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The Tourism Sector in Puerto Vallarta: An Approximation from the Circular Economy

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Abstract: The linear economic model consumes large amounts of energy and resources, but the limits on its physical capacity are being reached. The circular economy (CE), conversely, is reparative and regenerative; it aims to ensure that products, components, and resources maintain their usefulness and value. Tourism is a generator of wealth and employment worldwide (9.8% of world GDP and 9.1% of world employment), but it also contributes to a variety of environmental problems all over the world. Reducing the negative impacts of the practices of the tourism sector is essential. Therefore, implementing CE practices in this sector is crucial for producing changes that benefit the environment to reach the goal of sustainable development. The objective of this research was to explore the tourism sector knowledge of a CE and the actual implementation of its practices in Puerto Vallarta, and to determine companies' willingness to design a transition to the CE. Puerto Vallarta, Mexico, is a national tourist destination that ranks among the top three places in the country in terms of the number of tourist visitors, and therefore tourism is the basis of the local economy. A questionnaire was designed to collect information about attitudes and motives, which was answered by key informants from 64 tourism companies. The results show an incipient knowledge about the CE concept. However, companies conducting environmental activities, such as reducing consumption of fossil fuels and improving treatment of waste, indirectly generate a positive impact on the environment. In conclusion, Puerto Vallarta is prepared to implement the CE.

Keywords: sustainability; tourism; circular economy

1. Introduction

The dominant linear economic model is based on having large amounts of energy and other resources easily accessible, but the Earth's physical capacity limit is being reached. In addition to merely using resources more efficiently, the solution to this problem means an end to waste and a new type of inclusive and sustainable economic growth. The circular economy (CE) model is a reparative and regenerative method to rethink progress. The CE aims to ensure that products, components, and resources maintain their usefulness and value at all times [1].

Tourism, in this linear economic model, is related to a large volume of people who visit other destinations, having negative impacts on the environment, including shortage of natural resources, high levels of gas emission, deforestation, and high concentrations of waste, among others [2].

As a different way of thinking, the CE model tries to create a harmonious system between the environment and the economy [3], mainly by recycling and reuse [4]. The transition to the CE involves preventing the loss of valuable materials, job creation, economic growth, and incentivizing eco-designs [5]. The CE is complemented by eco-innovation [6,7] and intends to fulfill four basic economic functions (resources, production, consumption, and recycling) [8] by covering three fundamental issues. i.e., reduction of carbon emission levels, treatment for waste recovery,

and protection of water resources, which are also issues faced by the tourism sector to be more competitive and sustainable [9].

The challenge is how to integrate all these aspects into a new paradigm, especially if tourism is considered to be a valuable sector worldwide; tourism contributes 5% of the world GDP and 6% of world service exports, generating 235 million jobs, which is one in every 12 jobs in the world [10]. The question that arises is whether it is possible to change the current paradigm to create a win-win situation for all involved. Geng and Doberstein [11] and Park et al. [12] stated that the CE is based on a philosophy that allows the coexistence of healthy economies and environment. However, scientific progress in CE is incipient and the existing research is mainly theoretical [8,13,14] or based on the development of theoretical models [15] applied to the food system. Therefore, we do not yet know which implanted business models are more adapted to the CE, and applications to the tourism sector have been limited [16].

The data demonstrate the impact of tourism on the environment and on the well-being of cities, therefore, transitioning the tourism sector toward a CE is of importance [17]. Therefore, generating CE practices in the sector can be a determinant for the achievement of sustainable development, but the transition to a CE requires conscious cooperation within the tourist destination among public administration, residents, and the tourism sector [18]. Hence, the introduction of CE in tourist destinations does not depend on universal recipes for companies, but on the experience, ideas, and initiatives of diverse stakeholders such as business owners, managers, skilled staff, networks of suppliers, and customers [19].

In this context, tourist destinations in the world, such as Puerto Vallarta, have tried to be competitive and achieve sustainability through some strategies that have focused mainly on reducing environmental impacts [20]. Due to the prevailing mainstream tourism model of “sun and beach” in the area and to a more environmental sensitive market, Puerto Vallarta is concerned about preserving its territory and local culture, opting for better practices in their companies, however, we wanted to determine if they could be considered close to a CE.

The aim of this work was to explore the tourism sector axis at a local scale in Puerto Vallarta, the companies’ knowledge about the CE concept, whether or not they call it by this name, and their actual involvement in its practices, to determine their willingness to design a transition to a CE.

Literature Review on Circular Economy (CE) and Tourism

Although interest is growing in the CE concept, its application to the tourism sector has been limited [16], which is also true for the academic field. Jones and Wynn [21] reviewed the academic literature on CE, natural capital, and resilience applied to tourism and hospitality, and examined how several companies and organizations in this sector have used these concepts in their commercial operations and development plans. They found that related concepts guided strategies that were built based on challenges and opportunities for sustainability and development planning. However, the management strategies did not reflect the current theoretical depth. The implementation of information systems was proposed to support these concepts in the management of sustainability.

Vargas-Sánchez [22] recognized that the economy was in a process of transition toward the circular model and noted the lack of a common understanding of this concept, with a limited scope in its use. In addition, few well-documented initiatives on CE existed in the tourism industry. Relevant factors that influenced the transition to CE were considered from an organizational perspective and a strategic management approach was used combined with a neo-institutional theoretical lens, to identify four scenarios after selecting several relevant internal and external dimensions to help understand the form of the expected transition of tourism to a CE. Tour operators could position themselves within this framework to analyze their conditions to address this change [22].

Life cycle analysis in complex business models has been proposed to identify the possible negative environmental effects of commercial initiatives at the system level [23]. However, continuous monitoring is necessary to maintain the competitiveness of the destination [24], where sustainability strategies seem to be successful.

The differences between sustainability and CE have been examined. Geissdoerfer et al. [25] reviewed the literature, searching for their relationship and differences, and found that the CE was frequently viewed as a condition to achieve sustainability and could not be implemented in isolation. They investigated how a better understanding of both concepts and practices could influence the performance of business, supply chains, and companies in different economy sectors. The CE was also linked to the United Nations Sustainable Development Goals, particularly non-poverty, sustainable cities and communities, responsible consumption and production, and the promotion of inclusive and sustainable industrialization and innovation, which implied the necessity to ensure environmental quality, economic prosperity, and social equity, to which the tourism sector could contribute actively, to the benefit of current and future generations [18].

The CE aim, interrelated with sustainability, is to ensure that the value of products, materials, and resources are maintained in the economy as long as possible and that waste generation is minimized. The CE model is nonlinear, based on the principle of closing the life cycle of products, services, waste, materials, energy, and water, on the basis of three principles, i.e., preserve and improve natural capital, optimize the use of resources, and promote the effectiveness of the system.

When measuring sustainable tourism competitiveness, most of the models consider three basic aspects, i.e., economic, social, and environmental, but with greater emphasis on the social and environmental aspects (Table 1).

Table 1. Models for measuring sustainable tourism competitiveness.

Reference	Model
[26]	Economic indicators group Social indicators group Environmental indicators group
[27]	Benchmarking tool on sustainability
[28]	Economic indicators group Social indicators group Environmental indicators group
[29]	Framework for measuring sustainability of the destination through the incorporation of different stakeholders
[30]	Indicators to measure the cultural dimension of a destination
[31]	Development of a pyramid of priorities to achieve a sustainable destination; a series of indicators, objectives, and actions to reach the proposed priorities
[32]	Sustainable market orientation model, which emphasizes economic, social, and environmental aspects, and the agents' learning, for continuous improvement
[33]	Creation and measurement of a synthetic indicator with 27 items with economic, social, and environmental aspects
[34]	Model based on 3 economic, 4 environmental, and 3 social indicators
[35]	Evaluation of 14 economic, sociocultural, and environmental indicators on the impacts of tourism; visitor satisfaction and the level of community participation in measurement of tourism planning in the period 2002–2009

Source, Rodríguez-Antón [36].

An analysis of the existing models on sustainability that are based mainly on indicators showed that this new reality in the destinations must be captured using new methods of research and measurement. These new formulas of sustainable development and new technologies in the companies of the sector should be applied to promote the use of renewable energies, reduce consumption, and reuse the components [37].

Implementing CE practices in the sector can be a determinant for the realization of sustainable development. Although CE is becoming a main concept in sustainability-related topics and the current discussion is promising, companies still perceive it as something unnecessary, too innovative, and too expensive. Miret [6] derived some questions to address the situation and how companies perceive CE. They concluded that the common perception in companies was linked to the CE efforts that placed

too much focus on meeting new and higher environmental protection standards, and thus weakened profit maximization, especially for small companies.

The transition toward the circular model is a multilevel process, although the main change really occurs at the micro level, where a single actor (company or institution for example) interacts with a wide network of external actors. To promote a transition in a tourism destination, a three-axis model has been proposed. i.e., public administration, resident population, and the tourism sector, which necessitates changes in the various stakeholders and their interactions [7].

Another challenge to the shift toward a more CE, for small- and medium-sized enterprises (SMEs) such as hotels, is the financial barrier. Due to the lack of capital to invest in new technologies, for example, to reduce negative impacts on the environment [19], strategies for these companies must be improved to minimize these barriers.

Related to the complete business cycle, collective action is required on the part of all major stakeholders. Thus, the stakeholder perspective is critical for providing the required framework for a transition toward the CE paradigm because this group can affect the achievement of the company goals due the financial or human capital investments and the real interest [38].

The perception of stakeholders as key informants about their companies' performance related to CE has not been evaluated in the academic literature, which is the main contribution of this research. The few existing CE studies on tourism research have focused on how companies apply general CE production principles or, recently, how tourists' practices can support the development of a CE in tourism [9].

This research is explanatory in nature, using a quantitative approach through a sequential exploratory design. The data were collected through a survey that was designed to obtain the opinion of the companies' stakeholders through a questionnaire in which attitudes and motives were measured using a Likert scale. This research was developed under different ethical principles; the principle of autonomy was respected as respondents were aware that participation in the study was voluntary.

2. Materials and Methods

2.1. Study Area

Puerto Vallarta is a coastal municipality and tourist city in the state of Jalisco, Mexico, in Banderas Bay (Figure 1). In 2020, Puerto Vallarta had an estimated population of 304,141 [39], and 4,372,307 annual tourists in 2017 (Table 2) [40]. It is the second most important economic zone in the state of Jalisco and the third most important port in Mexico. Currently, it is one of the most visited places in the country.

Puerto Vallarta, as a national tourist destination, ranks among the top three places in Mexico in terms of receiving visitors; tourism is the basis of the local economy. The concentration of economic activity around tourism is excessive, since close to 80% of jobs are related to tourism. Because its economy is highly dependent on tourism activity, it is vulnerable to possible contingencies in the sector. Regarding companies linked to the tourism sector, 331 lodging establishments (Table 3) and 234 service establishments (Table 4) were identified [40]. In its 2018–2021 municipal development plan, the use of clean energy, proper waste management, environmental education, and a sustainable tourist city were established as the development priorities for Puerto Vallarta [40], but there was no mention of CE.

Table 2. Tourist influx to Puerto Vallarta in 2017.

Hosted Tourism			Private House			In Transit			Total Influx		
Nationals	Estranger.	Total	Nationals	Estranger.	Total	Nationals	Estranger.	Total	Nationals	Estranger.	Total
1,622,593	964,414	2,587,007	842,631	172,805	1,015,436	287,497	482,366	769,864	2,752,722	1,619,585	4,372,307

Source [40].

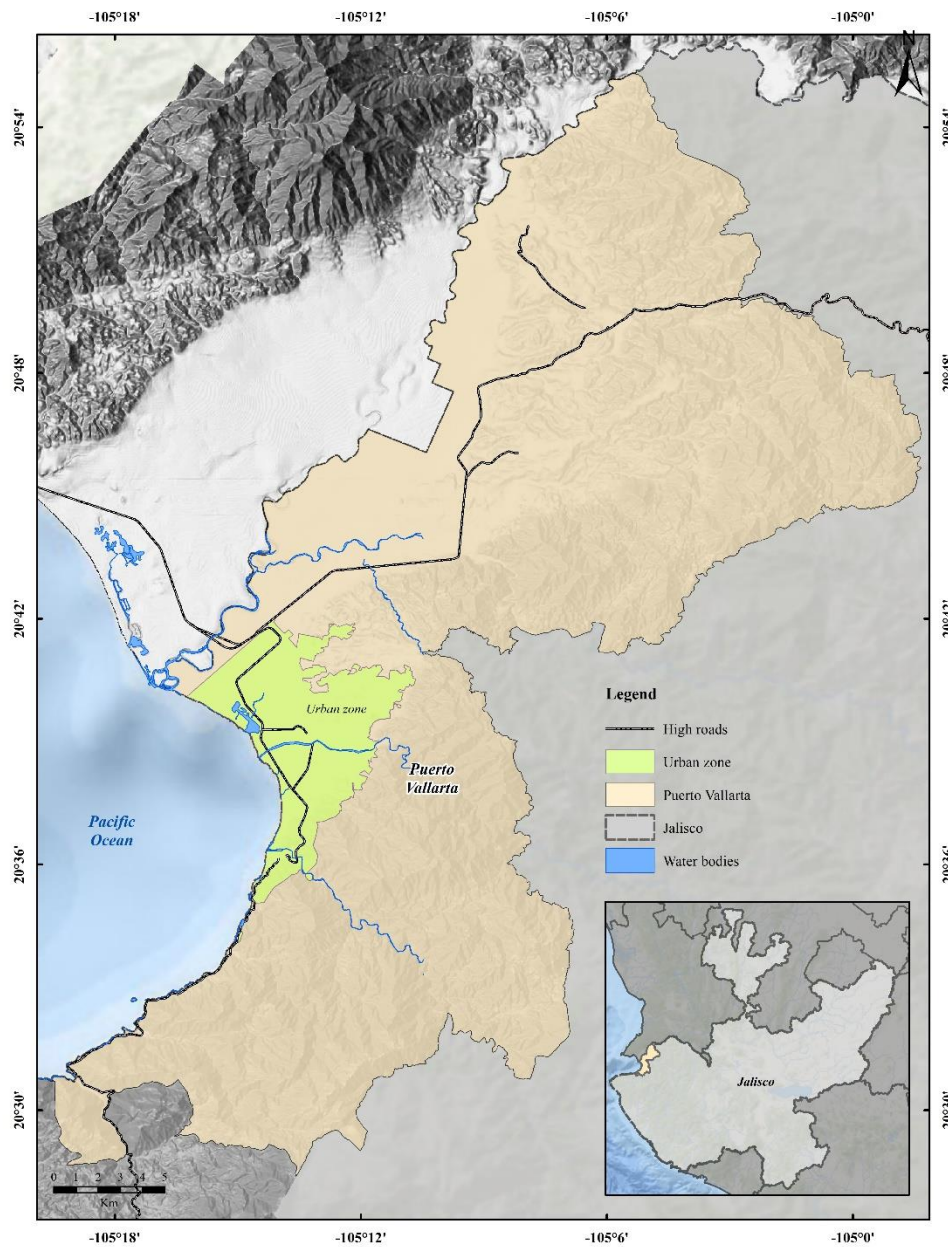


Figure 1. Map of Puerto Vallarta, Jalisco, Mexico.

Table 3. Registered lodging establishments in Puerto Vallarta by tourist category of the establishment.

Five Stars	Four Stars	Three Stars	Two Stars	One Stars	Without Category	Total
30	42	31	30	14	184	331

Source [40].

Table 4. Other establishments that provide services related to tourism in Puerto Vallarta.

Travel Agency	Spas	Golf Courses	Car Lessors	Tourist Marinas	Berths	Tourist Transporters	Total
87	2	2	50	1	3	89	234

Source [40].

2.2. Data Collection and Statistical Process

A structured questionnaire was administered to key informants (owners and company managers) between November and December 2019. The questionnaire was designed to collect information about each company's impacts on the environment, knowledge of the concept of the CE, certification of companies in the CE economy, and the willingness to invest in certifying the company. Questions with a Likert scale were used for responses to each defined variable. For the choice of companies (Figure 2), simple random sampling was used, resulting in a sample of 64 companies for the survey with a confidence of 90% and a statistical error of $\pm 10\%$ as follows:

$$n_{mas} = \frac{\frac{Z^2 PQ}{E^2}}{1 + \frac{1}{N} \left[\frac{Z^2 PQ}{E^2} - 1 \right]} \approx 64 \text{ companies}, \quad (1)$$

where n_{mas} is the sample size for a simple random sampling; Z is the 1.64 confidence, which is the normal value of the abscissa in the normal curve; E is the $\pm 10\%$ absolute maximum statistical error; P is 50%; Q is 50%; and N is the number of companies in Puerto Vallarta (565).

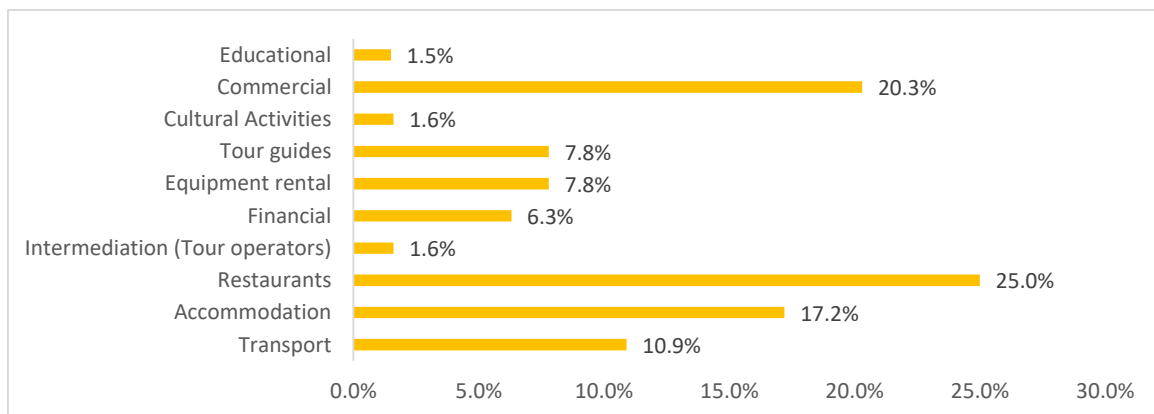


Figure 2. Type of companies surveyed in Puerto Vallarta, Jalisco, Mexico.

The sampling technique was probabilistic stratified random subsampling with proportional systematic selection by size of the primary sampling units and using the Kish rule of the secondary sampling units. The sample was stratified by the type of company; the primary sampling unit was the administrative employees of companies. For the processing of the questionnaires, SPSS© software was used; afterward, tables and graphs were elaborated.

To evaluate the reliability or homogeneity of the items, Cronbach's α was used for alternatives of polycotomic responses, such as Likert-type scales, which can take values between 0 and 1, where 0 indicates zero reliability and 1 indicates total reliability. The greater the linear correlation between items, the greater the Cronbach's α .

Cronbach's α coefficient is calculated as:

$$\alpha = \frac{np}{1 + p(n-1)}, \quad (2)$$

where n is the number of items and p is the average of the linear correlations between each item.

The problem, at the time of data collection, was the construction of the instruments to be used for this purpose to ensure that it obtained valid and reliable information. The calculated Cronbach α value of 0.806 verified the questionnaire's confidence.

3. Results

The descriptive statistics in Table 5 show that the actors have a clear conceptualization about the care of the environment and are starting to recognize the term CE. All the variables have values greater than three (Table 5).

Table 5. Descriptive statistics of the key informants' assessment of the concept of the circular economy (CE).

	<i>N</i>	Minimum	Maximum	Mean	SD	Variance
Do you have a plan within the company to generate a positive impact on the environment?	64	1	5	3.55	1.308	1.712
Do you have knowledge about the CE?	64	1	5	3.45	1.112	1.236
How much do you agree that companies in the tourism sector in Puerto Vallarta take enough action to remedy environmental problems?	64	1	5	3.69	1.390	1.933
How much do you agree that CE certification should be mandatory?	64	1	5	3.19	1.308	1.710
Would you be interested in joining a new CE regulation for the Puerto Vallarta tourism sector?	64	1	5	3.56	1.022	1.044
Would you invest to certify your company in the new CE regulations?	64	1	5	3.36	1.173	1.377
Valid <i>N</i> (listwise)	64					

Regarding the frequencies of each of the variables, we observed that the sample was distributed in the 10 types of companies that were selected, with restaurants being the most representative (25%), followed by hotels with 20.3% (Figure 2). Of the respondents, 54.7% agreed or strongly agreed that Puerto Vallarta companies have a plan to generate a positive impact on the environment.

Of the interviewees, 45.3% agreed or totally agreed that they have knowledge of the CE concept (Figure 3); 65.6% agreed that Puerto Vallarta companies take sufficient measures to mitigate environmental problems; and 34.4% responded that the most important benefit generated by the CE for the tourism sector is the implementation of renewable energy (Figure 4). Regarding how much they agree that certification in CE should be mandatory, 51.5% of the interviewees agreed and strongly agreed; 48.5% who disagreed referred to the main cause as the high costs generated by participating in the CE (38.5%).

In response to the question about whether they would be interested in a new CE regulation for the tourism sector in Puerto Vallarta, 64% agreed or totally agreed; 51.5% would invest to certify their company in the new CE regulations; however, only 26.6% would be willing to invest more than USD \$500, and 29.7% were not willing to invest in this certification. In cross-interaction analysis of variables to determine the information by type of company, we observed that the companies that have more knowledge about the CE are educational companies, tourist guides, and restaurant companies (Table 6).

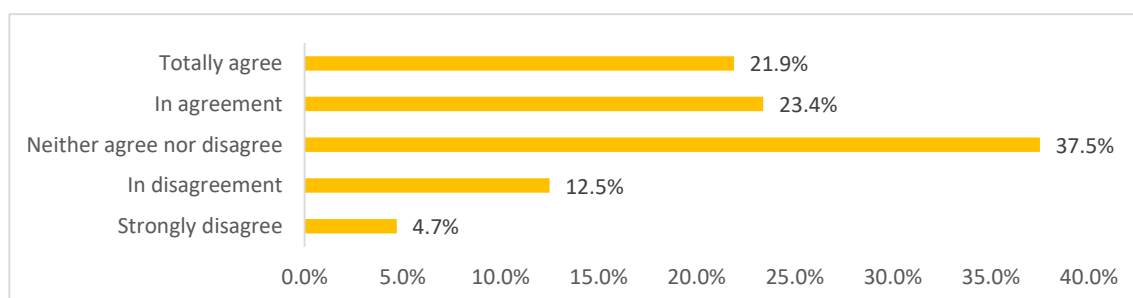


Figure 3. Stakeholder's agreement to participate in the CE.

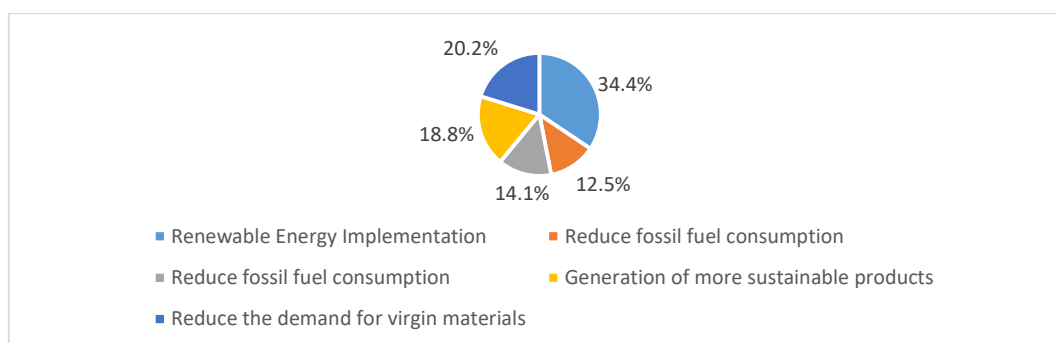


Figure 4. Benefits generated by the CE for the tourism sector.

Table 6. Knowledge about the CE by company type.

Company Type	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Totally Agree	Total
Transport		14.30%	71.40%		14.30%	100.00%
Accommodation		9.10%	36.40%	27.30%	27.30%	100.00%
Restaurants	12.50%	25.00%	12.50%	25.00%	25.00%	100.00%
Intermediation (Tour operators)			100.00%			100.00%
Financial			50.00%	50.00%		100.00%
Equipment rental	20.00%	20.00%		60.00%		100.00%
Tour guides			20.00%	20.00%	60.00%	100.00%
Cultural activities		100.00%				100.00%
Commercial			69.20%	15.40%	15.40%	100.00%
Educational					100.00%	100.00%

We analyzed whether there were significant differences in the level of knowledge of the different concepts depending on the companies using an ANOVA. The results showed that, overall, there were no significant differences in the level of knowledge depending on the type of company for five variables (P -value > 0.05); however, for four variables, we found significant differences (P -value < 0.05) (Table 7).

Table 7. ANOVA between company groups.

		Sum of Squares	df	Mean Square	F	Sig.
Do you have a plan within the company to generate a positive impact on the environment?	Between Groups	29.752	9	3.306	2.285	0.03
Do you know about the CE?	Between Groups	12.39	9	1.377	1.135	0.355
How much do you agree that companies in the tourism sector in Puerto Vallarta take sufficient measures to manage environmental problems?	Between Groups	26.923	9	2.991	1.704	0.111
Of the following benefits generated by the CE, which do you consider would be the most important for the tourism sector?	Between Groups	56.29	9	6.254	3.356	0.003
How much do you agree that CE certification should be mandatory?	Between Groups	26.096	9	2.9	1.918	0.069
If your answer was negative, what would be your reason for the following:	Between Groups	9.168	8	1.146	1.192	0.336
Would you be interested in joining a new CE regulation for the Puerto Vallarta tourism sector?	Between Groups	25.693	9	2.855	3.848	0.001
Would you invest to certify your company using the new CE regulations?	Between Groups	32.181	9	3.576	3.539	0.002
How much would you be willing to pay annually for this certification?	Between Groups	14.611	9	1.623	0.636	0.761

The “*type of company*” is the variable best explained by the three factors when registering the highest commonalities (Table 8). The value of 0.790 is interpreted as follows: 79.0% of the variability of the type of company is explained by the three factors, whereas the value of 0.591 indicates that the question “Of the following benefits generated by the CE, which would be the most important for the tourism sector?” is only 59.1% explained by the three factors.

Table 8. Commonality of the assessment of experts of the CE concept.

	Initial	Extraction
Do you have a plan within the company to generate a positive impact on the environment?	1.000	0.782
Do you have knowledge about the CE?	1.000	0.757
How much do you agree that companies in the tourism sector in Puerto Vallarta take sufficient measures to manage environmental problems?	1.000	0.721
Of the following benefits generated by the CE, which do you consider the most important for the tourism sector?	1.000	0.591
How much do you agree that CE certification should be mandatory?	1.000	0.665
If your answer is negative, what is your reason for the following:	1.000	0.673
Would you be interested in joining a new CE regulation for the Puerto Vallarta tourism sector?	1.000	0.644
Would you invest in certifying your company using the new CE regulations?	1.000	0.724
How much would you be willing to pay annually for this certification?	1.000	0.686
Company type	1.000	0.790

Extraction method, principal component analysis.

Table 9 shows the percentage of model variance that is explained by the three factors or components. In the column labeled “Extraction Sums of Squared Loadings”, Component 1, “*company type*”, explains 40.8% of the total variation; Component 2, “*Do you have a plan within the company to generate a positive impact on the environment?*” explains 16.9%; whereas Component 3, “*Do you have knowledge about the CE?*”, explains 12.5%. Combined, the three factors explain 70.3% of the behavior of the experts’ assessment of the concept of CE (Table 9).

Table 9. Explained variance of the experts’ assessment of the CE concept.

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.084	40.835	40.835	4.084	40.835	40.835
2	1.698	16.980	57.815	1.698	16.980	57.815
3	1.252	12.519	70.334	1.252	12.519	70.334
4	0.928	9.282	79.616			
5	0.722	7.218	86.834			
6	0.411	4.108	90.943			
7	0.334	3.344	94.287			
8	0.298	2.983	97.270			
9	0.145	1.452	98.721			
10	0.128	1.279	100.000			

Extraction method, principal component analysis.

4. Discussion

The respondents indicated that they had a clear conceptualization of the care of the environment and they were starting to recognize the term CE. Only 45.3% of the respondents reported knowledge of this term; respondents agreed that Puerto Vallarta companies implemented enough actions to mitigate environmental problems. The interviewees stated that the most important benefit generated by the CE for the tourism sector is the implementation of renewable energy. Key informants perceived that CE certification should be mandatory; they reported that the main reason for not applying it was the high

costs generated by participating in the CE. This approach has become an important factor ensuring the success of tourism projects and facilitating the involvement of all actors in destination management organizations, which would enhance the projection of the desired local identity and influence the image and positioning of the destination [41].

The lack of theoretical and empirical development of the CE is attributed to the lack of knowledge of both authorities and companies about the idea and its implementation [42]. Therefore, the limited empirical development has focused on case studies, such as NKansah et al. [43] in aluminum or Farmer et al. [5] in waste management. The few exceptions include Haas et al. [4], who preliminarily assessed the development of CE in the world. The authors showed that in Europe, the degree of CE development was still very low, since only 6% of the recycling of all the processed materials were reused to contribute to closing the circle. In Mexico and particularly in Puerto Vallarta, this concept is in the process of integration as a sustainability strategy. The only work found that applied to the service sector was that of Castellani et al. [44], who applied the principles of CE in a second-hand clothing store. However, CE initiatives have already been beginning to appear in Spain such as Basque Country [45] or those shown in the innovation foundation COTEC Report [46].

An argument in favor of the implementation of these environmental management systems focuses on the possible value that customers assign to these certifications, under the assumption that their greater environmental concern leads customers to prefer accommodation and restaurants that have been granted a sustainability seal. However, the excessive proliferation of certifications can confuse the consumer, who ends up ignoring these green labels [47]. Bruns-Smith et al. [48], in a study in the USA covering 100 resorts and 120,000 clients, found a very weak relationship between the implementation of environmental improvement programs and increases in customer satisfaction. Therefore, the adoption of certification systems such as those mentioned does not necessarily translate into improvements in reputations that produce business benefits, therefore, the decision on which programs to implement should be based on an individualized cost-benefit analysis of each program [49]. In this sense, businesspersons of Puerto Vallarta are aware that the CE certification for their companies would produce benefits; however, they are not willing to invest, mainly because of the additional costs.

Manniche et al. [19] analyzed the specific implications of CE for small- and medium-sized tourism businesses and detailed some possible actions to be implemented for the development and application of CE elements in three thematic areas, i.e., accommodation services, restoration, and spas. This coincides with this study in which restaurant companies, hotel companies, tourist guides, and education companies showed greater understanding of the CE concept.

CE covers a wide range of activities that influence companies and tourist destinations in areas such as energy; recycling; water; development of new construction projects; interior design; engineering projects; response to deterioration external environment; new products, processes, and business models; adaptations of existing products and materials; new materials; use of eco-biological products; spatial planning; and finally, the wellness industry which, in some regions, can include the development and transformation of organic products, eco-tourism, and therapeutic tourism, amongst others [50].

The ANOVA analysis showed that differences existed between the type of company, specifically in the following variables: “within the company they have some plan to generate a positive impact on the environment”, “the benefits generated by the CE and its importance in the tourism sector”, “the interest in being part of a new CE regulations for the tourism sector of Puerto Vallarta”, and “investing in certifying the company in new CE regulations”. The importance of the type of company was confirmed since we observed in the variable interaction table that education companies, tourist guides, lodging, and restaurants have a clearer understanding of the CE concept.

The factor analysis reaffirmed this position, and the three factors that explained the system were the following: “type of company”, “having some plan to generate a positive impact on the environment”, and “knowledge of the CE”.

To help all companies, especially the small ones, appreciate the full potential of the circularity model for businesses in the tourism sector, novel CE notions and training should be incorporated into

the strategic management process as proposed by Miret [6]. A CE can have a lasting positive impact on business practices and society [17]; however, some key issues such as a transition need to be addressed before a CE can be embraced by companies [51], especially in tourist destinations.

5. Conclusions

Many of the measures included in the guides to good tourism practices refer to the management and reuse of waste generated. The CE has emerged as a new economic model that advocates the conversion of waste into new resources that can be reused. However, the transformation to a CE produces the need for new investments, which, in the case of Puerto Vallarta, few businesspeople are willing to pay for the construction of new tourist facilities (hotels, accommodation, transportation infrastructure, food supply, information system, service centers, entertainment, etc.). In this context, local-, state-, and national-level public administrations play a crucial role and face important planning challenges related to the protection of natural resources, water supply, renewable energy, pollution reduction, and management of waste, among others. At a global level, the role of national tourism policies will be decisive in facilitating the implementation of more circular practices.

Considering the previous results and according to the limited knowledge that Puerto Vallarta businesspersons presently have about a CE, the public administration should implement awareness campaigns to promote the transition process from a linear economy model to a circular model. Therefore, the viability of integrating a CE in the tourism sector in Puerto Vallarta, as a first step, depends on the awareness and knowledge of the businesses' models. The demands of the government, tourists, and residents are essential for motivating the change. In addition, companies and the government should more clearly communicate their efforts in terms of practices related to CE in their companies to raise awareness among tourists and the population. Studying and understanding the degree of knowledge that exists in a tourist destination through the companies wishing to transition to the CE is important for the success of this transition.

We found that most of the models used in the tourism sector are aimed at sustainability and competitiveness; however, the new conceptualization of CE is the preservation of natural capital by controlling the reserves of finite resources and balancing the flows of renewable resources. Optimizing performance resources involves organizing products, components, and materials so that they maintain their maximum usefulness at all times and promote the efficiency of systems by minimizing losses and negative externalities. In this sense, Puerto Vallarta can become the spearhead in the implementation of this new paradigm in Mexico.

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