The Effect of Countries’ Health and Environmental Conditions on Restaurant Reputation

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Abstract: Corporate reputation enhancement in the restaurant industry has recently been increasingly driven by the central importance of consumer review websites and customers’ greater awareness of sustainable practices regarding health and the environment. In this context, the research question of the present study was if there is a relationship between health and environmental conditions, and restaurants’ corporate reputation on a country level. Trying to answer this question, the present study sought to analyze the effects of countries’ health and environmental conditions on their restaurants’ corporate reputation, thereby contributing to the existing knowledge about how sustainable environments influence the industry’s competitiveness. The research design included different methodological approaches, and was divided into three main phases: restaurant corporation identification, reputation database design, and results. To this end, reputation data from a consumer review website were gathered for a sample of restaurant corporations and establishments connected to the European countries on the Healthiest Country Index. The methods were based on regression analysis. The results indicate that restaurant reputation improves in healthy, sustainable environments, specifically in countries ranked as the healthiest. These findings provide a better understanding of how aspects related to health and environmental sustainability influence corporate reputation.

Keywords: health; environmental sustainability; corporate reputation; restaurant industry; Europe

1. Introduction

Corporate reputation is an intangible asset of special importance to restaurant industry companies. Restaurants sell food and experiences [1], so reputation provides signals about these establishments’ product and service quality [2]. Given the widespread use of social networks and consumer review websites, restaurant reputation is currently even more significant because potential customers can consider it a reflection of perceived quality [3].

Besides, restaurant customers are increasingly aware of sustainable practices regarding health and the environment [4]. Restaurants consequently seek to strengthen their reputation by publicizing their sustainable practices [5]. Previous studies’ findings indicate that these establishments can improve clients’ perceptions of their sustainable practices by actively seeking to protect customers’ health and the environment [5], engaging in eco-innovation [6] and communicating this clearly on social networks [7].
However, few researchers have focused on the effects of strategic alliances at the community level on restaurants’ competitive advantages. Only Tehrani, Fulton, and Schmutz’s study [8] analyzed how ‘green’ city declarations affect the restaurant industry’s sustainability practices. To date, no scholar has attempted to investigate the relationship between health and environment strategies and restaurant reputation in specific countries.

The present study sought to address this research gap, and measure the effect of a country’s health and environmental conditions on its restaurants’ corporate reputations for a sample of 16 European countries. This research thus addressed the question of whether the benefits of a specific nations’ health and environmental sustainability practices are transferred to their restaurants in the form of better reputations that customers can perceive. To answer this question, a new database was created of restaurant corporations and establishments belonging to the European countries on the Healthiest Country Index (HCI) [9].

The establishments in the sample have had their reputations evaluated on a consumer review website, and a corporate reputation measure was obtained by applying the intersection of confidence intervals (ICI) index. A regression analysis generated results that indicate the significant positive impact of the healthiest countries’ sustainability-related declarations on their restaurants’ reputations. Thus, this study’s findings expand the current literature on sustainability practices in the restaurant industry by clarifying the health and sustainability environment’s effects on restaurant reputation in European countries.

The rest of this paper is organized as follows. Section 2 discusses the results reported in the existing literature on reputation, sustainability and healthy environments in the restaurant industry. Section 3 describes the design of the research model applied in the present study. Section 4 details the characteristics of the sample and data used, while Section 5 presents the results. Section 5 synthesizes the main conclusions, the theoretical and practical implications, and suggestions for future lines of research.

2. Literature Review

Reputation plays an important role in the tourism industry, as it directly impacts on competitiveness [10]. Reputation is the aggregated perception of how organizations respond to their stakeholders’ demands and expectations [11]. Researchers have shown that a good reputation is seen as a sign of trustworthiness [12], and that reputation acts as an antecedent of trust [13]. Corporate reputation affects customers’ perceptions of the quality of companies’ products or services [2], and serves as a form of market information validation [14,15].

Previous studies have focused on different antecedents of restaurant reputation, such as food and service quality [16,17]. A direct relationship has been confirmed between service quality and perceptions of service quality, which is also influenced by health-related issues such as perceptions of cleanliness and food safety. Additionally, these two factors interact with customer satisfaction and electronic word-of-mouth, all of which affect restaurant reputation [18].

Reputation’s consequences or effects have also been analyzed in prior studies. Reputation significantly influences customer loyalty and satisfaction [19–21]. The ability to attract customers is vital in the restaurant industry because these establishments are not just selling food, but experiences too [1]. Consumers choose restaurants based on trust to reduce uncertainty [22].

As a result, restaurants invest heavily in developing a good reputation [23,24]. These establishments must also intensify their reputation’s effect on customers’ responses to the experiences provided. Previous studies have found that the experience quality can help build a reputation and that this, in turn, can indicate perceived quality to potential clients [3,25], which ensures a restaurant’s popularity grows due to word of mouth [26].

Corporate reputation is currently extremely important given the increasing use of social networks. Through these networks, companies promote their products and services, learn about their customers’
preferences, and interact directly with them [27–29]. When correctly used, social networks help companies attract new customers [30–33].

These networks can also be a tool to promote social sustainability [7,34], which, in this research context, is defined as the process of generating organization members' social health and wellbeing. Organizations further enhance environmental sustainability when they actively seek to preserve natural resources, minimize their actions’ harmful effects on the environment and contribute to improving humans’ overall quality of life [35,36]. Kim, Kim and Kim [37] and Schlosser [38] found that the restaurant industry’s success is extremely sensitive to how restaurants affect quality of life and the environment.

Consumers’ environmental awareness is also a significant variable regarding environmentally friendly products’ creation and consumption [4,39]. Another critical issue is clients’ perception of the value added by the attention firms pay to environmental issues in product development [40]. Restaurant companies have thus begun to implement multiple sustainability initiatives including healthier menu options, a commitment to protecting the environment, increased resource conservation, and the maintenance of good health [5]. The consumption of locally sourced products by restaurants can contribute to the three bottom-lines of sustainability [41–43]. It contributes to economic and social sustainability by stimulating sustainable traditional activities, including farming, fishing, and regional food industries, as well as sustaining rural communities [42]. Furthermore, the consumption of fresh local food products contributes to environmental sustainability, as these products do not require large-scale storage, refrigeration, processing, or transport over long distances, thus reducing greenhouse gas emissions and food’s ecological footprint [42,43]. The benefits of adopting sustainable practices include improved customer satisfaction and restaurant reputation [44,45]. Prior research has confirmed that corporate reputation is a consequence of corporate social responsibility [46]. Corporate social responsibility initiatives, in turn, may positively affect sustainability [47]. On the other hand, studies are indicating that there is a positive relationship between economic sustainability, social sustainability, environmental sustainability and corporate reputation [48].

Besides, prior research has confirmed that eco-friendly practices have other positive impacts on restaurant performance, such as financial solidity, resource efficiency, and customer attraction [34,49,50]. Eco-innovation has also become an important strategy to achieve sustainable development because of innovation’s potential for reducing environmental impacts and improving the competitiveness of the companies and countries that implement this strategy [51,52].

In this context, various researchers have examined government regulations’ effects on the restaurant industry’s sustainability. For example, Tehrani, Fulton and Schmutz [8] investigated whether the government and municipal laws improve this industry’s sustainability practices. The cited study analyzed green city declarations’ effects on restaurants’ sustainability practices, finding that government rules and green city policies do not significantly improve these companies’ sustainability strategies. Similar results were also reported by Bossle, de Barcellos and Vieira [6] for the Brazilian food industry.

The above investigations thus did not confirm that national and regional regulations and policies have positive impacts on restaurants’ sustainability. However, the cited researchers concurred that strategic alliances between various entities at the community level are of the utmost importance for restaurants to achieve competitive advantages [8]. The present study was, therefore, based on the argument that sustainable environments can influence the restaurant industry’s competitiveness by strengthening specific corporate reputations.

3. Materials and Methods

3.1. Research Design

This research’s design included different methodological approaches to analyzing the effects of countries’ health and environmental conditions on restaurant reputation. The design was divided
into three main phases: restaurant corporation identification, reputation database design, and results (see Figure 1).

Figure 1. Research model. Source: Own elaboration.

The first phase comprised identifying the restaurant corporations that should be included in the sample. In the second phase, online reputation was measured for the establishments belonging to each corporation in the final sample. For those that take the form of a restaurant chain (i.e., ownership of more than one establishment), an online reputation value needed to be estimated for the individual restaurants.

To guarantee the reliability of these establishments’ aggregated online reputation values, the Quorum Valuation Opinion Reputation Index (QV-ORI) proposed by Peláez, Martínez, and Vargas [53] was applied. The QV-ORI takes unsolicited information from consumers and processes this based on majorities to build an interval of valuation and provide an index of reliability for the opinion interval. This aggregation method is suitable in polarized valuations for which a simple aggregation does not provide useful information. In this situation, determining a set of opinions and/or feelings expressed by intervals is more reliable than other approaches, and a reliability value must be defined that measures the similarity of the intervals’ extreme values.

The assessment interval that expresses the set of opinions and/or feelings, $X$, is defined according to Equation (1):

$$X = [x^L, x^U]$$

in which $x^L, x^U \in \mathbb{R}$, so $X \in \mathbb{IR}$, represent the lower and upper limits, respectively. The ICI is defined based on Equation (2):

$$ICI = \frac{|x^U| - |x^L|}{|x^U| + |x^L|}$$

in which $-1 \leq x^L < 0, 0 < x^U \leq 1$ and $ICI \in [-1, 1]$.

Because $ICI \in [-1, 1]$, when all the assessments are positive, $ICI \to 1$, and when they are negative, $ICI \to -1$. However, if $|x^U| \to |x^L|$, then $ICI \to 0$. As a result, the closer the assessment is to an ICI value of 1 or −1, the more reliable the website users’ assessments are because less dispersion is present in the evaluation. QV-ORI is a tuple formed by the ICI and its corresponding reliability interval index.

In its final phase, this research used the ICI values of the selected restaurant corporations’ online reputations to measure the effect of the relevant countries’ health and environmental conditions on restaurant reputation. This process was accomplished using a regression analysis.

To compare the effect of each country’s health and environmental conditions on its restaurants’ reputations, four regression models were constructed. Model 1 only measures the control variables’ impact on the reputation values of the restaurant corporation $i$ in country $c$, as specified in Equation (3):

$$Reputation_{i,c} = \alpha_0 + \alpha_1 \text{ Control variables}_{i,c} + \mu_{i,c}$$
where $a_0$ is the constant term, $a_1$ is a vector of unknown parameters associated with the control variables, and $\mu$ denotes the error term. Model 2 was estimated to find out if a direct positive relationship exists between each country’s HCI score and reputation value, based on Equation (4):

$$Reputation_{i,c} = a_0 + a_1 \text{Control variables}_{i,c} + a_2 \text{HCI score}_{i,c} + \mu_{i,c}$$

where $a_2$ is the unknown parameter associated with the HCI score. Model 3 represents the control variables’ effect on reputation values as measured by the ICI, using Equation (5):

$$ICI_{i,c} = a_0 + a_1 \text{Control variables}_{i,c} + \mu_{i,c}$$

Finally, Model 4 was used to examine the relationship between the countries’ HCI scores and reputation values measured by the ICI, as expressed in Equation (6):

$$ICI_{i,c} = a_0 + a_1 \text{Control variables}_{i,c} + a_2 \text{HCI score}_{i,c} + \mu_{i,c}$$

3.2. Sample

The sample of restaurant companies used in the present study has been selected following two criteria. The first refers to belonging to a European country included in the HCI [9]. The second regards the requirement that the company contains enough information to be identified in the Amadeus database. Subsequently, from the population of companies that met both criteria, the restaurants were selected by random sampling and stratified by countries among active restaurant corporations in 2019. This selection process guaranteed a sampling error of less than 1%. As a result, 1216 selected restaurants were grouped into 405 corporations belonging to 16 European countries.

Figure 2 shows the rating given to each of the 16 selected European countries. Spain (96.56), Italy (95.83), Sweden (94.13), Norway (93.25), and France (91.70) are the European countries with the best scores. For its part, Figure 3 shows the distribution of establishments and corporations by country.

![Figure 2](image-url)  
**Figure 2.** Health and environmental scores for countries in the sample. Source: Bloomberg (2019) [9].

![Figure 3](image-url)  
**Figure 3.** Number of corporations and establishments in the sample. Source: Amadeus database and own elaboration.
France, Italy, Germany, the United Kingdom (UK), and Spain have the largest populations of active restaurant corporations, so, in the final sample, they also have the greatest weight. Each corporation’s number of establishments depends on the restaurant chains’ sizes in each country. In this sample, Germany, the UK, and Spain stand out as having a greater number of establishments due to their chains’ larger sizes.

Figure 4 shows the percentage of restaurants associated with chains in the sample. Poland and Austria have the highest proportion of restaurants associated with chains (90%), while Belgium and Denmark have the lowest (40%).

![Figure 4. Chain and non-chain distribution in the sample. Source: Amadeus database and own elaboration.](image)

### 3.3. Variables

In the present study, the dependent variables are reputation and ICI. TripAdvisor’s overall restaurant rating was used as a proxy of restaurant reputation. This assessment is based on online clients’ comments using a five-point Likert scale, including scores given for food, service, and value for money [54]. This measure has been previously used in the literature on the restaurant industry because the overall ratings aggregate many users’ information simultaneously, and these data can reveal similarities between people who have expressed a shared point of view [55–57]. Otherwise, the ICI variables an alternative to the value of the reputation of restaurants that guarantees the reliability of aggregated online values [58]. These variable data were collected directly from the TripAdvisor website in December 2019. To ensure greater homogeneity, the process was completed in a short time using a specific software program and applying the method developed by Yacouel and Fleischer [59] for similar studies.

As an independent variable, this study uses the HCI score. The HCI ranks 169 economies worldwide based on factors that contribute to individuals’ overall health. Each nation’s index rate is based on variables that include life expectancy and environmental factors, and the ranking only includes countries with at least 0.3 million inhabitants and sufficient data [9].

Likewise, other control variables were included in the present study for comparison purposes [55]. The % chain and chain size variables, for example, indicate that differences exist between countries in the proportion of restaurants belonging to chains and the number of establishments making up each chain [60]. Additionally, fame was used as a popularity measure, as this is significant in previous research on tourism corporations’ online reputations [58]. Finally, the market share control variable represents the restaurant industry’s different weights in the European market, which were estimated based on the number of active corporations in each country [61].
4. Results

Table 1 presents the descriptive statistics for dependent, independent and control variables for each country.

Table 1. Descriptive statistics.

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean Reputation</th>
<th>Reputation Interval</th>
<th>ICI</th>
<th>HCI</th>
<th>% Chain</th>
<th>Chain Size</th>
<th>Mean Fame</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>4.33</td>
<td>[3.83; 4.00]</td>
<td>0.67</td>
<td>90.81</td>
<td>90.00</td>
<td>3.75</td>
<td>1857.00</td>
<td>4.20</td>
</tr>
<tr>
<td>Belgium</td>
<td>3.67</td>
<td>[3.00; 5.00]</td>
<td>0.33</td>
<td>85.29</td>
<td>40.00</td>
<td>2.00</td>
<td>600.00</td>
<td>4.69</td>
</tr>
<tr>
<td>Czechia</td>
<td>3.44</td>
<td>[2.50; 4.16]</td>
<td>0.22</td>
<td>82.96</td>
<td>50.00</td>
<td>4.00</td>
<td>1171.75</td>
<td>5.93</td>
</tr>
<tr>
<td>Denmark</td>
<td>3.43</td>
<td>[2.16; 4.50]</td>
<td>0.22</td>
<td>86.47</td>
<td>40.00</td>
<td>4.00</td>
<td>180.00</td>
<td>1.23</td>
</tr>
<tr>
<td>Estonia</td>
<td>3.50</td>
<td>[3.00; 4.00]</td>
<td>0.25</td>
<td>78.47</td>
<td>50.00</td>
<td>3.00</td>
<td>200.00</td>
<td>0.49</td>
</tr>
<tr>
<td>Finland</td>
<td>3.67</td>
<td>[3.20; 4.00]</td>
<td>0.33</td>
<td>90.18</td>
<td>63.63</td>
<td>4.14</td>
<td>259.50</td>
<td>1.23</td>
</tr>
<tr>
<td>France</td>
<td>3.48</td>
<td>[1.50; 4.60]</td>
<td>0.24</td>
<td>91.70</td>
<td>50.00</td>
<td>3.11</td>
<td>468.80</td>
<td>17.78</td>
</tr>
<tr>
<td>Germany</td>
<td>3.23</td>
<td>[2.00; 3.84]</td>
<td>0.42</td>
<td>87.10</td>
<td>70.00</td>
<td>5.43</td>
<td>1100.00</td>
<td>12.35</td>
</tr>
<tr>
<td>Ireland</td>
<td>3.75</td>
<td>[3.60; 3.83]</td>
<td>0.38</td>
<td>88.57</td>
<td>50.00</td>
<td>3.00</td>
<td>420.00</td>
<td>12.35</td>
</tr>
<tr>
<td>Italy</td>
<td>3.79</td>
<td>[2.83; 4.50]</td>
<td>0.40</td>
<td>95.83</td>
<td>53.84</td>
<td>3.00</td>
<td>636.67</td>
<td>16.05</td>
</tr>
<tr>
<td>Norway</td>
<td>3.85</td>
<td>[3.00; 4.50]</td>
<td>0.42</td>
<td>93.25</td>
<td>75.00</td>
<td>4.33</td>
<td>229.67</td>
<td>0.74</td>
</tr>
<tr>
<td>Poland</td>
<td>3.50</td>
<td>[3.00; 4.00]</td>
<td>0.25</td>
<td>75.93</td>
<td>90.00</td>
<td>2.50</td>
<td>810.67</td>
<td>4.44</td>
</tr>
<tr>
<td>Portugal</td>
<td>3.60</td>
<td>[3.25; 4.15]</td>
<td>0.30</td>
<td>87.95</td>
<td>75.00</td>
<td>5.00</td>
<td>350.00</td>
<td>5.43</td>
</tr>
<tr>
<td>Spain</td>
<td>3.66</td>
<td>[1.50; 4.33]</td>
<td>0.33</td>
<td>96.56</td>
<td>58.06</td>
<td>6.11</td>
<td>494.67</td>
<td>9.88</td>
</tr>
<tr>
<td>Sweden</td>
<td>3.88</td>
<td>[3.50; 4.50]</td>
<td>0.44</td>
<td>94.13</td>
<td>41.25</td>
<td>3.80</td>
<td>740.00</td>
<td>3.70</td>
</tr>
<tr>
<td>UK</td>
<td>3.96</td>
<td>[3.00; 5.00]</td>
<td>0.48</td>
<td>88.74</td>
<td>78.82</td>
<td>7.40</td>
<td>1294.50</td>
<td>10.62</td>
</tr>
</tbody>
</table>

Note: Czechia = Czech Republic. Source: TripAdvisor, Bloomberg (2019) [9], Amadeus database, and own elaboration.

The average restaurant reputation per country shows little variability, ranging between 3.23 for Germany and 4.33 for Austria. Austria and the UK present the highest mean values (4.33 and 3.96, respectively). The lowest reputation values were given to Danish and German restaurants (3.43 and 3.23, respectively) (see Figure 5).

Figure 5. Mean restaurant reputation by countries in the sample. Source: TripAdvisor and own elaboration.

The simple aggregation of reputation values may thus not accurately capture the differences between countries due to the highly polarized values involved. The reputation intervals indicate this polarity exists for the selected countries, as, in some cases, the data present quite different minimum and maximum values. For example, France has a reputation value interval between 1.50 and 4.60...
and Spain between 1.50 and 4.33. As explained previously, this problem of the aggregated reputation values’ reliability can be solved by using the ICI, whose values already offer a solution for a comparable situation regarding the restaurant reputation values by country. In the present results, the ICI varies between 0.67 for Austria and 0.22 for Czechia (i.e., the Czech Republic) and Denmark (see Figure 6).

Figure 6. ICI reputation index by countries in the sample. Source: TripAdvisor and own elaboration.

Table 2 shows the results of the variables’ correlation test. A significant positive correlation was found between the ICI for reputation and the HCI score. Similar results were also obtained for the ICI and fame.

Table 2. Pearson’s correlation coefficients.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean reputation (1)</td>
<td>1</td>
<td>0.823 **</td>
<td>0.451</td>
<td>0.093</td>
<td>0.344</td>
<td>0.441</td>
<td>−0.139</td>
</tr>
<tr>
<td>ICI (2)</td>
<td>0.823 **</td>
<td>1</td>
<td>0.562 *</td>
<td>0.286</td>
<td>0.471</td>
<td>0.641 **</td>
<td>0.034</td>
</tr>
<tr>
<td>HCI (3)</td>
<td>0.451</td>
<td>0.562 *</td>
<td>1</td>
<td>0.334</td>
<td>−0.126</td>
<td>−0.021</td>
<td>0.367</td>
</tr>
<tr>
<td>Chain size (4)</td>
<td>0.093</td>
<td>0.286</td>
<td>0.334</td>
<td>1</td>
<td>0.369</td>
<td>0.231</td>
<td>0.216</td>
</tr>
<tr>
<td>% Chain (5)</td>
<td>0.344</td>
<td>0.471</td>
<td>−0.126</td>
<td>0.369</td>
<td>1</td>
<td>0.480</td>
<td>0.016</td>
</tr>
<tr>
<td>Mean fame (6)</td>
<td>0.441</td>
<td>0.641 **</td>
<td>−0.021</td>
<td>0.231</td>
<td>0.480</td>
<td>1</td>
<td>0.265</td>
</tr>
<tr>
<td>Market share (7)</td>
<td>−0.139</td>
<td>0.034</td>
<td>0.367</td>
<td>0.216</td>
<td>0.016</td>
<td>0.265</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: * and ** coefficients are significant at the 0.05 and 0.01 levels, respectively. Source: Own elaboration.

Table 3 shows the regressions’ results for the four models developed. Multicollinearity was analyzed based on variance inflation factors (VIFs), revealing moderate levels of correlation between the variables. All the VIF values are below the maximum level allowed according to previous studies [62].
Table 3. Ordinary least squares regression results.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constant</strong></td>
<td>3.465 **</td>
<td>0.498 **</td>
<td>0.179 **</td>
<td>0.347 **</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.000) a</td>
<td>(0.000) a</td>
<td>(0.000) a</td>
<td>(0.000) a</td>
</tr>
<tr>
<td><strong>HCI</strong></td>
<td>-</td>
<td>0.034 **</td>
<td>-</td>
<td>0.014 **</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.004) a</td>
<td>(0.002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chain size</strong></td>
<td>-0.029</td>
<td>-0.067</td>
<td>-0.001</td>
<td>-0.014</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.329)</td>
<td>(0.117)</td>
<td>(0.457)</td>
<td>(0.344)</td>
</tr>
<tr>
<td><strong>% Chain</strong></td>
<td>0.001</td>
<td>0.004</td>
<td>0.001</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.870)</td>
<td>(0.263)</td>
<td>(0.708)</td>
<td>(0.134)</td>
</tr>
<tr>
<td><strong>Fame</strong></td>
<td>0.020 *</td>
<td>0.030 *</td>
<td>0.023 *</td>
<td>0.041 **</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.032)</td>
<td>(0.025)</td>
<td>(0.029)</td>
<td>(0.005)</td>
</tr>
<tr>
<td><strong>Market share</strong></td>
<td>-0.016 *</td>
<td>-0.026 *</td>
<td>-0.004 *</td>
<td>-0.008 *</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.027)</td>
<td>(0.021)</td>
<td>(0.025)</td>
<td>(0.043)</td>
</tr>
<tr>
<td><strong>Country dummy</strong></td>
<td>0.018</td>
<td>0.011</td>
<td>0.004</td>
<td>0.002</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>(0.373)</td>
<td>(0.393)</td>
<td>(0.469)</td>
<td>(0.317)</td>
</tr>
<tr>
<td><strong>Adjusted R^2</strong></td>
<td>0.337</td>
<td>0.584</td>
<td>0.487</td>
<td>0.715</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>2.087</td>
<td>1.620</td>
<td>1.298</td>
<td>2.201</td>
</tr>
<tr>
<td><strong>Significance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Durbin-Watson test</strong></td>
<td>1.803</td>
<td>1.894</td>
<td>1.873</td>
<td>1.987</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>1.076</td>
<td>1.131</td>
<td>1.332</td>
<td>1.087</td>
</tr>
<tr>
<td><strong>Mean VIF</strong></td>
<td>3.388</td>
<td>4.517</td>
<td>1.998</td>
<td>7.276</td>
</tr>
<tr>
<td><strong>J-B p-value</strong></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Heteroscedasticity test</strong></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Notes: The dependent variable in models (1) and (2): Reputation; the dependent variable in models (3) and (4): ICI; * and ** coefficients are significant at the 0.05 and 0.01 levels, respectively; a coefficient’s significance is reported in parentheses; b p-values are reported for the J-B normality test; c Breusch–Pagan/Cook–Weisberg test for heteroscedasticity. Source: Own elaboration.

The estimated parameters for Models 2 and 4 indicate that countries’ health and environmental scores have a significant positive impact on restaurant reputation: \( \alpha_1 = 0.034 \) with \( p < 0.01 \) and \( \alpha_1 = 0.014 \) with \( p < 0.01 \), respectively. The adjusted R-squared (R^2) is also relatively high, increasing when the ICI is included as a measure of reputation. The validity tests of the regression models (i.e., F-, Durbin–Watson and Jarque–Bera (J-B) tests) further confirmed that the results are robust.

5. Discussion and Conclusions

5.1. Discussion

The present study’s results complement and extend the findings of previous studies on sustainable environments’ influence on the restaurant industry’s competitiveness. Various researchers have found that government rules and green city declarations do not significantly strengthen sustainability practices in the restaurant industry [8]. Concurrently, national and regional regulations and policies’ positive effects on restaurants’ sustainability have not been confirmed [6]. The present study is thus the first empirical research to confirm that restaurant corporations’ reputations improve in healthy and sustainable environments, specifically for countries ranked among the healthiest worldwide. These results reveal that country-level conditions related to health and environmental sustainability have a significant positive influence on restaurants’ competitiveness.

Previous studies also showed that the implementation of restaurant sustainable practices influenced customers’ perceptions of brand image [63]. However, most of the literature only relates to parts of sustainability, particularly ecological sustainability, rather than the integral [64]. In this sense, our results, focused on the countries’ health and environmental conditions, can help us to understand that comprehensive sustainable practices have a positive effect on customer perceptions, leading to a better restaurant reputation.
As regards innovation, the previous literature has also verified that innovation strategies are positively related to the competitiveness of hotels [65] and restaurants [34,49,50]. Furthermore, eco-innovation is an important strategy to improve the competitiveness of companies and countries [51,52]. Our results confirm these previous findings by detecting a significant relationship between innovative strategies of environmental sustainability at the country level and the competitiveness of restaurants.

Lastly, other studies have analyzed different antecedents of restaurant reputation, for example, the experience quality [3,25] and rituals in the workplace of employees [66]. However, our results uncover new reputational antecedents related to healthy and sustainable environments. Perhaps the use of a database with numerous companies and countries has made it possible to detect other antecedents that significantly impact the restaurant’s reputation.

5.2. Theoretical Implications

Since corporate reputation has become one of the restaurant industry’s most important issues, this study’s results contribute to the literature on sustainability by developing a model facilitating the analyses of the effects of countries’ health and environmental conditions on restaurant reputation. The findings offer theoretical contributions and have managerial implications. First, the results indicate that restaurant corporations’ reputations improve in the most sustainable environments, namely, in nations’ ranked among the healthiest. Although previous studies have explored the impacts of sustainable environments such as green cities, no researchers have integrated these variables into a model of the restaurant industry’s corporate reputation. This study’s contribution is thus the specific combination of variables and the exploration of their effects.

Second, the findings provide a deeper understanding of some sustainability features’ influences on restaurant reputation, revealing that this effect is cross-sectional for all the countries in the sample under study. Consequently, an implication for restaurant management is that a complete understanding is needed of the evaluation criteria that clients use to evaluate offers. Aspects related to health and environmental sustainability are becoming increasingly important.

5.3. Managerial Implications

These novel results indicate that belonging to a country classified as among the healthiest worldwide has a positive impact on a restaurant’s competitive advantages through more positive customer perceptions. Therefore, restaurant managers must understand that partnerships focused on creating healthy communities are a necessity, and that these alliances have the potential to have a significant impact on corporations’ development. Restaurants are among the players that, by adopting sustainable practices, healthy menu options and the best hygienic and cleaning practices, significantly contribute to a country’s health and sustainability. Several studies indicate that a country’s sustainability impacts positively on a country’s health, and restaurants can play a role in contributing to the country’s sustainability. Restaurant managers must be aware of the importance of adopting sustainable practices, as well as the best hygienic and cleaning practices and healthy menu options, for contributing to the country’s health and sustainability, and therefore, to the reputation and competitiveness of the country’s restaurants.

5.4. Research Limitation

This study was carried out during the COVID-19 pandemic and used pre-pandemic data. Therefore, it is valid for the pre-pandemic period. We are aware that the COVID-19 pandemic may have heavily impacted on the health of the analyzed countries and the future Healthiest Country Index, which is still unknown. Additionally, our research does not analyze particular eco-friendly practices of any restaurants, such as healthy menu options, or hygienic and cleaning practices, nor does it analyze the reputation of a particular restaurant at the establishment level, because this information is not available in our dataset.
5.5. Suggestions for Future Research

Future research could benefit from exploring the effects on restaurant reputation of other municipal, regional or national associations that promote healthy, sustainable environments. In the restaurant industry, strategic partnerships between tourism organizations, academic institutions, and local business clusters can be essential for sustainable development. Through these alliances, essential knowledge and training can be provided, as well as the facilitation of communication to the market about the implementation of systems promoting healthy communities and sustainability.

Another area of interest is to extend this type of research to other regions worldwide, which would increase the validity of the hypotheses tested in the present study. Expanding the geographical context would provide a fuller understanding of the effects of sustainability issues on a global scale, and allow researchers to focus on heterogeneity across countries. Finally, a cross-sectional approach was used in this study rather than a longitudinal one. This choice implies that much more emphasis was placed on observing consumers’ experiences than on observing changes over time. Further research is needed; for example, to investigate whether food and service quality are affected by healthier, more sustainable environments throughout economic cycles, and whether any variations in quality over time can influence restaurants’ reputations.

5.6. Conclusions

It was the aim of the present study to answer the research question of whether there is a relationship between health and environmental conditions on a country level, and said country’s restaurants’ corporate reputations. To that end, this study used empirical data, which provide strong evidence that high health and environmental scores on the country level, provided by the Healthiest Country Index, have a significant positive impact on the country’s restaurants’ reputations as ranked by customers’ ratings in TripAdvisor. Indeed, the higher the country’s health and environmental scores, the higher the country’s restaurant reputation.

Author Contributions: This study has been designed and performed by all of the authors. M.A.F.-G., J.D.-S. and J.A.C.-S. collected the data, and analyzed the data. The introduction, literature review, and hypothesis were written by M.A.F.-G. and J.A.C.S. All of the authors wrote the discussion and conclusions. All authors have read and agreed to the published version of the manuscript.

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