM)-ISM	Used EEAM to identify 26 elements impacting rural tourism's sustainability, examine their logical hierarchical link, and investigate ISM's internal system operating mechanism.
Gupta et al. (2021)	ISM-MICMAC	Used ISM and MICMAC to create a hierarchical structure of the tourist sector foreign flow factors.
Hosseini et al. (2021)	Fuzzy DEMATEL, Fuzzy VIKOR	Used a hybrid MCDM model to prioritize the defined action plans to help these businesses recover and improve their activities during the pandemic.
Moradi et al. (2023)	ISM-MICMAC	Used ISM and MICMAC to examine the interactions between these factors and provide empirical evidence supporting their relationships.

There are a number of advantages and explanations for using the DEMATEL technique in the tourism industry context. Decisions in the tourism industry are complex, since they include a wide range of circumstances and parties. DEMATEL aids in illuminating these aspects' intricate interconnections and interactions, therefore presenting a complete picture of the decision-making challenge. DEMATEL makes it possible to pinpoint the precise elements that impact a tourist's final choice most. With such knowledge in hand, decision-makers will be able to put their energy and resources where they will have the most effect. DEMATEL enables prioritizing components according to their impact or reliance (i.e., cause-effect), laying the groundwork for resource allocation. This aids decision-makers in directing their limited resources to where they are most needed. Experts, stakeholders, and decision-makers are all included in the DEMATEL process. Encouraging participation from all stakeholders ensures that a wide range of opinions and knowledge are considered before making any decisions. Furthermore, DEMATEL encourages and facilitates tourism industry-wide strategic planning. Decision-makers may design informed strategies that account for their choices' larger implications and ramifications by finding and comprehending the linkages between diverse aspects.

Insights into the aspects that contribute to the success or issues in the tourism sector may be gained with the use of DEMATEL, which can then be used to aid in policy formation. With such insights, policymakers could craft measures to sustainably advance the tourism industry. Tourism locations, goods, and services may all benefit from DEMATEL's ability to analyze the correlations between several performance metrics. This aids in pinpointing problem areas and reaching peak efficiency. As the tourism sector evolves, many elements play a role in shaping decisions. To guarantee the sustainability and growth of tourism projects, DEMATEL may be regularly utilized to reevaluate the connections and appropriately adjust decision-making processes. Decision-makers in the tourism business may benefit from DEMATEL's in-depth analysis of various factors to make more educated judgments. This technique offers a systematic and organized way to examine interrelationships, improving tourism planning, management efficiency, and sustainability.

Interpretive Structural Modeling (ISM) is also a way to investigate complicated systems and understand the interconnections structure of different variables or factors. The use of ISM in the tourism industry research context is expected to help determine how the various elements affecting tourist behavior, tastes, and decisions are interconnected. The ISM method is based on finding a set of tourism-related variables or factors and modeling them using experts' knowledge. The result is a structural model showing interconnections between the elements classified based on their driving and dependence powers. Therefore, ISM can be used in the tourism industry context to understand and model the interconnections between tourist motives, location characteristics, travel restrictions, and external factors, to mention a few. Such understanding enables decision-makers in the tourism industry to develop ways to improve tourists' experiences by creating better-targeted marketing campaigns, finding potential problems and ways to solve them, and creating effective strategies for enhancing the tourist experience and promoting sustainable tourism practices.

Despite the individual strength of the DEMATEL and ISM methods, several studies in other research fields (Chauhan et al. 2018; Jafari-Sadeghi et al. 2021; Liang et al. 2022; Xiahou et al. 2022; Sorooshian et al. 2023; Huo et al. 2023) have combined both techniques to provide deeper insights into the studies' subject matter. Although both DEMATEL and ISM assist in building and analyzing structural models of complex problems based on their constituent components (Thakkar 2021), both techniques complement each other when integrated. On the one hand, DEMATEL assists in formulating and analyzing all linked relationships between the components of a problem. Furthermore, DEMATEL helps to classify those components into cause-and-effect groups and visualize the structure of the most critical causal relationships with a chart and a digraph. DEMATEL also reflects the relative level of relationships within the components of the problem by finding the relative importance weights among them.

On the other hand, ISM also assists in formulating and analyzing all interconnected relationships between the components of a problem. However, based on the direction of relationships and the classification of components of the situation based on their driving and dependence powers into four groups: autonomous, dependent, linkage, and independent. Based on this classification, ISM helps visualize the structure of complicated interconnections among the components in a chart and a digraph.

Therefore, this research study uses the integrated DEMATEL-ISM approach to model the factors influencing tourism DI. Details of the integrated approach and how it assists in achieving the study's objective, algorithms of both methods, information gathering, analyses, and results are provided in the subsequent sections.

3. Materials and Methods

This study aims to model the factors influencing DI in the tourism industry. Therefore, fifteen factors influencing DI, which fall under five dimensions, were extracted from the literature and listed in Table 2. Additionally, Figure 1 illustrates a conceptual structure schematic of the dimensions and their pertaining factors.

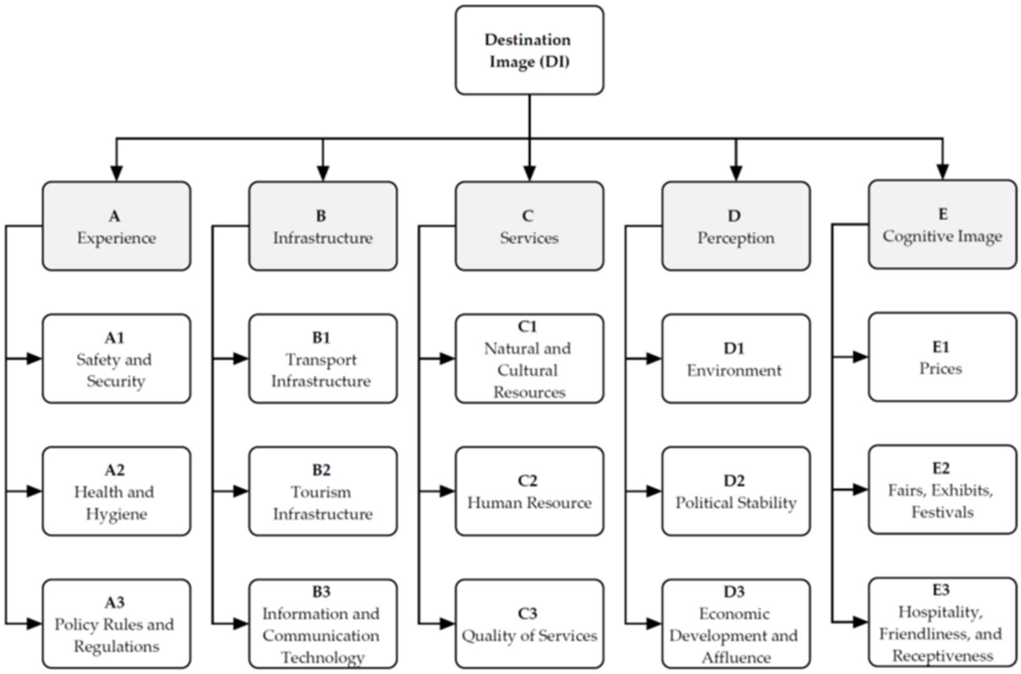

Figure 1. Conceptual schematic of dimensions and factors influencing Destination Image (DI).

As mentioned earlier, the integrated DEMATEL-ISM approach is used to model the factors in this study. This is to analyze the interrelationships between the factors in terms of their causal effects, the weights of those effects, their ranks, and their driving and dependence powers. This is also to build their causal and interpretive structures. Therefore, the integrated approach in this study is conducted in two main analysis phases. The first analysis phase is for the DEMATEL method, and the second is for the ISM method. Figure 2 shows the used Integrated DEMATEL-ISM Procedures flowchart.

In the first phase for DEMATEL, a questionnaire survey is designed using the extracted factors listed in Table 2 and shown in Figure 1. An expert panel of ten tourism industry experts (see Table A1 in Appendix A for experts' profiles) rated each factor's influence on another factor using a defined integer scale in a pairwise format until all pairs were exhausted. The gathered information was used as input for the DEMATEL modeling procedure. The DEMATEL classifies the factors into cause-and-effect groups, revealing their causal relationships, relative importance weights, and ranks. The resulting cause-and-effect relationships from the DEMATEL are used as input to the ISM modeling procedure in the second phase. Those cause-and-effect relationships informed the directions of the relationships between the studied factors assisting in the conversion from the DEMATEL to the ISM. ISM also classified the factors based on their driving and dependence powers into four groups: autonomous, dependent, linkage, and independent. Finally, the resulting causal and interpretive structures from the DEMATEL and ISM were used to build an integrated DEMATEL-ISM model. The following subsections provide details on the modeling procedures and steps of the DEMATEL and ISM methods.

3.1. Decision-Making Trial and Evaluation Laboratory (DEMATEL)

As shown in Figure 2, the DEMATEL procedure includes seven steps (Thakkar 2021), as follows:

Step 1: Calculate the Group Direct-Influence Matrix Z by assessing the relationships between n factors $F = \{F_1, F_2, \ldots, F_n\}$. A total of l experts evaluate the relationships between the studied factors in an experts' decision group $E = \{E_1, E_2, \ldots, E_l\}$ who are asked to indicate the direct influence that factor F_i has on factor F_j, using the integer scale defined in Table 4.

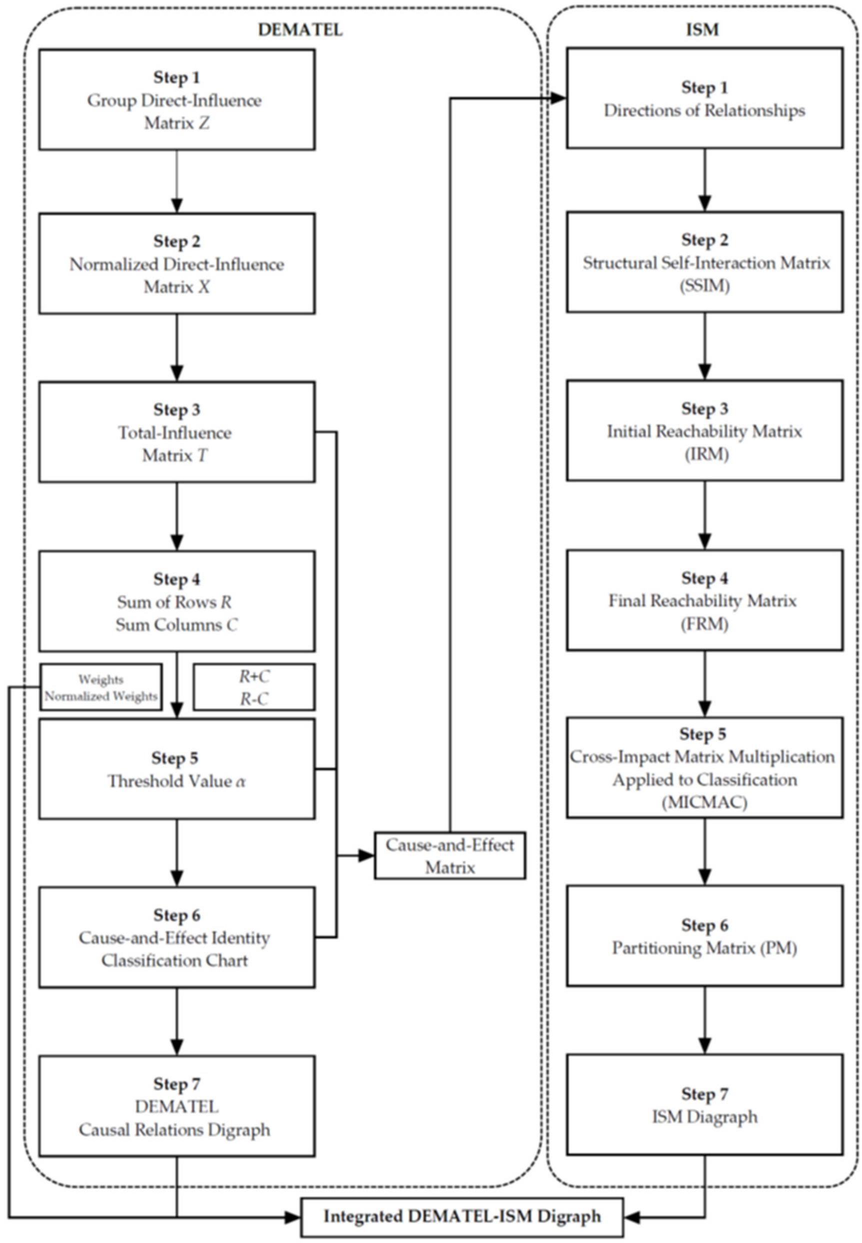

Figure 2. Integrated DEMATEL-ISM procedures flowchart.

Table 4. Comparison integer scale of the DEMATEL method.

Integer Scale	Definition
0	No influence
1	Low influence
2	Medium influence
3	High influence
4	Very high influence

The individual direct-influence matrix $Z_k = \left[z_{ij}^k\right]_{n \times n}$, representing opinion on the influence of factor F_i on F_j provided by each expert from E_k to E_l. Then, all individual views of all engaged experts l are combined into a group direct-influence matrix $Z = \left[z_{ij}\right]_{n \times n}$, which is found using Equation (1).

$$z_{ij} = \frac{1}{l}\sum_{k=1}^{l} z_{ij}^{k}. \qquad i.j = 1, 2, \ldots, n \tag{1}$$

Step 2: Determine the Normalized Direct-Influence Matrix X using the group direct-influence matrix Z calculated in Step 1. The normalized direct-influence matrix $X = \left[x_{ij}\right]_{n \times n}$ is found using Equations (2) and (3). Where all elements in X conform with $0 \le x_{ij} \le 1$, $0 \le \sum_{j=1}^{n} x_{ij} \le 1$, and at least one i such that $\sum_{j=1}^{n} z_{ij} \le s$.

$$X = \frac{Z}{s}. \tag{2}$$

$$s = \max\left(\max_{1 \le i \le n}\sum_{j=1}^{n} z_{ij}, . \max_{1 \le i \le n}\sum_{i=1}^{n} z_{ij}\right) \tag{3}$$

Step 3: Derive the Total-Influence Matrix T using the normalized direct-influence matrix X calculated in Step 2. The total-influence matrix $T = \left[t_{ij}\right]_{n \times n}$ is computed using Equation (4).

$$T = X + X^2 + X^3 + \cdots + X^h = X(I - X)^{-1} \qquad \text{when}, h \to \infty \tag{4}$$

where,

I: the identity matrix.

Step 4: Calculate the sum of rows and the sum columns using the Total-Influence Matrix T computed in Step 3. This is achieved by finding the vectors R and C, representing the sum of the rows and the sum of the columns in the matrix T, respectively, using Equations (5) and (6).

$$R = [r_i]_{n \times 1} = \left[\sum_{j=1}^{n} t_{ij}\right]_{n \times 1} \tag{5}$$

$$C = \left[c_j\right]_{1 \times n} = \left[\sum_{i=1}^{n} t_{ij}\right]_{1 \times n}^{T} \tag{6}$$

where,

r_i: the ith row sum in the matrix T, representing the effects dispatching from factor F_i to other factors.

c_j: the jth column sum in the matrix T, representing the effects that factor F_i is receiving from other factors.

Subsequently, let $i = j$ and $i, j \in \{1, 2, \ldots, n\}$, the horizontal axis vector ($R + C$), called Prominence, and the vertical axis vector ($R - C$), called Relation, are calculated. The ($R + C$) (i.e., prominence) reveals the degree of importance the factors have in the system, and the higher the ($R + C$) value, the more the relationship with other factors, and the lower the ($R + C$) value, the less the relationship with other factors. Whereas the ($R - C$) (i.e., relation) reveals the relation type between the factors in terms of contribution effect. If the ($r_i - c_i$) value is positive, the factor F_i is identified as a dispatcher factor and is classified to the cause group as it influences other factors in the system. However, if the ($r_i - c_i$) value is negative, the factor F_i is identified as a receiver factor and is classified to the effect group as other factors influence it in the system.

Then, using Equation (7), the relative importance of each factor is found by calculating the weight ω_j of each factor using its $R + C$ and $R - C$ (i.e., Prominence and Relation), respectively. Subsequently, each found weight is normalized using Equation (8) and accordingly ranked.

$$\omega_j = \sqrt{\left(r_j + c_j\right)^2 + \left(r_j - c_j\right)^2} \tag{7}$$

$$\acute{\omega}_j = \frac{\omega_j}{\sum_{j=1}^{n} \omega_j} \tag{8}$$

Step 5: Set up the threshold value α to separate negligible from strong influences of factor relationships in the matrix T. Influence values in matrix T that are less than the value of α are considered negligible, and influence values greater than or equal to the value of α are considered strong effects. Only strong influences are used to produce the Cause-and-Effect Identity Classification Chart and the DEMATEL Causal Relations Digraph. Usually, the value of α depends on the decision-makers to identify all the factors in the system, and this threshold value could be readjusted until an acceptable Cause-and-Effect Identity Classification Chart and the DEMATEL Causal Relations Digraph are produced. However, in this study, the threshold value α is calculated using Equation (9) by taking the average of all elements in the matrix T using Equation (7).

$$\alpha = \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} \left[t_{ij}\right]}{n^2} \tag{9}$$

Step 6: Produce the Cause-and-Effect Identity Classification Chart based on the cause-and-effect identity classification of the factors using the total-influence matrix T computed in Step 3, its calculated sum of rows and sum columns in Step 4 by mapping ($R + C$, $R - C$) in a chart format, and the determined threshold value in Step 5.

Step 7: Produce the DEMATEL Causal Relations Digraph based on the Cause-and-Effect Identity Classification Chart and the determined threshold value α, which represents the cause-and-effect relationships of factors in the system, providing insights into the subject-matter decision-making.

3.2. Interpretive Structure Modeling (ISM)

As shown in Figure 2, the ISM procedure includes seven steps. The steps are according to (Thakkar 2021), except the first step is modified due to the conversion of the DEMATEL's output to be used as an input to ISM as follows:

Step 1: Determine the directions of relationships between the studied factors. Given that DEMATEL's Total-Influence Matrix T determined the cell location of strong relation influences, DEMATEL results also classified the factors into cause-and-effect groups. Both pieces of information are used to develop a Cause-and-Effect Matrix. In the Cause-and-Effect Matrix, every strong influence (i.e., values $\geq \alpha$) in matrix T is replaced by its type (i.e., Cause or Effect) in the exact cell location, and negligible influences (i.e., values $< \alpha$) are replaced with (None) indicating no relation to being considered, except the diagonal cells since they represent the relation of each factor with itself. This is to prepare for the conversion from the quantitative influence values of relationships in the DEMATEL's T matrix to the directions of those relationships as input in the ISM, knowing the type of each factor being a cause or an effect factor.

Step 2: Construct the Structural Self-Interaction Matrix (SSIM) using the developed Cause-And-Effect Matrix in Step 1 using the rules presented in Table 5.

Step 3: Form the Initial Reachability Matrix (IRM). Using the constructed SSIM in Step 2, the IRM is created by the 0 and 1 entry codes according to the direction of relationships between pairs of factors based on the rules shown in Table 5.

Step 4: Form the Final Reachability Matrix (FRM). Using the formed IRM in Step 3, the FRM is created to include any existing higher-order transitive relationships between the factors. Using Warshall's algorithm (Warshall 1962), transitive relationships were found and denoted by the (1*) symbol.

Step 5: Classify the studied factors based on their dependence and driving powers resulting from the FRM in Step 4 by performing the Cross-Impact Matrix Multiplication Applied to Classification (MICMAC) analysis. All factors are charted based on their dependence and driving powers in a quadrant chart to visualize their classifications into four categories as independent drivers, linkage, autonomous, and dependent factors.

Step 6: Form the Partitioning Matrix (PM). Using the formed FRM in Step 4, the levels of factors are determined by finding the reachability, antecedent, and intersection sets of each factor and eliminating the specified level in subsequent iterations until all factors in the system are exhausted.

Step 7: Build the ISM digraph based on the directions of relationships between the studied factors, their partitioned levels, and their classifications found in Steps 2 to 6.

Table 5. Rules of converting the DEMATEL's Cause-and-Effect Matrix to the ISM's Structural Self-Interaction Matrix (SSIM) and Initial Reachability Matrix (IRM).

Scenario	**DEMATEL**		**ISM**			
	Cause-and-Effect Matrix		**Direction of Relationship**	**SSIM Entry**	**IRM Entries**	
	(F_i,F_j) [a]	**(Fj,Fi) [a]**	**(F_i,F_j) [a]**	**(Fi,Fj) [a]**	**(Fi,Fj) [a]**	**(Fj,Fi) [a]**
1	Cause Cause None	Effect None Effect	$Fi \rightarrow Fj$	V	1	0
2	Effect Effect None	Cause None Cause	$Fi \leftarrow Fj$	A	0	1
3	Cause Effect	Cause Effect	$Fi \leftrightarrow Fj$	X	1	1
4	None	None	$Fi \times Fj$	O	0	0

[a] i and j indicate the factor number in a row and column in the associated matrix, respectively. Note: None indicates no directions of relations for negligible effects based on a calculated threshold value α from the DEMATEL's total-influence matrix T.

4. Results

The results of applying the DEMATEL and ISM procedures using the gathered information are presented in the following subsections, respectively.

4.1. Results of the Decision-Making Trial and Evaluation Laboratory (DEMATEL)

In DEMATEL's Step 1, 10 experts evaluated the direct influences between the factors influencing DI listed in Table 2 and shown in Figure 1 using the integer scale defined in Table 4. This resulted in ten direct influence matrices, one matrix from each expert representing their individual views. Subsequently, their individual views are combined by calculating the Group Direct-Influence Matrix Z using Equation 1, as presented in Table 6.

In DEMATEL's Step 2, the Group Direct-Influence Matrix Z (Table 6) is used to Determine the Normalized Direct-Influence Matrix X, which is calculated using Equations (2) and (3). Based on Equation (3), the maximum value in the sum of rows and columns is 31.60, by which each value in Matrix Z (Table 6) is divided to be normalized according to Equation (2). The resulting Normalized Direct-Influence Matrix X is presented in Table 7.

In DEMATEL's Step 3, the Normalized Direct-Influence Matrix X (Table 7) is used to find the Total-Influence Matrix T, which is computed using Equations (4), which includes the use of an identity matrix of size 15 in this case. The resulting Total-Influence Matrix T is presented in Table 8.

Table 6. The Group Direct-Influence Matrix of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3	Sum
A1	0.000	2.500	2.100	2.700	1.700	2.100	2.500	2.800	2.200	2.000	1.500	2.000	2.300	1.800	2.100	30.30
A2	2.000	0.000	2.000	1.900	2.100	1.300	2.100	2.900	2.100	2.100	1.400	2.400	1.600	2.100	2.000	28.00
A3	1.700	2.300	0.000	1.700	1.900	2.200	2.200	2.500	1.800	2.300	1.400	2.300	2.600	2.200	1.800	28.90
B1	1.100	1.900	1.300	0.000	2.100	3.000	1.500	1.900	1.700	2.000	1.800	1.600	2.000	2.200	2.300	26.40
B2	2.200	2.500	1.600	2.200	0.000	2.400	2.600	2.300	2.700	2.100	1.800	1.900	2.400	0.900	2.300	29.90
B3	2.200	2.600	2.200	2.200	2.300	0.000	1.500	2.000	1.300	2.300	2.100	1.500	1.600	2.400	3.500	29.70
C1	1.800	1.800	2.100	2.400	2.200	1.600	0.000	1.300	1.900	2.400	2.000	1.900	2.400	1.800	2.300	27.90
C2	2.400	1.500	2.400	2.400	1.400	1.400	2.600	0.000	1.800	1.200	2.100	1.700	2.800	1.500	2.000	27.20
C3	0.700	2.300	1.600	2.200	2.500	1.500	2.100	2.200	0.000	2.200	2.100	2.400	1.700	2.900	2.400	28.80
D1	2.000	2.200	1.800	2.600	2.900	2.500	2.200	2.700	1.900	0.000	2.000	1.900	2.200	2.300	1.700	30.90
D2	2.000	2.800	1.900	1.800	3.100	1.600	1.500	2.300	2.200	1.000	0.000	1.800	2.000	1.600	1.900	27.50
D3	2.100	2.200	1.700	1.900	2.000	2.200	2.600	1.900	2.400	1.600	1.600	0.000	1.900	2.300	2.300	28.70
E1	3.200	2.000	2.400	2.400	1.200	1.700	1.700	2.400	2.400	2.400	1.800	1.700	0.000	1.200	1.100	27.60
E2	1.900	2.300	1.900	1.500	2.500	1.900	1.800	1.800	2.700	2.500	1.800	2.000	2.500	0.000	1.900	29.00
E3	2.000	1.500	2.400	2.000	2.000	1.800	1.400	2.600	2.600	1.900	2.500	1.400	2.100	2.100	0.000	28.30
Sum	27.30	30.40	27.40	29.90	29.90	27.20	28.30	31.60	29.70	28.00	25.90	26.50	30.10	27.30	29.60	

Table 7. The Normalized Direct-Influence Matrix of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3
A1	0.000	0.079	0.066	0.085	0.054	0.066	0.079	0.089	0.070	0.063	0.047	0.063	0.073	0.057	0.066
A2	0.063	0.000	0.063	0.060	0.066	0.041	0.066	0.092	0.066	0.066	0.044	0.076	0.051	0.066	0.063
A3	0.054	0.073	0.000	0.054	0.060	0.070	0.070	0.079	0.057	0.073	0.044	0.073	0.082	0.070	0.057
B1	0.035	0.060	0.041	0.000	0.066	0.095	0.047	0.060	0.054	0.063	0.057	0.051	0.063	0.070	0.073
B2	0.070	0.079	0.051	0.070	0.000	0.076	0.082	0.073	0.085	0.066	0.057	0.060	0.076	0.028	0.073
B3	0.070	0.082	0.070	0.070	0.073	0.000	0.047	0.063	0.041	0.073	0.066	0.047	0.051	0.076	0.111
C1	0.057	0.057	0.066	0.076	0.070	0.051	0.000	0.041	0.060	0.076	0.063	0.060	0.076	0.057	0.073
C2	0.076	0.047	0.076	0.076	0.044	0.044	0.082	0.000	0.057	0.038	0.066	0.054	0.089	0.047	0.063
C3	0.022	0.073	0.051	0.070	0.079	0.047	0.066	0.070	0.000	0.070	0.066	0.076	0.054	0.092	0.076
D1	0.063	0.070	0.057	0.082	0.092	0.079	0.070	0.085	0.060	0.000	0.063	0.060	0.070	0.073	0.054
D2	0.063	0.089	0.060	0.057	0.098	0.051	0.047	0.073	0.070	0.032	0.000	0.057	0.063	0.051	0.060
D3	0.066	0.070	0.054	0.060	0.063	0.070	0.082	0.060	0.076	0.051	0.051	0.000	0.060	0.073	0.073
E1	0.101	0.063	0.076	0.076	0.038	0.054	0.054	0.076	0.076	0.076	0.057	0.054	0.000	0.038	0.035
E2	0.060	0.073	0.060	0.047	0.079	0.060	0.057	0.057	0.085	0.079	0.057	0.063	0.079	0.000	0.060
E3	0.063	0.047	0.076	0.063	0.063	0.057	0.044	0.082	0.082	0.060	0.079	0.044	0.066	0.066	0.000

Table 8. The Total-Influence Matrix of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3	*R*
A1	0.575	0.705	0.640	0.707	0.673	0.634	0.668	0.743	0.687	0.649	0.592	0.618	0.700	0.628	0.682	9.902
A2	0.594	0.588	0.597	0.641	0.640	0.572	0.616	0.699	0.641	0.610	0.551	0.591	0.637	0.595	0.635	9.204
A3	0.607	0.677	0.557	0.656	0.655	0.616	0.638	0.710	0.653	0.636	0.569	0.606	0.685	0.618	0.650	9.535
B1	0.543	0.616	0.550	0.554	0.612	0.593	0.569	0.640	0.600	0.580	0.538	0.541	0.616	0.572	0.616	8.742
B2	0.635	0.700	0.622	0.689	0.616	0.637	0.665	0.724	0.695	0.646	0.597	0.611	0.696	0.597	0.683	9.813
B3	0.634	0.700	0.637	0.685	0.683	0.565	0.631	0.713	0.655	0.650	0.602	0.596	0.672	0.637	0.713	9.774
C1	0.589	0.643	0.599	0.655	0.645	0.582	0.552	0.655	0.636	0.620	0.568	0.577	0.658	0.588	0.644	9.212
C2	0.590	0.616	0.593	0.638	0.602	0.559	0.612	0.596	0.615	0.569	0.555	0.555	0.653	0.562	0.617	8.932
C3	0.573	0.673	0.601	0.665	0.670	0.593	0.630	0.697	0.596	0.629	0.586	0.606	0.656	0.634	0.663	9.473
D1	0.648	0.713	0.645	0.719	0.721	0.660	0.674	0.755	0.693	0.603	0.619	0.628	0.712	0.654	0.686	10.131
D2	0.587	0.663	0.586	0.630	0.660	0.573	0.591	0.675	0.637	0.572	0.501	0.567	0.638	0.573	0.625	9.076
D3	0.611	0.670	0.604	0.657	0.654	0.612	0.644	0.688	0.666	0.613	0.572	0.534	0.660	0.617	0.661	9.463
E1	0.622	0.643	0.603	0.651	0.610	0.579	0.600	0.681	0.643	0.614	0.557	0.567	0.582	0.567	0.605	9.126
E2	0.612	0.680	0.615	0.652	0.674	0.609	0.628	0.693	0.680	0.643	0.582	0.600	0.683	0.554	0.654	9.558
E3	0.599	0.639	0.613	0.648	0.643	0.591	0.600	0.697	0.660	0.609	0.587	0.567	0.655	0.600	0.581	9.288
C	9.020	9.925	9.063	9.848	9.757	8.974	9.318	10.365	9.756	9.243	8.575	8.764	9.903	8.998	9.716	

Note: Shaded cells represent values greater than or equal to the threshold value α of 0.628.

In DEMATEL's Step 4, using the Total-Influence Matrix T (Table 8), the sum of rows and the sum of columns vectors R and C were calculated using Equations (5) and (6). Then, the prominence and relation vectors R+C and R-C were calculated, revealing the degree of importance and the identity of relations between the factors, respectively. Subsequently, the relative importance and the normalized relative importance weights were calculated for each factor using Equations (7) and (8), respectively, and the factors were accordingly ranked. Calculation results are presented in Table 9. The results in Table 9 show that eight factors out of fifteen, which are A1, A3, B2, B3, D1, D2, D3, and E2, all belong to the dispatcher factors group and are classified as the cause factors influencing DI. However, the remaining seven factors, A2, B1, C1, C2, C3, E1, and E3, all belong to the receiver factors group and are classified as the effect factors in influencing DI. The results in Table 9 also revealed the rankings of the factors influencing DI based on their relative importance weights. It shows the ranking from 1 for factor B2 being the most important, to 15 for factor D2 being the least important in influencing DI.

Table 9. Relative importance weights, ranks, and identities of factors influencing Destination Image (DI) based on prominence and relation calculations.

Factors	R	C	$R + C$	$R - C$	ω	$\acute{\omega}$	Rank	Identity
A1	9.902	9.020	18.922	0.882	18.943	0.0670	8	Cause
A2	9.204	9.925	19.129	−0.722	19.143	0.0677	5	Effect
A3	9.535	9.063	18.598	0.471	18.604	0.0658	11	Cause
B1	8.742	9.848	18.589	−1.106	18.622	0.0659	10	Effect
B2	9.813	9.757	19.570	0.056	19.570	0.0692	1	Cause
B3	9.774	8.974	18.748	0.800	18.765	0.0664	9	Cause
C1	9.212	9.318	18.529	−0.106	18.529	0.0656	13	Effect
C2	8.932	10.365	19.297	−1.433	19.350	0.0685	3	Effect
C3	9.473	9.756	19.229	−0.283	19.231	0.0680	4	Effect
D1	10.131	9.243	19.375	0.888	19.395	0.0686	2	Cause
D2	9.076	8.575	17.651	0.500	17.658	0.0625	15	Cause
D3	9.463	8.764	18.227	0.698	18.240	0.0645	14	Cause
E1	9.126	9.903	19.030	−0.777	19.045	0.0674	6	Effect
E2	9.558	8.998	18.556	0.560	18.564	0.0657	12	Cause
E3	9.288	9.716	19.004	−0.428	19.009	0.0672	7	Effect

In DEMATEL's Step 5, the threshold value α is calculated using Equation (9) and the Total-Influence Matrix T (Table 8) using Equation (7). The result is a threshold value α of 0.628. Accordingly, values in the Total-Influence Matrix T (Table 8) greater than or equal to α are shaded, only representing strong influences of factor relationships to be considered. It is worth mentioning that none of the diagonal values were found to be greater than or equal to α, indicating no influence between each factor and itself.

In DEMATEL's Step 6, using the cause-and-effect identity classification of the factors and the ($R + C$, $R - C$) as coordinates (Table 9), the Cause-and-Effect Identity Classification Chart is produced and presented in Figure 3. The chart assists in visualizing the separation of the factors, where the eight cause factors in influencing DI A1, A3, B2, B3, D1, D2, D3, and E2 are all above the axis, and the remaining seven factors A2, B1, C1, C2, C3, E1, and E3 are all below the axis.

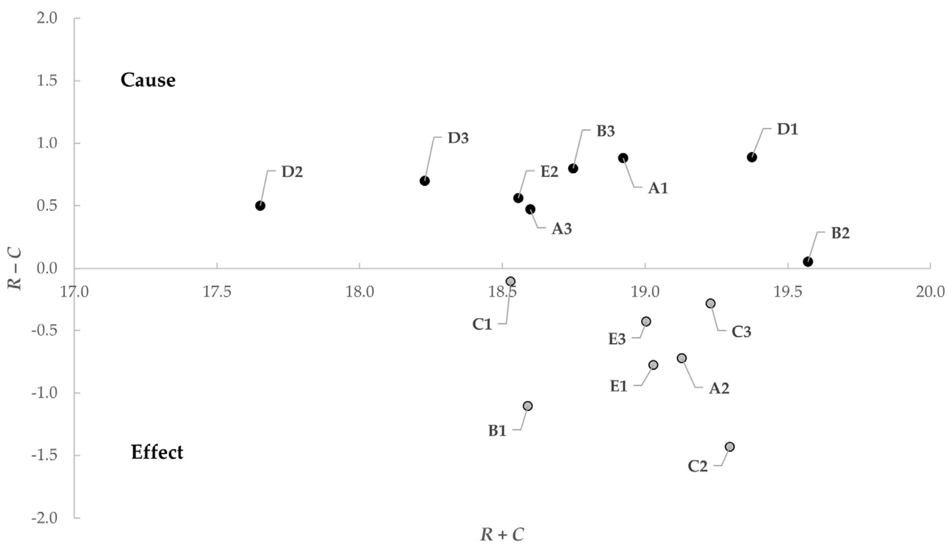

Figure 3. Cause-and-effect identity classification chart of factors influencing Destination Image (DI).

Finally, in DEMATEL's Step 7, the found strong influences of factor relationships (shaded cells in Table 8), the relative importance weights of the factors and their ranks (Table 9), and the Cause-and-Effect Identity Classification Chart (Figure 3) were used to produce the DEMATEL Causal Relations Digraph of factors influencing DI, as presented in Figure 4.

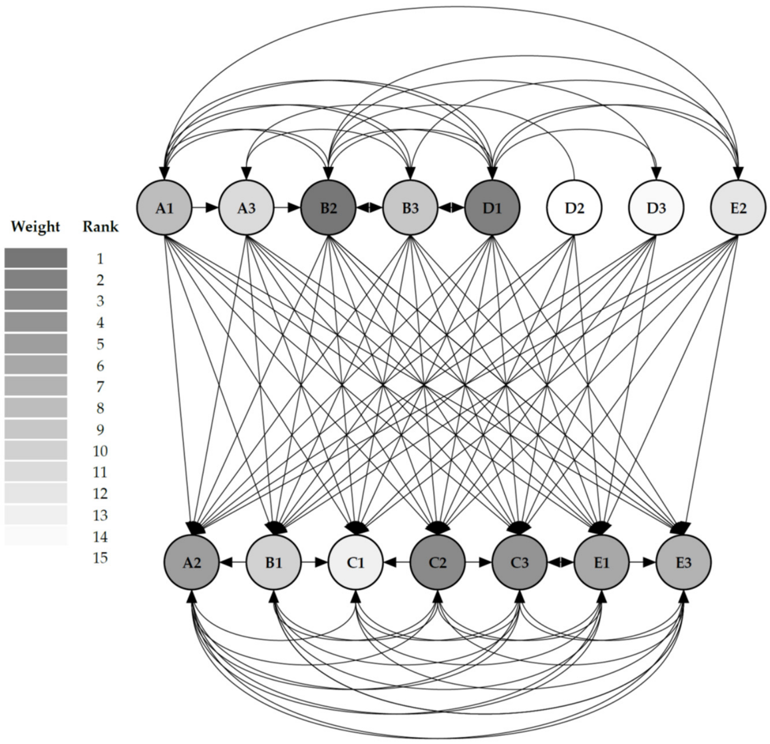

Figure 4. Cause-and-effect identity classification chart of factors influencing Destination Image (DI).

4.2. Results of the Interpretive Structure Modeling (ISM)

In ISM's Step 1, using the resulting factor's identity classifications (i.e., cause or effect) in Table 9, Figures 3 and 4, and the found cell locations of strong influences of factor relationships (i.e., shaded cells in the Total-Influence Matrix *T* presented in Table 8) from the DEMATEL procedure, the directions of relationships between the studied factors are determined. Then, the Cause-and-Effect Matrix of factors is constructed as presented in Table 10 by replacing each value in the Total-Influence Matrix *T* (Table 8) with the associated type of the relationship (i.e., cause, effect, none) except for the diagonal cells.

Table 10. The Cause-and-Effect Matrix of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3
A1		Cause	Cause	Cause	Cause	Cause	Cause	Cause	Cause	Cause	None	None	Cause	Cause	Cause
A2	None		None	Effect	Effect	None	None	Effect	Effect	None	None	None	Effect	None	Effect
A3	None	Cause		Cause	Cause	None	Cause	Cause	Cause	Cause	None	None	Cause	None	Cause
B1	None	None	None		None	None	None	Effect	None	None	None	None	None	None	None
B2	Cause	Cause	None	Cause		Cause	Cause	Cause	Cause	Cause	None	None	Cause	None	Cause
B3	Cause	Cause	Cause	Cause	Cause		Cause	Cause	Cause	Cause	None	None	Cause	Cause	Cause
C1	None	Effect	None	Effect	Effect	None		Effect	Effect	None	None	None	Effect	None	Effect
C2	None	None	None	Effect	None	None	None		None	None	None	None	Effect	None	None
C3	None	Effect	None	Effect	Effect	None	Effect	Effect		Effect	None	None	Effect	Effect	Effect
D1	Cause	Cause	Cause	Cause	Cause	Cause	Cause	Cause	Cause		None	Cause	Cause	Cause	Cause
D2	None	Cause	None	Cause	Cause	None	None	Cause	Cause	None		None	Cause	None	None
D3	None	Cause	None	Cause	Cause	None	Cause	Cause	Cause	None	None		Cause	None	Cause
E1	None	Effect	None	Effect	None	None	None	Effect	Effect	None	None	None		None	None
E2	None	Cause	None	Cause	Cause	None	Cause	Cause	Cause	Cause	None	None	Cause		Cause
E3	None	Effect	None	Effect	Effect	None	None	Effect	Effect	None	None	None	Effect	None	

Note: Shaded cells represent the excepted relations of each factor with itself.

In ISM's Step 2, the Cause-and-Effect Matrix (Table 10) is used to construct the SSIM presented in Table 11, following the rules shown in Table 5.

Table 11. Structural Self-Interaction Matrix (SSIM) of Factors Influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3
A1		V	V	V	X	X	V	V	V	X	O	O	V	V	V
A2			A	A	A	A	V	A	X	A	A	A	X	A	X
A3				V	V	A	V	V	V	X	O	O	V	O	V
B1					A	A	V	X	V	A	A	A	V	A	V
B2						X	V	V	V	X	A	A	V	A	V
B3							V	V	V	X	O	O	V	V	V
C1								A	X	A	O	A	A	A	A
C2									V	A	A	A	X	A	V
C3										A	A	A	X	A	X
D1											O	V	V	X	V
D2												O	V	O	O
D3													V	O	V
E1														A	V
E2															V
E3															

Note: The V, A, X, and O symbols represent the directions of relationships defined in Table 5.

In ISM's Step 3, the constructed SSIM (Table 11) is used to create the IRM presented in Table 12, using the 0 and 1 entry codes following the rules shown in Table 5. Furthermore, the driving and dependence powers of the studied factors were found by calculating the sum of rows and columns, respectively.

Table 12. Initial Reachability Matrix (IRM) of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3	Driving Power
A1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	13
A2	0	1	0	0	0	0	1	0	1	0	0	0	1	0	1	5
A3	0	1	1	1	1	0	1	1	1	1	0	0	1	0	1	10
B1	0	1	0	1	0	0	1	1	1	0	0	0	1	0	1	7
B2	1	1	0	1	1	1	1	1	1	1	0	0	1	0	1	11
B3	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	13
C1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
C2	0	1	0	1	0	0	1	1	1	0	0	0	1	0	1	7
C3	0	1	0	0	0	0	1	0	1	0	0	0	1	0	1	5
D1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
D2	0	1	0	1	1	0	0	1	1	0	1	0	1	0	0	7
D3	0	1	0	1	1	0	1	1	1	0	0	1	1	0	1	9
E1	0	1	0	0	0	0	1	1	1	0	0	0	1	0	1	6
E2	0	1	0	1	1	0	1	1	1	1	0	0	1	1	1	10
E3	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	4
Dependence Power	4	14	4	10	8	4	14	11	15	6	1	2	13	4	13	

In ISM's Step 4, the created IRM (Table 12) forms the FRM by denoting higher-order transitive relationships between the factors by the (1*) and accordingly recalculating the driving and dependence powers. The resulting FRM is presented in Table 13.

In ISM's Step 5, the resulting driving and dependence powers from the FRM (Table 13) are used to classify the studied factors by performing a MICMAC analysis. The resulting MICMAC chart presented in Figure 5 classifies the factors influencing DI into independent, linkage, and dependent factors, and no factors are classified as autonomous factors. The results show that factor D2 classifies as an independent factor influencing DI. However, the factors A1, A3, B2, B3, D1, D3, and E2 are all classified as linkage factors in influencing DI. In contrast, the factors A2, B1, C1, C2, C3, E1, and E3 are all classified as dependent factors in influencing DI. It is worth mentioning that the factors classification results of the MICMAC are consistent with the cause-and-effect classification of the DEMATEL with only one difference specific to factor D2. The MICMAC classifies the DEMATEL's cause group into the independent factor D2 and the linkage factors A1, A3, B2, B3, D1, D3, and

E2. Furthermore, the MICMAC classifies the DEMATEL's effect group of factors A2, B1, C1, C2, C3, E1, and E3 as dependent factors.

Table 13. Final Reachability Matrix (FRM) of factors influencing Destination Image (DI).

Factors	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	D2	D3	E1	E2	E3	Driving Power
A1	1	1	1	1	1	1	1	1	1	1	0	1*	1	1	1	14
A2	0	1	0	1*	0	0	1	1*	1	0	0	0	1	0	1	7
A3	1*	1	1	1	1	1*	1	1	1	1	0	1*	1	1*	1	14
B1	0	1	0	1	0	0	1	1	1	0	0	0	1	0	1	7
B2	1	1	1*	1	1	1	1	1	1	1	0	1*	1	1*	1	14
B3	1	1	1	1	1	1	1	1	1	1	0	1*	1	1	1	14
C1	0	1*	0	1*	0	0	1	1*	1	0	0	0	1*	0	1*	7
C2	0	1	0	1	0	0	1	1	1	0	0	0	1	0	1	7
C3	0	1	0	1*	0	0	1	1*	1	0	0	0	1	0	1	7
D1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	14
D2	1*	1	1*	1	1	1*	1*	1	1	1*	1	1*	1	1*	1*	15
D3	1*	1	1*	1	1	1*	1	1	1	1*	0	1	1	1*	1	14
E1	0	1	0	1*	0	0	1	1	1	0	0	0	1	0	1	7
E2	1*	1	1*	1	1	1*	1	1	1	1	0	1*	1	1	1	14
E3	0	1	0	1*	0	0	1	1*	1	0	0	0	1*	0	1	7
Dependence Power	8	15	8	15	8	8	15	15	15	8	1	8	15	8	15	

Note: 1* represents transitive relationships based on Warshall's algorithm (Warshall 1962).

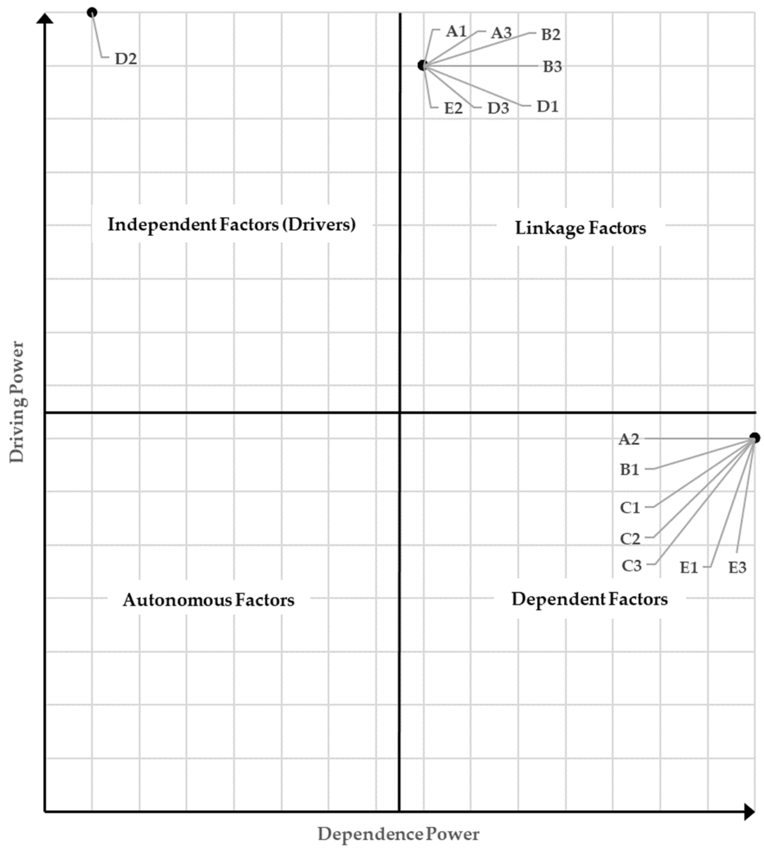

Figure 5. Cross-Impact Matrix Multiplication Applied to Classification (MICMAC) of factors influencing Destination Image (DI).

In ISM's Step 6, the formed FRM (Table 13) is used to create the PM. A summary of the formed PM is presented in Table 14. The PM classified the factor influencing DI into three levels based on each factor's reachability, antecedent, and intersection sets in three iterations.

Table 14. Summary of the Partitioning Matrix (PM) of factors influencing Destination Image (DI).

Factor	Reachability Set	Antecedent Set	Intersection Set	Level
A1	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
A2	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
A3	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
B1	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
B2	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
B3	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
C1	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
C2	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
C3	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
D1	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
D2	D2	D2	D2	III
D3	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
E1	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I
E2	A1, A3, B2, B3, D1, D3, E2	A1, A3, B2, B3, D1, D2, D3, E2	A1, A3, B2, B3, D1, D3, E2	II
E3	A2, B1, C1, C2, C3, E1, E3	A1, A2, A3, B1, B2, B3, C1, C2, C3, D1, D2, D3, E1, E2, E3	A2, B1, C1, C2, C3, E1, E3	I

In the ISM's Step 7, based on the directions of relationships between the factors influencing DI, their three partitioned levels, and their classifications found in Steps 2 to 6, the ISM digraph is built as presented in Figure 6.

Finally, as shown in Figure 2, an integrated DEMATEL-ISM model of factors influencing DI is built using the DEMATEL Causal Relations Digraph in Figure 4 and the ISM Digraph in Figure 6. The resulting integrated DEMATEL-ISM model of factors influencing DI is presented in Figure 7.

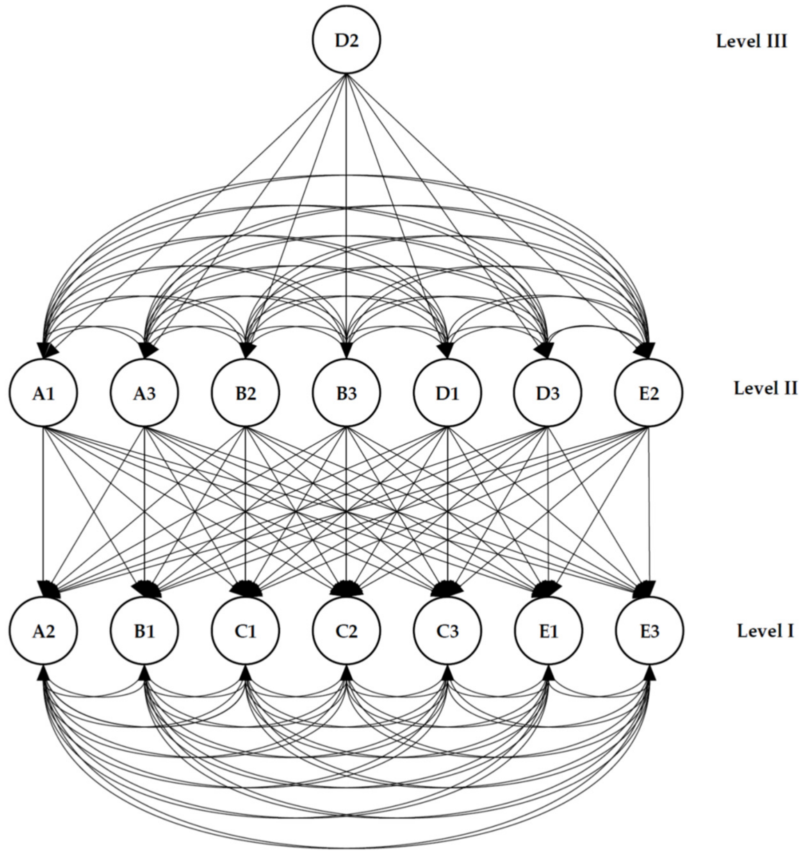

Figure 6. ISM Digraph of factors influencing Destination Image (DI).

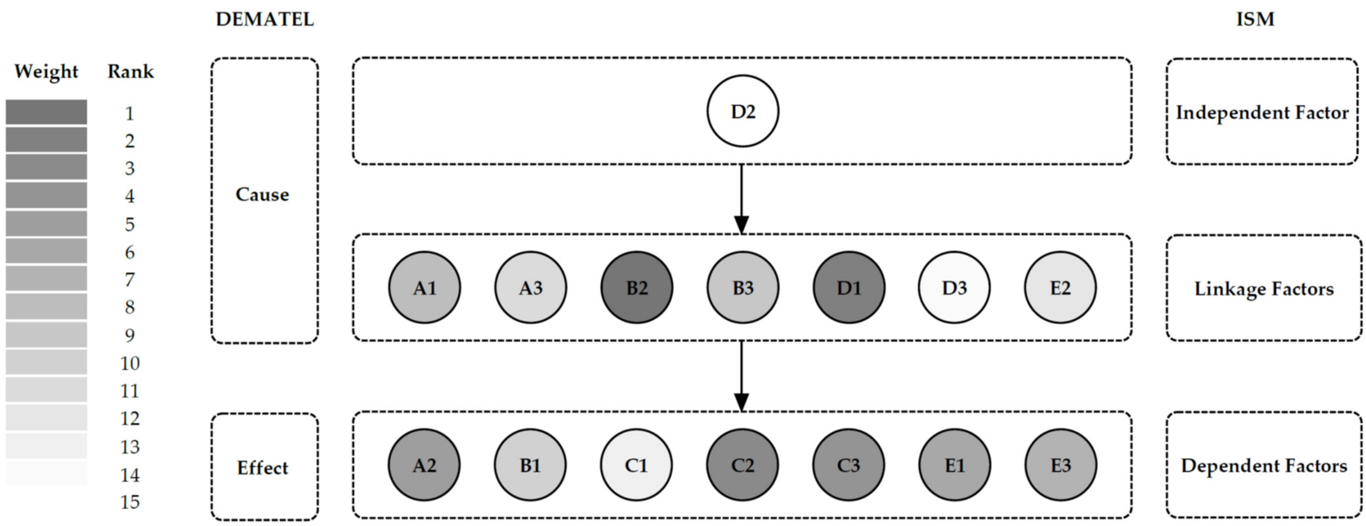

Figure 7. Integrated DEMATEL-ISM Digraph of factors influencing Destination Image (DI).

5. Discussion

This section discusses the results and insights obtained using the integrated DEMATEL-ISM approach to address the complex interrelationships and factors influencing DI. The following subsections are divided based on the distinct outcomes of the DEMATEL method, the ISM method, the MICMAC analysis, and finally, the combined result using the integrated DEMATEL-ISM approach. These methodologies have been instrumental in deciphering factors influencing DI in terms of their causal relationships, relative importance, rankings, identity, and classifications, offering a comprehensive perspective on the subject matter.

5.1. Discussion on the Results of DEMATEL

The findings of applying the DEMATEL method provide the relative importance rank of each factor and categorize the factors into cause-and-effect groups. A discussion of each category is provided in the following subsections.

5.1.1. Cause Factors in Influencing Destination Image (DI)

The developed DEMATEL model (Figure 4) classifies eight factors in the cause group, signifying their more significant influence on other factors than being affected by them. The highest rank in the cause group is for Tourism Infrastructure (B2), followed by Environment (D1), Safety and Security (A1), Information and Communication Technology (ICT) (B3), Policy Rules and Regulations (A3), Fairs, Exhibits, and Festivals (E2), Economic Development and Affluence (D3), and Political Stability (D2). Improvements in aspects related to these cause factors are essential to developing DI. Thus, tourism industry policymakers should focus on the factors that belong to the cause group on a priority basis to implement DI's effective strategy.

The developed model reveals that the Tourism Infrastructure (B2) is foundational to making a desirable tourist destination and enabling a smooth tourist experience, leading the cause category. This primary aspect includes well-connected transportation networks, hotels, and critical services coordinating a visitor's trip. It discreetly ensures a traveler's convenience and contentment. The Environment (D1), with its natural beauty, sustainability efforts, and biological diversity, is very intriguing. This aspect of the destination's landscapes, fauna, and preservation initiatives captivates guests and leaves a lasting impression. The environment's views and feeling of duty encourage tourists to protect the natural scene they visit. The Safety and Security (A1) factor, which reassures travelers' safety and security, ranks high in the developed hierarchy, indicating its crucial role in influencing a DI. This element goes beyond physical safety, fostering mental well-being that allows tourists to enjoy a destination and its ambient surroundings without fear. The fast development of Information and Communication Technology (ICT) (B3) influences DI. ICT effortlessly integrates connection, navigation, and information transmission, improving travel. Policy Rules and Regulations (A3) are also paramount to DI. This is because the travel experience is regulated by comprehensive and cohesive standards that preserve the destination's culture and nature and encourage responsible tourism, balancing tourist interests with destination identity. Fairs, Exhibits, and Festivals (E2) provide immersive cultural experiences that liven up a destination's environment. Visitors may experience the destination's traditions, art, and culture via these celebrations, leaving a long-lasting impression on tourists and deepening their connection to the destination. Economic Development and Affluence (D3) attract visitors with their riches and investment prospects. It appeals to leisure and business tourists by implying progress and enrichment. Political Stability (D2) allows for serenity and a sense of safety, providing a peaceful destination environment for tourists.

Recognizing the profound impact of these cause factors in influencing DI provides evidence that their enhancement is vital to developing DI. Therefore, it is recommended that policymakers within the tourism industry prioritize these factors when crafting and implementing strategies to shape DI. Through bolstering these influential elements, destinations can create a compelling and enduring allure that resonates with travelers worldwide, ultimately securing their position on the global stage as captivating and sought-after places to explore.

5.1.2. Effect Factors in Influencing Destination Image (DI)

The developed DEMATEL model (Figure 4) classifies the remaining seven factors in the effect group of factors influencing DI. Though not wielding the same level of influence as the cause group of factors, the effect factors play an essential role in shaping DI. Each factor interacts with others, creating a complex network of relationships that ultimately contribute to the overall understanding and dynamics of DI. The highest rank in the effect group is for Human Resources (C2), followed by Quality of Services (C3), Health and Hygiene (A2), Prices (E1), Hospitality, Friendliness, and Receptiveness (E3), Transport Infrastructure (B1), and Natural and Cultural Resources (C1). These factors are the effect of the cause group of factors. Thus, the developed model suggests that for the tourism industry policymakers to implement DI's effective strategies, they should focus on factors that belong to the cause group first, then the effect group of factors.

The availability of necessary Human Resources (C2) is a key factor in shaping DI. The workforce's competence, expertise, and commitment enable the development of the destination's unique character and appeal. The Quality of Services (C3) is another distinguishing characteristic of a destination. The standard of service delivery encompasses the care, precision in execution, and satisfaction of guests, shaping the destination's image. Health and Hygiene (A2) represents a destination's health and hygiene standards. Trust in a destination is gained when tourists know they are in a hygienically safe and healthy environment. The Cost (E1) is an important factor indicating a destination's affordability. The cost-benefit ratio influences the overall impression, affecting potential tourists' choices. Hospitality, Friendliness, and Receptiveness (E3) add the humanity dimension to the destination. The genuine friendliness and kindness of the hosting people in a destination serve as a unifying force, creating a sense of community and helping to create lasting impressions and memories. The Transport Infrastructure (B1) is an important factor highlighting the convenience of mobility and accessibility. Good public transportation allows tourists to explore attractions in a destination at their own pace. Finally, Natural and Cultural Resources (C1) feature the destination's natural and cultural assets, which should be preserved to maintain a unique DI.

From a DI perspective, encouraging and strengthening the influencing factors listed above will promote the growth of components within the effect group of factors. Therefore, industry decision-makers involved in shaping the future of the tourism sector should first focus on aspects related to the cause group of factors and then investigate those related to the effect group of factors. This is to achieve a DI that maximizes the destination's attractiveness, creating a memorable and long-lasting impression to the tourists.

5.2. Discussion on the Results of ISM

The developed ISM model presented in Figure 6 depicts a three-tier hierarchical structure, which classifies factors influencing DI into independent, linkage, and dependent factors, describing the relationships among them.

In Level III, only Political Stability (D2) is classified as an independent factor with the highest driving power and the lowest dependence power for the DI in the tourism industry. Political stability is one of the most important factors that influence DI. A destination that is perceived as being politically stable is more likely to attract tourists than a destination that is perceived as being unstable. There are several reasons why political stability is so important to the DI. First, tourists are more likely to feel safe and secure in a politically stable destination. This is important because tourists want to be able to relax and enjoy their vacation without having to worry about their safety. Second, political stability can create a sense of confidence in the destination's future. This is important because tourists want to be sure that the destination will still be a desirable place to visit in the future. Third, political stability can attract investment in the destination. This is important because investment can help improve the destination's infrastructure and attractions, further enhancing the destination's image. Several studies have found that political stability is a significant factor in the DI. For example, the study by Stylidis et al. (2022) found that political stability positively impacted a destination's DI. The study found that tourists were more likely to have a positive image of a destination that was perceived as being politically stable. Another study by Assaker and O'Connor (2021) found that political stability was one of the most important factors influencing DI among tourists.

In Level II, Safety and Security (A1), Policy Rules and Regulations (A3), Tourism Infrastructure (B2), Information and Communication Technology (ICT) (B3), Environment

(D1), Economic Development and Affluence (D3), and Fairs, Exhibits, Festivals (E2) are classified as linkage factors.

In Level I, Health and Hygiene (A2), Transport Infrastructure (Air, Road, Railways, and port) (B1), Natural and Cultural Resources (C1), Human Resources (C2), Quality of Services (C3), Prices (E1), and Hospitality, Friendliness, and Receptiveness (E3) belong to this category and are classified as dependent factors. It is essential to highlight that factors at this level have high dependence and low driving power. Hence, ISM analysis ranked factors of DI based on their driving and dependence power.

The ISM model has some implications for destination marketing and decision-makers in the tourism industry. First, it suggests that they should focus on enablers and intermediaries. These are the factors that have the most significant impact on DI. Second, destination marketers should work to create a positive DI. This could be achieved by addressing important tourism factors such as safety and security, natural and cultural resources, and hospitality. The ISM model is a valuable tool for destination marketers. It can be used to improve the understanding of the factors that influence DI and to develop strategies for improving it. The derived ISM model intricately portrays the interplay of enablers, intermediaries, and outcomes, unraveling the multifaceted dynamics governing DI formation in the tourism industry. This structured framework empowers stakeholders to discern and strategize the influence of various factors, ultimately enhancing a destination's allure and perception.

MICMAC analysis categorizes factors into four clusters based on their driving and dependence powers (Figure 5), providing fruitful insights regarding their role in influencing DI.

The autonomous cluster represents factors that have weak dependence and driving power. In this study, no factor was classified under this cluster, indicating the importance of each factor in the overall system. Hence, the absence of autonomous factors indicates that the studied factors are contextually significant to influencing the DI.

The independent cluster signifies factors having high driving power and weak dependence. Political Stability (D2) belongs to this cluster; thus, it corroborated earlier studies (Medvedeva 2021; Kuok et al. 2023) that suggested the importance of political stability for DI has been demonstrated in several studies. They found that political stability is among the most important factors influencing tourists' destination choices. The study found that tourists are more likely to visit destinations that are perceived as being politically stable. Political stability in the independent cluster of factors influencing DI suggests that it is a foundational enabler for other factors to thrive. A stable political environment forms the bedrock upon which other aspects, such as economic development, safety, and infrastructure, can be developed.

The linkages cluster refers to highly critical factors with high dependence and driving powers. Safety and Security (A1), Policy Rules and Regulations (A3), Tourism Infrastructure (B2), Information and Communication Technology (ICT) (B3), Environment (D1), Economic Development and Affluence (D3), and Fairs, Exhibits, and Festivals (E2) fell into this cluster. Any actions on these factors can bring changes in other factors and feedback on themselves. Thus, close attention to these factors is critical to developing DI. The intricate interdependencies within the linkages cluster signify that any action taken to enhance or modify these factors reverberates across the broader system, triggering a chain reaction of changes. Moreover, these factors possess the capacity to influence one another and even impact themselves, creating intricate feedback loops that contribute to the dynamic evolution of DI. This underscores the complexity and interconnectedness of the factors that collectively shape the image of a tourist destination. Scholars have emphasized the significance of these interconnections and the role of various factors in influencing DI. For instance, Haarhoff (2018) highlight the importance of environmental factors in creating a positive image of a destination. Navarrete-Hernandez and Zegras (2023) stress the influence of infrastructure on tourists' perceptions. In light of these findings, it becomes evident that a keen and attentive focus on the elements encapsulated within the Linkages cluster is paramount. Developing a holistic and strategic approach to manage and enhance Safety and Security, Tourism Infrastructure, Information and Communication Technology, Environment, Economic Development and Affluence, and the dimensions of Hospitality, Friendliness, and Receptiveness is essential for crafting a captivating and compelling DI.

The dependent cluster refers to factors with weak driving powers and strong dependency on other factors. Hospitality, Friendliness, and Receptiveness (E3), Prices (E1), Quality of Services (C3), Human Resources (C2), Natural and Cultural Resources (C1), Transport Infrastructure (B1), and Health and Hygiene (A2), fell under this cluster. The findings from the dependent cluster emphasize the interconnectedness of these factors and their pivotal role in shaping the perception of a tourism destination. It underscores that while these factors may not independently significantly drive DI, their collective influence and interdependency hold the key to creating a compelling and captivating DI.

5.3. The Developed DEMATEL-ISM Model of Factors Influencing DI

The developed integrated DEMATEL-ISM model of factors influencing DI illustrated in the digraph (Figure 7) shows the combined results of the DEMATEL and ISM methodologies. The developed model shows the relationships between the factors, with arrows indicating the direction of influence. The model also classifies the factors into cause-and-effect groups based on the DEMATEL results and into three groups: independent, linkage, and dependent factor groups based on the ISM results. The cause group of factors includes the independent and linkage factors of the model. The independent factors create the foundation of the causal network in influencing DI. The independent factors influence the linkage factors and influence the dependent factors. The dependent factors are also classified as the effect group of factors.

The developed model shows that political stability is foundational to creating a positive DI. Political stability in a destination must first exist to enable providing the necessary safety and security, policy rules and regulations, tourism infrastructure, ICT, environment, economic development and affluence, and fairs, exhibits, and festivals in a destination. Furthermore, the model shows that once those are made available in a destination, other essential factors are enabled. Such factors are health and hygiene, transport infrastructure (air, road, railways, and port), natural and cultural resources, human resources, quality of services, prices, hospitality, friendliness, and receptiveness in a destination. The developed model provides a valuable framework for decision-makers in the tourism industry on factors influencing DI. This is through understanding these factors in terms of their causal identities, relationship directions among them, their relative importance, and priorities in improving DI.

In conclusion, the developed DEMATEL-ISM model provides valuable insights into the factors influencing DI. This is through the comprehensive analysis of causal and directional relationships, relative importance, rankings, and classifications and structures. By prioritizing the enhancement of these factors, policymakers can develop effective strategies that shape DI, ultimately positioning destinations as attractive and desirable places for global travelers. Additionally, the developed model provides further insights into the specific factors influencing DI and their interrelationships. The findings underscore the importance of political stability, safety and security, natural and cultural resources, and hospitality in shaping DI. By considering these factors and their interdependencies, destination marketers and decision-makers can develop targeted strategies to enhance DI and create a compelling and captivating image for tourism destinations.

In summary, the developed DEMATEL-ISM model and the insights gained have successfully achieved the research objectives of understanding and identifying the key factors influencing DI in the tourism industry. These findings serve as a solid foundation for future research endeavors and practical applications in destination marketing, empowering decision-makers to make informed choices and implement strategies that enhance DI for their destinations.

6. Conclusions

This research study aimed to model the factors influencing DI in the tourism industry. A total of fifteen influencing factors fall under five dimensions related to experience, infrastructure, services, perception, and cognitive image, which were extracted from the literature. Data on the influencing factors were collected from ten tourism industry experts. An integrated DEMATEL-ISM modeling approach was adopted for the modeling process. The modeling process was performed in two main analysis phases. The first analysis phase was for the DEMATEL method, and the second was for the ISM method. The DEMATEL method revealed the interrelationships between the factors, their causal effects, relative importance weights, ranks, and their causal structure. The ISM method revealed the classifications of factors based on their driving and dependence powers and levels and their interpretive structure. Finally, an integrated DEMATEL-ISM model was built, classifying the factors into cause-and-effect groups, dividing their interpretive structure into three levels, and showing their importance rankings in influencing destination image. The study results revealed that political stability in a destination is foundational to other aspects of the destination's image. Then, factors related to providing the necessary safety and security, policy rules and regulations, tourism infrastructure, information and communication technologies, environment, economic development and affluence, and fairs, exhibits, and festivals in a destination should be considered. These factors affect others related to health and hygiene, transport infrastructure, natural and cultural resources, human resources, quality of services, prices, hospitality, friendliness, and receptiveness aspects in a destination.

The study's theoretical implications include the integrated DEMATEL-ISM approach and the factors influencing DI. The practical implication of the study consists of providing a valuable framework for decision-makers in the tourism industry to enhance and shape the DI. This is through designing enhancement action plans that prioritize improving aspects in a particular destination based on the developed model of factors influencing the DI. This study adds to the literature on tourist DI using the integrated approach. Furthermore, the developed model in this study is not limited to a single region or a particular destination, as the identified influencing factors are universal and might affect the DI anywhere. In addition, the developed model provides a conceptual framework with insights into destination policymakers and promoters to manage better and improve their plans for marketing and advertising their tourism destinations. It assists in developing better sustainable tourism policies, improving destination competitiveness and tourist experiences through a deeper understanding of the factors that shape tourists' perceptions of a destination.

Although the factors and dimensions used in this study cover most factors influencing DI, other emerging dimensions and factors influencing DI might need further research. Additionally, conducting the study using input data from a different and larger expert panel and other modeling methods might further emphasize the developed model and the reached conclusions in this study or provide additional insights into the subject matter. Furthermore, this study focuses on studying factors shaping DI from the perspective of experts and decision-makers in the tourism industry, not from the tourists' perspective. However, factors influencing DI from the perspective of tourists might differ, and their opinions about them could also be different before or after visiting a destination. Thus, studying factors shaping DI from the tourists' perspective is also a future research endeavor.

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Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Tourism industry experts' profiles.

Expert Number	Qualification	Specialty	Occupational Sector	Years of Experience
1	Ph.D.	Tourism Management	University Professor	20
2	Master's degree	Hospitality Management	Ministry of Tourism	15
3	Ph.D.	Tourism Management	Tourism Development Fund	12
4	Bachelor's degree	Tourism	Ministry of Tourism	10
5	Ph.D.	Tourism Management	Tourism Authority	7
6	Master's degree	Hospitality Management	Tourism Development Council	6
7	Bachelor's degree	Tourism	Ministry of Tourism	6
8	Diploma	Travel and Tourism	Tourism Development Council	5
9	Bachelor's degree	Tourism	Tourism Authority	4
10	Certificate	Tourism	Tourism Development Fund	3

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