Competitiveness and tourism GDP in Magic Towns: an analysis based on the theory of forgotten effects

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Abstract

The magic towns of Mexico require strategies that help them to face competition and influence the economic development of the country and the tourism sector itself. Therefore, the aim of this paper is to evaluate the relationship between tourism competitiveness and tourism GDP in the magic towns, in order to identify direct and indirect effects of the phenomenon from the perspective of experts. To respond to this approach made, the theory of forgotten effects proposed by Kaufmann & Aluja in 1988 was used. In order to apply the forgotten effects, 25 experts from different countries and knowledgeable about the "Pueblos Mágicos" programme evaluated the cause-effect relationships. A close relationship was observed between natural and cultural resources and stock market, exchange and investment activities. A strong relationship was also found between accessibility to the destination, tourism infrastructure and complementary tourism services with photography and videography services. Finally, a relationship was found between natural resources and retail trade. These relationships suggest that investment in natural and cultural resources, improved accessibility, tourism infrastructure and the promotion of complementary tourism services can have a positive impact on the local economy. Prior to the present work, an evaluation between the two aforementioned variables (tourism competitiveness and tourism GDP) in Magic Towns had not been performed. With the results obtained, the cause-effect relationships of the phenomenon under study were made visible, both direct and indirect relationships, thus being able to obtain a complete picture and in fact, facilitate both decision-making and the generation of strategies that seek to improve these tourist destinations.

Keywords Tourism competitiveness · GDP · Magic towns programme · Forgotten effects · Expertons

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1 Introduction

Tourism has become one of the most important and progressive economic sectors in the world. According to data from the World Tourism Organization (UNWTO, 2019 and 2024), tourist arrivals increased from 25 million in 1950 to 1,461 million in 2019 and income in dollars increased from 2,000 million in 1950 to 1,503,000 million in 2019; 2019 has been taken as the reference year as it is the year with the highest number of tourist arrivals and tourism receipts, as by 2020 this sector experienced a drastic fall due to the Covid-19 pandemic. The year 2023 closed with tourist arrivals of 1,326 million and tourism revenues of 1,342,000 million dollars, data that showed a significant recovery of the sector after the pandemic, but that still do not reach the levels of 2019, they are closer to the results of 2017. Mexico is in the Americas region, which is the second best performing region in the travel and tourism ranking, only behind Europe, but unlike Europe, which depends mostly on its cultural resources, the Americas region depends mainly on its natural resources. In particular, in the North American sub-region, solid results were observed in Mexico and Canada (SECTUR, 2019); regarding the Travel & Tourism Competitiveness Index (WEF, 2017), Mexico ranks first, together with Brazil in the Americas region.

The trends that are experienced in the tourism market make it necessary to propose processes for the renewal of destinations and to increase their competitiveness. In Mexico, the development of tourist destinations is limited due to the lack of competitive conditions, particularly in Mexican destinations known as "pueblos mágicos" (magic towns). The level of tourism competitiveness and the factors that determine it are unknown, as well as the contribution made by these destinations to GDP and the tourism competitiveness - tourism GDP relationship.

Mexico´s magic towns are localities with emblematic attributes and socio-cultural manifestations, which as a whole, represent an interesting opportunity for tourism activity (SECTUR, 2001). As a programme, the Ministry of Tourism seeks to take advantage of the rich heritage of these localities (López 2018), while diversifying inland tourism in Mexico (Núñez and Ettinger 2020). The Magic Towns program raises the possibility of benefiting small towns that had been left out of the tourism sector and opens up the opportunity to also recover the cultural, festive, gastronomic, natural, artistic, historical heritage and even the proposal and management capacities of some local groups (Flores-Romero et al., 2021a). According to the Ministry of Tourism (2024), the share of tourism gross census value added of the pueblos mágicos in 2018 was 0.12% in the economy in general and 1.12% in tourism in particular, with an average annual growth rate from 2003 to 2018 of 2.98% in tourism alone.

Despite the fact that the Pueblos Mágicos programme has been in existence for more than two decades, according to data from the Ministry of Tourism, the Pueblos Mágicos have a very small share in the Mexican economy (0.12% in 2018). In order to make tourism a component of economic development, tourism competitiveness is required as a key instrument (Miguel et al. 2014; Sánchez 2012; Pulido & Sánchez 2010); furthermore, it is known that greater tourism competitiveness favours greater tourism growth of destinations, allows for the improvement of well-being and generates economic development (García and Siles 2015a). Mexico's Pueblos Mágicos as tourist destinations have characteristics that make them unique, so in order to be able to generalise to them what was previously mentioned

regarding competitiveness and economic development, it is necessary to study this fact in such destinations.

Therefore, the following research question has been raised: What is the relationship between the tourism competitiveness of Mexico's magic towns and the tourism GDP they generate? The aim of this paper is to evaluate the relationship between the tourism competitiveness of the magic towns and their tourism GDP using the theory of forgotten effects, in order to identify direct and indirect impacts surrounding this phenomenon. The Forgotten Effects Theory was used in this research because it allows us to see the cause-effect relationship between the study variables by integrating logical reasoning, which favours decision making reduced in uncertainty. The structure of the paper is as follows: Sect. 2 shows the theoretical and conceptual framework guiding this research. Section 3 describes the methodology, mentioning the theory of forgotten effects and how it was applied in the study. Section 4 outlines the main results found. Finally, Sect. 5 takes up the main findings and presents the conclusions of the study.

2 Theoretical and conceptual framework

This section addresses the concepts of tourism competitiveness and tourism GDP.

2.1 Tourism competitiveness

Competitiveness emerged as a new paradigm to understand the differences in the economic development of countries and regions (López 2008). Tourist destinations offer broad possibilities for economic development, so particularly in tourism research, competitiveness emerged in 1990 (Ritchie and Crouch 2003), and is defined as the capability of a place to optimise its attractiveness both for residents and non-residents, to offer quality, innovative and attractive tourism services, while ensuring that the resources that support tourism are used efficiently and sustainably (Dupeyras & MacCallum, 2003).

There are several factors that influence the competitiveness of a destination (Villa-Hernández et al. 2013; Alonso 2010), in other words, tourism competitiveness is considered multifactorial or multidimensional. It is precisely from its multidimensional aspect that competitiveness can be analysed from different approaches (Botero 2014). For the purposes of this paper, the 7 dimensions of tourism competitiveness shown in Table 1 are considered dimensions of competitiveness.

Tourism competitiveness as a line of research has been studied worldwide from different perspectives, some works are those carried out by Salazar & Espinoza (2022) in cocoa

	Id	Dimensions
Table 1 Dimensions of tourism competitiveness	a1	Natural resources
	a2	Cultural resources
	a3	Tourism infrastructure
Source own elaboration based on Dwyer and Kim (2003); Sánchez (2006)García and Siles (2015a, b); Castellanos et al. (2014); Alonso (2010)	a4	Events
	a5	Complementary tourism services
	a6	General infrastructure
	a7	Accesibility to the destination

routes in Ecuador, Serrano et al. (2021) in Boyacá, Colombia, Hanafiah and Zulkifly (2019) for the 115 nations that make up the Travel and Tourism Competitiveness Index, Armenski et al. (2017) in Serbia, Andrades and Dimanche (2017) in Russia, Amaya et al. (2017) in Mexico, Garcia & Siles (2015a), as well as Rodrigues and Carrasqueira (2011) in Decasper (2014) in Argentina, Cucculelli and Goffi (2016) in Italy, Castellanos et al. (2014) in Cuba, Leung and Baloglu (2013) in Asian countries, Bolaky (2011) in the Caribbean, Gandara et al. (2013) and Pascarella and Fontes (2010) in Brazil, to name a few. In particular, the tourism competitiveness of Mexico's Pueblos Mágicos has been analysed by Pérez-Romero et al. (2023), who created a tourism competitiveness index for these destinations based on inherited, created and supporting resources, and by using an exploratory factor analysis.

2.2 Tourism GDP

Tourism GDP is defined as the total value of goods and services purchased directly by visitors to a country (SECTUR, 2014); there are two main components: goods and services. Within the goods category are handicrafts and other goods. Services include transport services (air passenger, rail passenger, water passenger, road passenger), transport-related services, transport equipment rental services, travel agencies and other booking services, support services, cultural services, sports and recreational services, visitor accommodation services (in traditional establishments, in holiday home ownership, in the homes of relatives and friends), restaurants, bars and nightclubs, other services (tourist trade, local transport, information services, financial services, real estate and rental services, professional services, health services and non-consumer products and others) (INEGI, 2019).

In the case of Mexico, INEGI estimates tourism production at national and state level through the sum of the production of each of the activities characteristic of tourism. Based on the above, this paper considers the economic activities that make up tourism GDP, which are shown in Table 2.

Table 2 Economic activities of tourism GDP

Id	Dimension
b1	Retail trade
b2	Transport
b3	Film, video and sound industry
b4	Stock Exchange, foreign Exchange and investment activities
b5	Real estate services and rental of movable and intangible property
b6	Photographic and video recording services
b7	Business support services
b8	Educational services
b9	Cultural and sporting entertainment and other recreational services
b10	Temporary accommodation services and food and beverage preparation services
b11	Other services except governmental activities

Source own elaboration based on INEGI (2018)

Table 3 Endecadary scale

Grade	Meaning
0	No impact
0.1	Virtually no impact
0.2	Almost no impact
0.3	Very low impact
0.4	Has a low incidence
0.5	Medium impact
0.6	Significant incidence
0.7	Fairly high incidence
0.8	Has a high incidence
0.9	Has a very high incidence
1	Has the highest incidence

Source Kaufmann and Gil-Aluja (1988)

3 Metodologhy

Kaufmann & Aluja (1988) state that all the events surrounding us are part of a system or subsystem, assuring that any activity is subject to some kind of cause-effect incidence. However, causal relationships are not always evident (Gil-Lafuente et al. 2015), it is possible for them to remain hidden due to the fact that they are effects on effects and therefore, accumulate causes that are provoked by them; in this way, there is the possibility of omitting some of them voluntarily or involuntarily (Saldaña and Guamán 2019). The Forgotten Effects Theory, proposed by Kaufmann & Aluja in 1988, makes it possible to obtain the direct and indirect relationships of the analysed phenomena (Alfaro-Calderón 2022), minimising possible errors or omissions (Gil-Lafuente et al. 2015), as it helps to identify variables and relationships that remain hidden in a given phenomenon (Flores-Romero et al. 2021b).(Table 3)

The Forgotten Effects Theory is based on the idea that the decisions we make may have unintended consequences that are not immediately obvious. A matrix called the forgotten effects matrix is used to assess the relationships between different variables, allowing decision-makers to consider a wider range of possible consequences when making decisions. The main advantage of the Forgotten Effects Theory is that it combines expert opinion with a robust mathematical procedure (García-Orozco et al. 2021), which allows for more complete and informed decision-making, helps to avoid unintended consequences and promotes a more holistic view of problems. Among the limitations that can be mentioned is that the construction of the forgotten effects matrix can be complex and time-consuming, in addition to the fact that it is not able to accurately predict the consequences of decisions.

The Forgotten Effects Theory can be used to solve management problems in the political and financial sphere, in determining the business image and objectives of the company (Kaufmann & Aluja, 1988). Specifically, it has been used to evaluate the relationship between educational objectives and learning outcomes at the Catholic University of Cuenca in Ecuador (Cabrera-Mejía et al. 2020); to determine the liquidity of companies in the commercial sector Cuenca-Ecuador (Illescas et al., 2023); to identify cause-effect relationships between variables affecting countries and changes caused by the COVID-19 pandemic (Barcellos-Paula et al. 2022); to quantify the effects of the results of the innovation pillars on the innovation capabilities of a region (Alfaro-Calderón et al. 2020), to mention just some of its applications.

For the application of the Theory of Forgotten Effects in the present work, the competitiveness dimensions were considered causes (see Table 1) and the economic activities of tourism GDP were considered effects (see Table 2), which are expressed in the two sets of elements shown below:

$$A = \left\{ a_i \big/_i = 1, 2, \ldots, n \right\} : Suddimensions\ of\ Tourism\ Competitiveness$$

$$B = \left\{ b_i \big/_j = 1, 2, \ldots, m \right\} : Economic\ activities\ that\ make\ up\ tourism\ GDP$$

Based on the results obtained from the evaluation carried out by the experts, 3 expertons (M, A and B) were formed. Matrix M is made up of the estimates made regarding the effects that the elements of set A exert on the elements of set B and is defined as the direct incidence matrix; matrix A is made up of the incidence relationships that occur between the causes and matrix B is made up of the incidence relationships generated by the effects (Gil-Lafuente et al. 2020).

The matrices M, A and B were convolved (A ∘ M ∘ B) to obtain M*. M* represents all the initial causal relationships affected by the possible intervening incidence of some cause or some effect (Alfaro-Calderón 2022). Finally, the forgotten effects matrix (O) was calculated using the formula O=M*-M (Flores-Romero et al. 2021b). The O matrix shows the difference between the second-generation effects matrix and the direct incidence matrix, whose result allows us to know the degree to which some causal relationships have been forgotten or ignored (Gil-Lafuente et al. 2020).

Excel software was used to concentrate the results of the experts' evaluation and obtain the expertons, then FuzzyLog software was used to calculate the forgotten effects and generate the images presented below.

4 Results

Table 4 shows matrix M, i.e. the matrix of incidences or direct relationships between the dimensions of tourism competitiveness (causes) and the economic activities of tourism GDP (effects).

Table 5 below shows the incidence of each of the causes on the rest (Matrix A). It can be seen that the incidence of each element on itself has a value of 1, which means the maximum incidence.

Table 4 Cause-effect matrix. Direct relation

Cause/Effect	e1	e2	e3	e4	e5	e6	e7	e8	e9	e10	e11
a1	0.51	0.68	0.58	0.36	0.60	0.57	0.56	0.55	0.68	0.73	0.57
a2	0.61	0.68	0.69	0.41	0.63	0.63	0.62	0.68	0.81	0.80	0.64
a3	0.71	0.89	0.63	0.57	0.75	0.59	0.76	0.63	0.81	0.91	0.69
a4	0.73	0.73	0.68	0.54	0.79	0.72	0.74	0.58	0.81	0.85	0.67
a5	0.69	0.73	0.53	0.54	0.62	0.50	0.67	0.56	0.67	0.72	0.64
a6	0.76	0.83	0.56	0.58	0.67	0.50	0.66	0.65	0.75	0.79	0.71
a7	0.70	0.93	0.58	0.47	0.69	0.49	0.65	0.63	0.71	0.82	0.65

Source Own elaboration

Table 5 Matrix of relationships between the sub-dimensions of Tourism Competitiveness

Cause/Cause	a1	a2	a3	a4	a5	a6	a7
a1	1.00	0.72	0.71	0.58	0.65	0.68	0.75
a2	0.71	1.00	0.78	0.81	0.71	0.72	0.77
a3	0.74	0.76	1.00	0.82	0.80	0.83	0.88
a4	0.59	0.79	0.80	1.00	0.76	0.77	0.84
a5	0.62	0.70	0.77	0.77	1.00	0.77	0.77
a6	0.65	0.67	0.84	0.77	0.77	1.00	0.83
a7	0.71	0.72	0.88	0.85	0.77	0.83	1.00

Source Own elaboration

Table 6 Matrix of relationships between the economic activities that make up the GDPT

Effect/Effect	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11
b1	1.00	0.71	0.50	0.58	0.52	0.48	0.56	0.51	0.56	0.65	0.55
b2	0.72	1.00	0.51	0.47	0.63	0.48	0.63	0.66	0.73	0.76	0.67
b3	0.52	0.55	1.00	0.40	0.46	0.70	0.58	0.44	0.61	0.59	0.52
b4	0.61	0.52	0.41	1.00	0.64	0.42	0.60	0.50	0.52	0.54	0.56
b5	0.55	0.65	0.45	0.63	1.00	0.46	0.56	0.52	0.59	0.71	0.58
b6	0.45	0.47	0.71	0.40	0.45	1.00	0.50	0.49	0.59	0.53	0.50
b7	0.59	0.67	0.57	0.61	0.61	0.47	1.00	0.52	0.63	0.71	0.62
b8	0.58	0.67	0.43	0.47	0.48	0.48	0.48	1.00	0.65	0.63	0.62
b9	0.63	0.74	0.61	0.55	0.64	0.59	0.64	0.67	1.00	0.74	0.60
b10	0.69	0.76	0.55	0.53	0.71	0.54	0.65	0.62	0.73	1.00	0.60
b11	0.54	0.67	0.49	0.53	0.58	0.50	0.57	0.64	0.58	0.61	1.00

Source Own elaboration

Table 7 Matrix of second order incidents

Matrix AMB	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11
a1	0.72	0.75	0.69	0.63	0.71	0.69	0.71	0.68	0.73	0.75	0.69
a2	0.73	0.78	0.71	0.63	0.79	0.72	0.76	0.68	0.81	0.81	0.71
a3	0.76	0.89	0.71	0.63	0.79	0.72	0.76	0.68	0.81	0.91	0.71
a4	0.76	0.84	0.71	0.63	0.79	0.72	0.76	0.68	0.81	0.85	0.71
a5	0.76	0.77	0.71	0.63	0.77	0.72	0.76	0.68	0.77	0.77	0.71
a6	0.76	0.84	0.71	0.63	0.77	0.72	0.76	0.67	0.81	0.84	0.71
a7	0.76	0.93	0.71	0.63	0.79	0.72	0.76	0.68	0.81	0.88	0.71

Source Own elaboration

Subsequently, Table 6 shows the incidences of each one of the effects on the rest of the effects (Matrix B). In the same way as in the previous table, the incidence that each element has on itself has the maximum incidence, so a diagonal with values of 1 can be observed.

Next, the second-order incidence matrix (M*) was obtained, which is shown in Table 7 and arises from the convolution between matrices A, M and B, i.e. the convolution of the direct incidence matrix with the matrix of relationships between the sub-dimensions of competitiveness (Cause - Cause) and in turn, with the matrix of relationships between the economic activities of GDPT (Effect - Effect).

Table 8 Matrix of forgotten effects

Cause-Effect	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10	b11
a1	0.21	0.08	0.11	0.27	0.11	0.12	0.16	0.13	0.05	0.03	0.12
a2	0.12	0.11	0.02	0.22	0.16	0.09	0.15	0.00	0.00	0.01	0.08
a3	0.05	0.00	0.08	0.05	0.04	0.13	0.00	0.05	0.00	0.00	0.02
a4	0.02	0.11	0.03	0.09	0.00	0.00	0.03	0.10	0.00	0.00	0.04
a5	0.07	0.04	0.18	0.09	0.15	0.22	0.10	0.12	0.11	0.05	0.07
a6	0.00	0.01	0.15	0.05	0.11	0.22	0.11	0.02	0.07	0.05	0.00
a7	0.05	0.00	0.13	0.16	0.10	0.23	0.12	0.05	0.11	0.07	0.06

Source Own elaboration

Table 9 Major forgotten effects

Cause	Effect	Initial value	Accumulated value	Forgotten effect
a1	b4	$\mu_i\,(a1 \rightarrow b4) = 0.36$	$\mu_a\,(a1 \rightarrow b4) = 0.63$	0.27
a2	b4	$\mu_i\,(a2 \rightarrow b4) = 0.41$	$\mu_a\,(a2 \rightarrow b4) = 0.63$	0.22
a7	b6	$\mu_i\,(a7 \rightarrow b6) = 0.49$	$\mu_a\,(a7 \rightarrow b6) = 0.72$	0.23
a6	b6	$\mu_i\,(a6 \rightarrow b6) = 0.50$	$\mu_a\,(a6 \rightarrow b6) = 0.72$	0.22
a5	b6	$\mu_i\,(a5 \rightarrow b6) = 0.50$	$\mu_a\,(a5 \rightarrow b6) = 0.72$	0.22
a1	b1	$\mu_i\,(a1 \rightarrow b1) = 0.51$	$\mu_a\,(a1 \rightarrow b1) = 0.72$	0.21

Source Own elaboration

Finally, Table 8 shows the forgotten effects, obtained from the absolute difference between the direct effects (cause-effect matrix, Table 4) and the second-order incidence matrix (Table 7).

The above table highlights the influence of the variables natural resources (a1), cultural resources (a2), complementary tourism services (a5), general infrastructure (a6) and accessibility to the destination (a7), with indirect effects on some of the economic activities of the GDPT such as retail trade (b1), stock exchange, foreign exchange and investment activities (b4), as well as photographic and video recording services (b6), being the relationships that show the forgotten effects with the highest values in the table. Table 9 below shows in detail the major forgotten effects between tourism competitiveness and tourism GDP in Mexican towns with the "Pueblo Mágico" designation, showing the initial assessment, the actual assessment obtained from the maximum convolution and the forgotten effect.

A deeper analysis of the relationship between natural resources (cause) and stock market, foreign exchange and investment activities (effect) shows that the experts had evaluated this relationship at 0.36; however, when evaluating the second-order relationships, a real value of 0.63, originated by 4 different situations was found: in the first case, cultural resources as well as real estate services and rental of movable and intangible property exert an effect between the relationship of natural resources - stock exchange, foreign exchange and investment activities, see Fig. 1; in the second case, it is tourism infrastructure together with real estate services and rental of movable and intangible property, see Fig. 2; in the third case, the influence is given by the general infrastructure together with real estate services and rental of movable and intangible property, see Fig. 3; finally, in the fourth case, accessibility
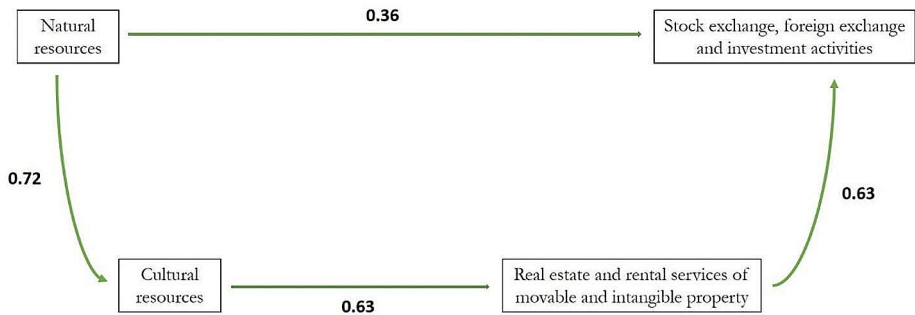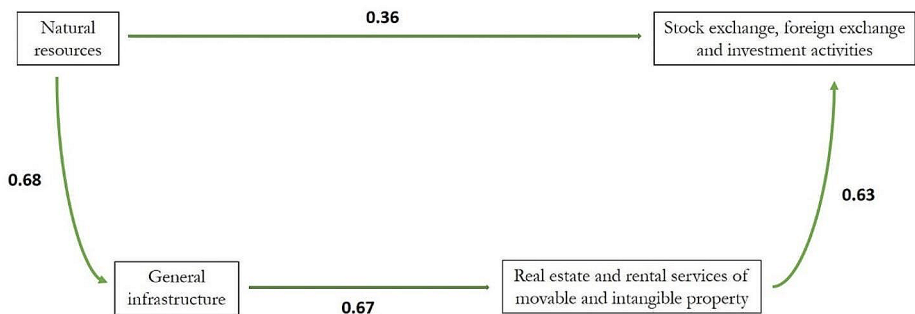
Fig. 1 Forgotten effect in the relationship between natural resources (cause) and stock market, exchange and investment activities (effect). Case 1
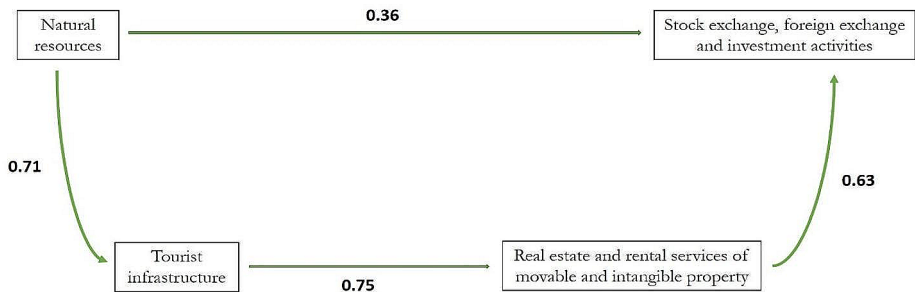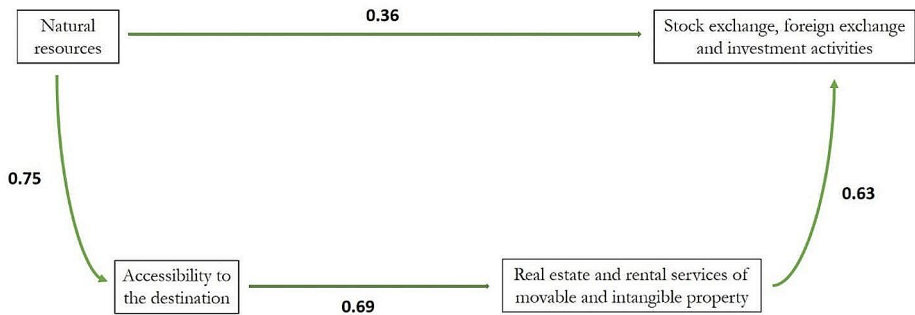

Fig. 2 Forgotten effect in the relationship between natural resources (cause) and stock market, exchange and investment activities (effect). case 2
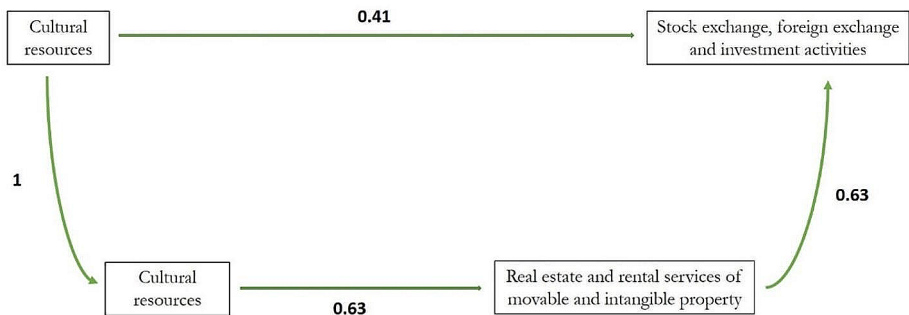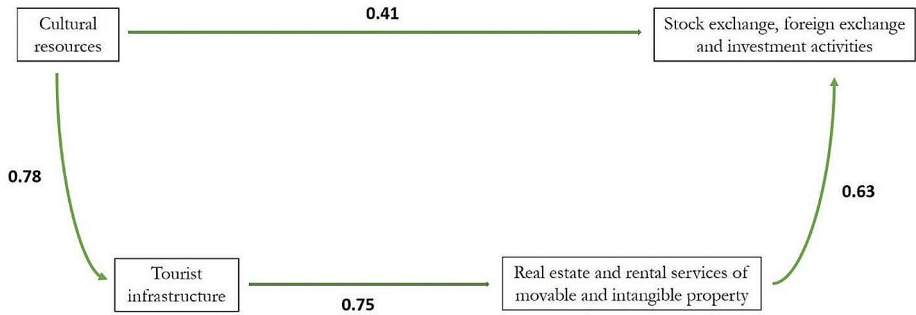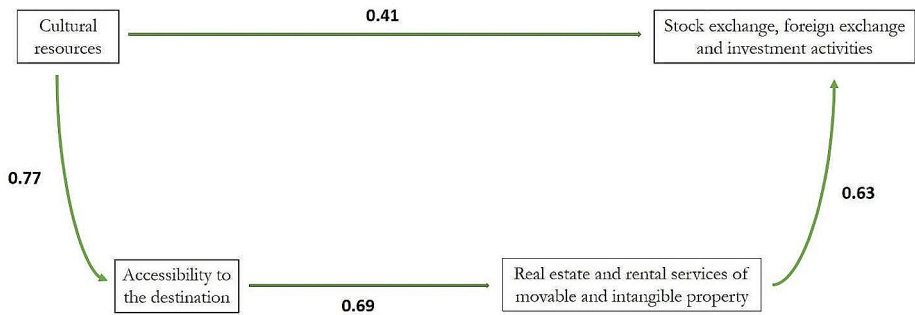

Fig. 3 Forgotten effect in the relationship between natural resources (cause) and stock market, exchange and investment activities (effect). case 3

to the destination and real estate services and rental of movable and intangible property are present, see Fig. 4.

Regarding the relationship cultural resources - stock market, foreign exchange and investment activities, it had also been underestimated by the experts (0.41), but when observing

Fig. 4 Forgotten effect in the relationship between natural resources (cause) and stock market, exchange and investment activities (effect). case 4
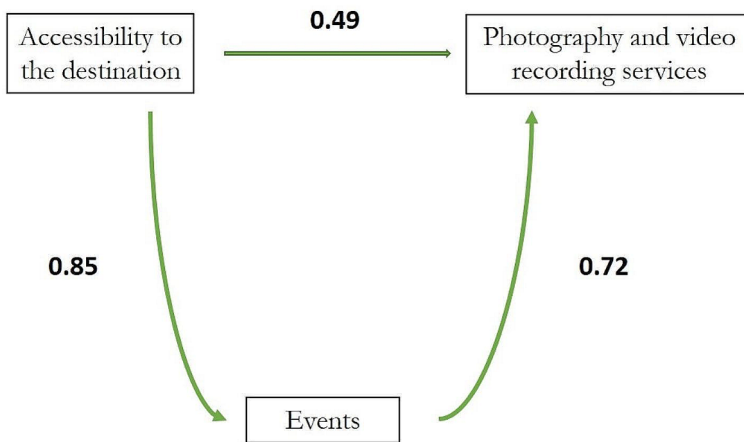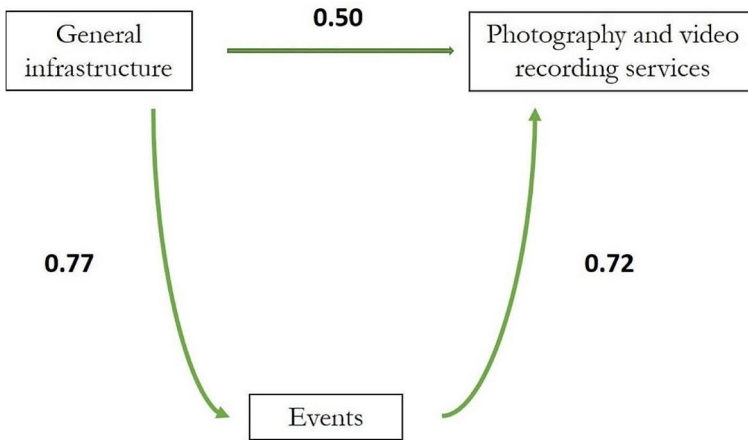

Fig. 5 Forgotten effect in the relationship between cultural resources (cause) and stock market, exchange and investment activities (effect). Case 1

the second-order relationships, this relationship has a real value of 0 63, caused by the indirect effect of cultural resources (Case 1), see Fig. 5; tourism infrastructure (Case 2), see Fig. 6; events (Case 3), see Fig. 7; general infrastructure (Case 4), see Fig. 8; and finally, accessibility to the destination (Case 5), see Fig. 9, all of them through real estate services and rental of movable and intangible property.

With regard to the photographic and video recording services effect, it is present with a significant forgotten effect in 3 different situations, the first one in relation to the cause of accessibility to the destination, the second one to the cause of general infrastructure and the third one to the cause of complementary tourism services. In the 3 situations mentioned, the incidence is given through events, see Figs. 10, 11 and 12.

Finally, the natural resources - retail trade relationship was also modified; it was initially valued at 0.51, however, the real value should be 0.72 because retail trade receives an indirect effect from natural resources through accessibility to the destination and transport, see Fig. 13.

Alfaro-Calderón et al. (2019) applied the theory of forgotten effects to assess the relationship between the social welfare index and sustainable development in Mexico. Among the results obtained, they identified that the areas of infrastructure and communications have been an indicator of the forgotten effects; a situation that is also presented in this study and

Fig. 6 Forgotten effect in the relationship between cultural resources (cause) and stock market, exchange and investment activities (effect). case 2
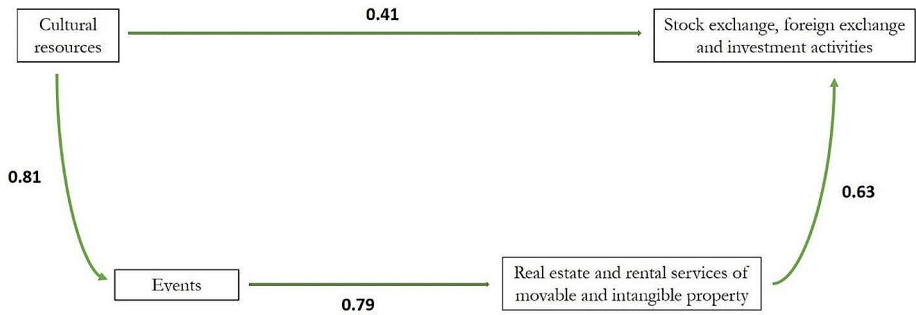
Fig. 7 Forgotten effect in the relationship between cultural resources (cause) and stock market, exchange and investment activities (effect). case 3
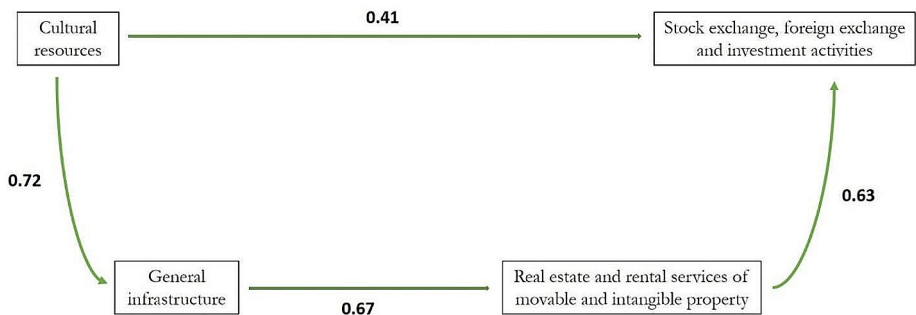
Fig. 8 Forgotten effect in the relationship between cultural resources (cause) and stock market, exchange and investment activities (effect). case 4

Fig. 9 Forgotten effect in the relationship between cultural resources (cause) and stock market, exchange and investment activities (effect). case 5

Fig. 10 Forgotten effect in the relationship accessibility to the destination (cause) with photography and video recording services (effect)

can specifically be seen in the information presented in Figs. 2, 3, 4, 6, 8, 9 and 13, where the indirect effect of infrastructure is specifically indicated, in this case tourism infrastructure and accessibility to the destination (communication route).

It should also be noted that there are 13 relationships whose evaluation by the experts and whose result obtained from the Forgotten Effects Theory give exactly the same value, with one forgotten effect with a value of 0. These relationships are the following: general infrastructure - retail trade, tourism infrastructure - transport, accessibility to the destination - transport, events - real estate services and rental of movable and intangible property, events - photographic and video recording services, tourism infrastructure - business support services, cultural resources - educational services, cultural resources - cultural and sporting entertainment and other recreational services, tourism infrastructure - cultural and sporting entertainment and other recreational services, events - cultural and sporting entertainment and other recreational services, tourism infrastructure - temporary accommodation services and food and beverage preparation services, events - temporary accommodation services

Fig. 11 Forgotten effect in the general infrastructure relationship (cause) with photography and video recording services (effect)
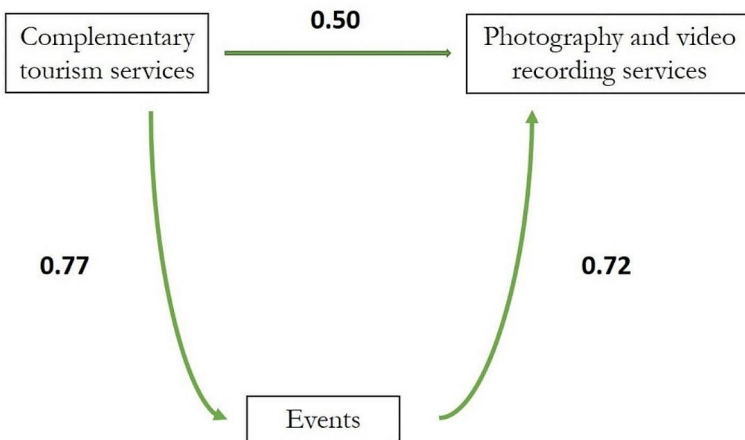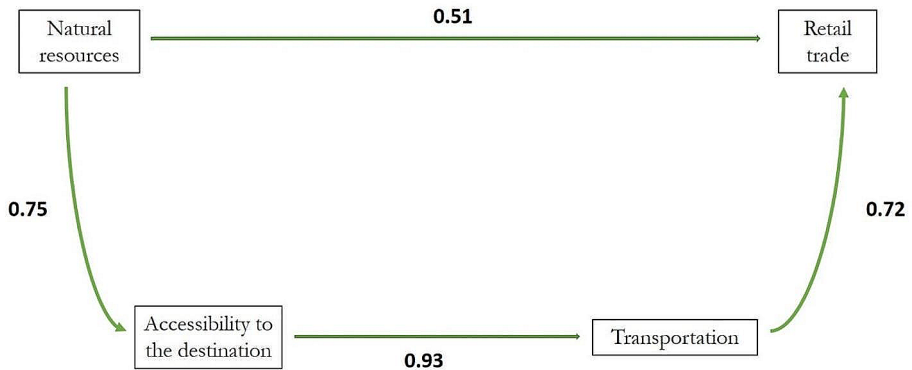

Fig. 12 Forgotten effect in the relation of complementary tourism services (cause) with photography and video recording services (effect)

and food and beverage preparation services. Finally, general infrastructure - other services except governmental activities.

5 Conclusions

This research began by setting out the objective of evaluating the relationship between tourism competitiveness and tourism GDP in magic towns, in order to identify the direct and indirect effects of the phenomenon from the perspective of experts. At the end of the study, the direct and indirect impacts on the relationship between tourism competitiveness and

Fig. 13 Forgotten effect in the relationship between natural resources (cause) and retail trade (effect)

tourism GDP in the Magic Towns were shown through the Forgotten Effects Theory. The results are considered of great value in the sense that it is now specifically known which tourism GDP activities are influenced by which competitiveness factors.

A close relationship was observed between natural and cultural resources and stock market, exchange and investment activities. This means that the existence of natural and cultural resources in a location can have a positive impact on its economy, attracting investment and increasing financial activity. A strong relationship was also found between destination accessibility, tourism infrastructure and complementary tourism services with photography and videography services. This indicates that tourists who visit a place with good accessibility, infrastructure and complementary services are more likely to hire photography and videorecording services to capture their experiences. Finally, there was evidence of a relationship between natural resources and retail trade. This suggests that the presence of natural resources can stimulate local trade, as tourists and residents can purchase products and souvenirs related to these resources.

Making all the aforementioned relationships visible will allow for more efficient decision-making to improve the competitiveness of the Pueblos Mágicos as tourist destinations and even develop a series of business strategies to make the most of the resources available in them. Moreover, they have important implications for the economic development of the Pueblos Mágicos.

The versatility of the Forgotten Effects Theory allows it to be used in various administrative, social and business phenomena and in any field of knowledge as long as its causes and effects are identified; therefore, future lines of research include applying a similar study in tourist destinations with categories such as World Heritage Cities or with specific resources such as Archaeological Zones, Global Geoparks, Protected Natural Areas, in order to understand the tourism dynamics of these destinations and facilitate future decisions in favour of them.

This work overcomes one of the limitations of similar studies: the number of experts, as there was a high level of participation in terms of the number of experts who evaluated the cause-effect relationships. However, there is a limitation in the identification of causes and effects in a non-systematic way.

Declarations

Institutional review board Not applicable.

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