

AN ASSESSMENT OF TOURISM COMPETITIVENESS: A COMPARATIVE ANALYSIS OF GEORGIA AND NEIGHBORING COUNTRIES

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ABSTRACT

Competitiveness is extensively explored across various disciplines, with tourism competitiveness emerging as a significant focus of research. This aspect is pivotal in current research, embodying a multi-dimensional construct that profoundly impacts the prosperity of destinations. This study has undertaken a systematic literature review to pinpoint indicators influencing destination competitiveness and conducted a statistical analysis to validate these findings. Centered on Georgia and contrasted with its neighboring countries, the analysis spans 12 years, from 2008 to 2020. The study's significance extends beyond its specific focus on Georgia, offering insights with broader relevance to destinations marked by competitive dynamics. The analysis has revealed that within a diverse array of opportunities, the most impactful areas for enhancing Georgia's competitive environment include "Business environment," "Human resources and labor market," and "ICT readiness."

Keywords: competitiveness; tourism; influence matrix; World Economic Forum; Georgia; systematic literature review

DOI: <https://doi.org/10.15549/jeecar.v11i2.1536>

INTRODUCTION

Competitiveness is a fundamental concept in modern business across industries, and the tourism sector is no exception. In general, there are different levels of competition: company, industry, and international (Porter, 1998). As sustainability is understood as a competitive advantage and a key factor of competitiveness in

the tourism industry (Rodríguez-Díaz, Pulido-Fernández, 2019), it is necessary to study the existing and expected challenges of the competitive environment and adequately plan business activities. This study focuses on competitiveness on the international level, where competitiveness can be defined as the ability of an economy to attract the demand for

its exports and the investment to supply that demand, all within social norms that result in an improved standard of living for its citizens (Bobirca, 2007). The growth of the tourism industry in Georgia and neighboring countries makes the competitiveness study relevant.

Annually, Georgia has been observing steady growth in the influx of international tourists, a trend that was evident until 2019, according to data from Our World in Data (2023). This growth has spanned the past two decades, signifying the progression of the tourism sector. Nevertheless, while the industry advances, certain aspects warrant attention to enhance outcomes. Consequently, the dimensions of competitiveness and rivalry are assuming greater prominence. As the literature review has revealed, despite the extensive interest in promoting and understanding destination competitiveness, there is, within the numerous studies and models that deal with competitiveness in the tourism industry, and a wide variety of indicators that many organizations have developed over the years, no widely accepted definition or methodology for analyzing or measuring competitiveness within the existing literature on tourism (Dwyer, Kim, 2003).

The objective of this research is to assess the competitiveness of the tourism industry in Georgia and also to compare it to neighboring countries in the region. Although we have not encountered a comparable study concerning Georgia, various research works have explored the competitiveness of distinct tourism destinations or nations. Additionally, studies have employed diverse methodologies to analyze tourism competitiveness.

LITERATURE REVIEW

Tourism plays a pivotal role in fostering economic development and growth by serving as the primary source of foreign exchange inflow into a country (Goffi et al., 2018). Its impact on economic development is evident in investment, employment, and balance of payments indicators (Middleton, Fayall, Morgan, Ranchhod, 2009, p. 3), which can mitigate the trade deficit (UNWTO, 2020). The economic significance of tourism is unmistakably mirrored in periodic international statistics such as those found in the World Travel and Tourism Council (WTT), the United Nations World Tourism Organization

(UNWTO), the United Nations Statistics Division (UNSD), and Travel & Tourism Competitiveness Index (TTCI).

The global tourism industry, with a large range of destinations, is a very competitive field. While various definitions of competitiveness exist, there is no universal term or definition for it in the specialized literature (Dwyer, Kim, 2003). For instance, the World Economic Forum, assessing countries' competitiveness since 1979, has defined it as "Competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country" (WEF, 2020). Additionally, it is intriguing that, beyond companies, countries may find themselves competing on these indicators (Mankiw, 2018). According to traditional economic theory, competition between countries is advantageous for any nation (Mankiw, 2009). The Organization for Economic Co-operation and Development defines competition between countries as a measure of a country's ability to produce goods and services of a quality that meets international market standards and increases local incomes in the long term (OECD, 2011).

Economists have argued that a country's competitiveness should be termed productivity (e.g., Krugman; 1996; Cann, 2016; World Economic Forum, 2020), a concept unrelated to conflicts between nations. Moreover, economists have considered deviations from standard economic models, incorporating factors like imperfect competition, other economies, or both (Krugman, 1996). The UN World Tourism Organization has defined destination competitiveness as the ability of the destination to use its natural, cultural, human, man-made, and capital resources efficiently to develop and deliver quality, innovative, ethical, and attractive tourism products and services in order to achieve sustainable growth within its overall vision and strategic goals, increase the added value of the tourism sector, improve and diversify its market components and optimize its attractiveness and benefits both for visitors and the local community in a sustainable perspective (UNWTO, 2019).

According to the OECD Tourism Competitiveness Indicators report, destination competitiveness is the ability of a destination to enhance its appeal to residents and non-residents by attaining high levels of quality, innovation, and attractiveness of tourism

services. This involves expanding market share in local and global markets while ensuring efficient and sustainable use of resources that support tourism (Dupeyras, MacCallum, 2013). A destination is deemed competitive if it is appealing from a territorial standpoint, easily accessible (meaning territorial accessibility), functions efficiently, and positively impacts economic development (World Bank Group - Tourism for Development, 2019).

Ritchie and Crouch (2003) defined competitiveness in the tourism industry as "the ability of a destination to increase tourism spending by creating attractions and exciting experiences for visitors, charging reasonable prices, improving the welfare of local residents, and supporting natural capital and investment for future generations" (Ritchie, Crouch, 2003). When scrutinizing the competitiveness of tourism, the focus predominantly centers on the tourist destination, the very product of tourism (Popescu, Pavlovic, 2012; Mihajlovic, 2013), where competitiveness is attained through tourism income. Competitiveness is a multifaceted concept that has captivated the attention of tourism researchers for decades (Kim, Liu, Williams, 2022). Historically, competitiveness has been intricately linked to a nation's ability to maintain a favorable balance of payments, especially within the realm of international trade (Chaudhuri, Ray, 1997).

A multitude of scholars have conducted extensive investigations into tourism competitiveness, as well as the myriad factors and indicators that significantly influence it, as indicated in Figure 1, which is a visual synthesis of various scholars and their associated concepts into a comprehensive bubble diagram. This visual representation serves as a graphical snapshot that encapsulates the scholars whose works were scrutinized (highlighted in orange) and the pivotal indicators they deemed essential for evaluating competitiveness (illustrated in green). In the course of the research, we have encountered scholars who referenced a plethora of indicators and indicators that multiple authors cited. Consequently, the size of these bubbles within the diagram has been proportionally enlarged, vividly illustrating the most recurrent and emphasized indicators.

For instance, Porter (1979) introduced the concept of competitive forces shaping business strategy, encapsulating elements such as the

threat of new entrants, the bargaining power of buyers and suppliers, the threat of substitutes, and competitive rivalry (see Figure 1). This conceptual framework has found broad applicability across various industries. Porter (1990) posited that competitiveness is profoundly influenced by two factors: demand and investments. Poon (1993) posited that four pivotal indicators warrant particular attention, namely: environmental conditions (climate), the tourism sector, distribution channels, and the private sector. Keyser and Vanhove (1994), in a study encompassing eight Caribbean destinations, identified five indicators pivotal to the development of a competitiveness model: macroeconomic indicators, delivery, demand, transport, and politics.

Ritchie and Crouch (1999) emphasized that technology is the pivotal factor for competitiveness, a sentiment echoed by Gooroochurn and Sugiyarto (2005), who, however, expanded on this perspective by including human resources, social factors, and price as equally critical elements. Go and Govers (1999) gauged competitiveness through a meticulous assessment of seven key characteristics: accessibility, destination image, quality of service, facilities, price, climate and environment, and attractiveness. Hassan (2000) emphasized the paramount importance of leveraging comparative advantages in the context of tourism competitiveness while strongly advocating for destinations to harness their unique strengths, the foremost determinants in this context encompassing the tourism sector, demand, comparative advantage, and sustainability. Heath (2002) underscored four indispensable factors: marketing, research and control, policy, strategy, management, and sustainability. Dwyer and Kim (2003) introduced a comprehensive model that emphasizes existing and created resources, as well as the impact of demand conditions on destination competitiveness. Their approach delves into the dynamic interplay of factors influencing competitiveness.

In their comprehensive analysis, Ritchie and Crouch (2003) broadened the spectrum of indicators crucial for defining competitiveness. They presented an extensive list that encompassed organizations, demographics, destination image, accessibility, technology, attractiveness, human resources, social factors,

safety and security, infrastructure, policy, strategy and management, price, cultural factors, environment, climate, research and control, and marketing.

The World Economic Forum asserted the presence of numerous indicators influencing tourism competitiveness. The Travel & Tourism Competitiveness Index (TTCI, 2004) encompassed factors such as Business Environment, Safety and Security, Health and Hygiene, Human Resources and Labour Market, ICT Readiness, Prioritization of Travel and Tourism, International Openness, Price Competitiveness, Environmental Sustainability, Air Transport Infrastructure, Ground and Port Transport Infrastructure, Tourist Service Infrastructure, Natural Resources, Cultural Resources, and Business Travel.

Cho, Moon, and Kim (2009) asserted that the paramount concept influencing competitiveness is human resources. Goffi et al. (2018), in alignment with Faur and Ban (2020), Gao et al. (2021), and Zekan et al. (2022), asserted that sustainability stands as the cornerstone of competitiveness. Li and Du (2021) contended that cultural factors take precedence as the most crucial elements for competitiveness. Some scholars have underscored the need for policymakers to comprehend tourism potential and comparative advantage to establish the relationship between tourism capacity and competitive advantages across countries (Jovanic, Krstic, Jankovic-Milic, 2013). The uneven distribution of benefits within the sector often hinges on a nation's ability to enhance global economic performance through improved competitiveness (Bobirca, 2007). The World Economic Forum (WEF) has played a significant role in shaping the discourse on competitiveness, particularly through the introduction of the Travel & Tourism Competitiveness Index. This index examines a wide array of indicators, spanning from environmental sustainability to infrastructure and human resources.

Most scholars (e.g., Poon, 1993; Keyser, Vanhove, 1994; Go, Govers, 1999; Hassan, 2000) have deconstructed the process of assessing competitiveness into various determinants based on their nature and the number of associated indicators. These determinants encompass environmental factors (Poon, 1993; Go, Govers, 1999; Ritchie, Crouch, 2003; WEF, 2004), macroeconomics (Keyser, Vanhove,

1994), transport (Keyser, Vanhove, 1994), demand (Porter, 1990; Keyser, Vanhove, 1994; Hassan, 2000; Dwyer, Kim, 2003), supply (Keyser, Vanhove, 1994), sustainability (Hassan, 2000; Heath, 2002; WEF, 2004; Risteski, Kocevski, Arnaudov, 2012; Goffi and Cucculelli, 2018; Faur, Ban, 2020; Gao et al., 2021; Zekan et al., 2022), price (Go, Govers, 1999; Ritchie, Crouch, 2003; Dwyer, Kim, 2003; WEF, 2004; Gooroochurn and Sugiyarto, 2005), infrastructure (Ritchie and Crouch, 2003; Dwyer and Kim, 2003; WEF, 2004), and various other factors or determinants.

The literature review underscores the multitude of theoretical models devised for evaluating business, destination, and national competitiveness (see Figure 1). These models take into account a wide range of factors, including environmental conditions, macroeconomic aspects, demand and supply dynamics, sustainability, and much more. Despite the plethora of models and indicators developed over time, the quest for a universally applicable framework to manage a country's tourism sector often remains elusive (Dupeyras, MacCallum, 2013).

Upon reviewing the literature, it becomes evident that there are commonalities among the indicators featured in the models proposed by Ritchie and Crouch (1999; 2003), Dwyer and Kim (2003), and the Travel and Tourism Competitiveness Index. As depicted in Figure 1, the most significant emphasis is observed in the models by WEF (2004), Ritchie and Crouch (2003), and Dwyer and Kim (2003) due to their extensive coverage of indicators. It is worth noting that other scholars, in contrast, offer a more limited number of factors, while the indicators presented by Ritchie and Crouch (1999; 2003), Dwyer and Kim (2003), and the Travel and Tourism Competitiveness report exhibit numerous similarities in terms of their nature. Ritchie and Crouch's (1999; 2003) model, known as the "Competitiveness model," focuses on 36 elements of competitiveness, which are further categorized into five main factors (Goffi et al., 2018). This model distinguishes between comparative advantages that ensure the availability of tourism resources and competitive advantages associated with a destination's ability to effectively utilize these resources over an extended period (Goffi et al., 2018).

An evolved version of the Ritchie and Crouch

(2000) model was presented by Dwyer and Kim (2003) (Goffi et al., 2018). According to their model, it is imperative to differentiate between existing and created resources and determine the "demand conditions" crucial to a tourist destination's competitiveness (Goffi et al., 2018). This model has contributed to discussions on

other conceptual models of destinations, including those proposed by Hassan (2000), Heath (2002), and Dwyer and Kim (2003) and (Goffi et al., 2018).

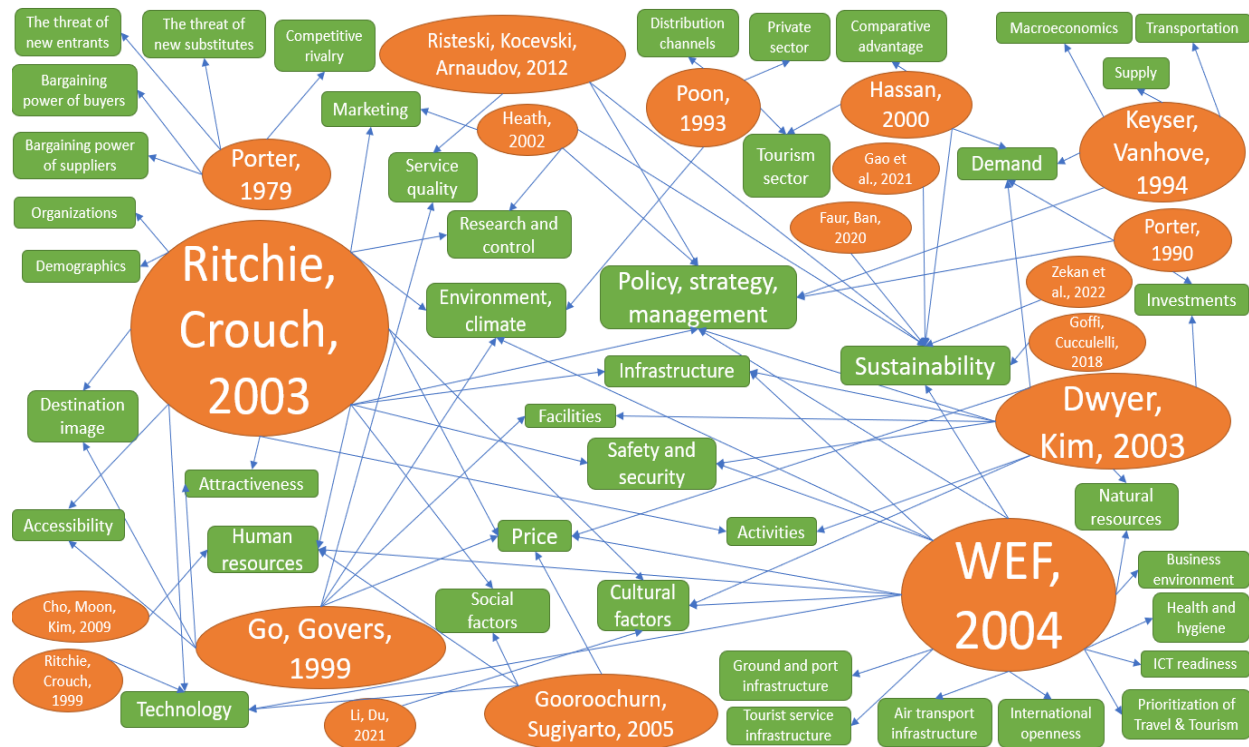


Figure 1: A summary of tourism competitiveness indicators

Among the various methodologies reviewed for assessing a country's competitiveness including the Report by the International Institute for Management Development (IMD), The Global Competitiveness Index by the World Economic Forum, The Travel & Tourism Competitiveness Index by the World Economic Forum, the SolAbility Sustainable Competitiveness Index, and the OECD, one index stands out, namely The Travel & Tourism Competitiveness Index by the World Economic Forum. It has been developed and established by several authoritative and widespread organizations, providing deep insights into a country's competitiveness. The preceding literature analysis has underscored a convergence among the indicators proposed by various authors and those employed by the World Bank to assess destination

competitiveness. In this context, the approaches presented by Dwyer and Kim and Ritchie and Crouch exhibit the greatest proximity to the Travel and Tourism Competitiveness Index. A comparison of these models reveals a substantial convergence in indicators, meticulously detailed in Table 1. In an effort to emphasize the consistency among these models, we have chosen to present only the indicators that are shared by at least two out of the three authors.

Table 1: Comparison of the pillars proposed by Dwyer and Kim and Ritchie and Crouch with the pillars given in The Travel and Tourism Competitiveness Report

Factors	TTCI	Ritchie, Crouch (2003)	Dwyer and Kim (2003)
Environment	✓	✓	✗
Policy, strategy, management	✓	✓	✓
Price	✓	✓	✓
Cultural factors	✓	✓	✓
Technology	✓	✓	✗
Human resources	✓	✓	✗
Infrastructure	✓	✓	✓
Safety and Security	✓	✓	✓
Activities	✗	✓	✓
Investments	✓	✗	✓
Natural resources	✓	✗	✓

The theories and models we have considered are focused on a variety of research aspects. However, it is important to recognize that there is no universal approach to competitiveness indicators for all destinations (Dwyer, Kim, 2003). Given the insights gleaned from the literature review and our comprehensive comparative analysis, we have chosen to rely on the findings presented in the World Economic Forum (WEF) report as the primary resource for studying the evolving landscape of competitiveness in Georgia. The examination of the sources has revealed that the Travel & Tourism Competitiveness Index of the World Economic Forum contains both traditional (e.g., Go, Govers, 1999; Dwyer, Kim, 2003; Gooroochurn, Sugiyarto, 2005) and innovative indicators (e.g., Goffi and Cucculelli, 2018; Faur and Ban, 2020; Li and Du, 2021; Gao et al., 2021; Zekan et al., 2022), highlighting its academic significance. Traditional indicators cover aspects such as environment, demand, policy, strategy, facilities, accessibility, and service quality, among others, while innovative indicators encompass culture, sustainability, and more.

While we have underscored the significant similarities among the indicators discussed earlier, it is equally essential to acknowledge potential weaknesses and gaps in the research approach. Notably, the Travel & Tourism Competitiveness Report's most recent edition was published in 2019, with subsequent editions

emerging under a new name and incorporating revised indicators from 2021. This transition has necessitated a degree of caution and adaptability in our analysis. Furthermore, it might be judicious to consider the inclusion of additional indicators, such as political stability, competition policies, and market regulation. The incorporation of these factors could significantly enhance the comprehensiveness of our research and provide a more robust foundation for the study of tourism competitiveness in Georgia.

This study delves into Georgia's destination¹ competitiveness, exploring the relationships between determinants. Significantly, there is a scarcity of research investigating the interplay of Travel and Tourism Competitiveness Index pillars using methodologies such as ANOVA, interquartile range analysis, and expert interviews. However, some studies do explore the competitiveness of specific tourism destinations or countries, while others analyze the Travel and Tourism Competitiveness Index using different approaches (Croes, Niekerk, 2017; Saayman, Rossouw, 2018; Niekerk, Saayman, 2018; Balakrishnan, Chua, 2019; Haung, Wang, 2019; Costa, Teixeira, 2021).

The hypotheses of this study aim to determine the potential influence of indicators on each other and assess the equal significance of all indicators in enhancing destination competitiveness. Leveraging the comprehensive

¹ In this study, the terms country and tourism destination are used as interchangeable terms

indicators provided by the Travel and Tourism Competitiveness Index, the research investigates the competitiveness of Georgia's tourism industry.

The research hypotheses are as follows:

H₁: The indicators have significantly different potential to influence each other in a destination's competitive environment.

H₂: All assessed indicators have the same significance in enhancing the destination's overall competitiveness.

Given the comprehensive set of indicators revealed in the literature and the prominence of the Travel and Tourism Competitiveness Index, these indicators are the foundation for our study on the competitiveness of Georgia's tourism industry.

METHODOLOGY

Due to the multifaceted nature of competitiveness, as illuminated in the literature review, the objective of this study transcends the mere ranking of indicators as better or worse. Instead, the aim is to construct a framework that unveils the underlying nuances and challenges inherent in the existing set of competitiveness indicators. The Travel and Tourism Competitiveness Index, in its 2019 edition, encompasses 14 distinct pillars, each comprising a total of 90 individual indicators. It is within these pillars that we find the foundation for this research's direction as we seek to illuminate the intricate interconnections among them. This approach allows the elucidation of the pivotal indicators influencing the advancement of a country's competitiveness to varying degrees. The focus is on tourism competitiveness in Georgia and comparing its performance with that of neighboring countries, including Armenia, Azerbaijan, Russia, and Turkey. The central pillars under scrutiny in this study include:

1. Business Environment;
2. Safety and Security;
3. Health and Hygiene;
4. Human Resources and Labor Market;
5. ICT Readiness;
6. Prioritization of Travel and Tourism;
7. International Openness;
8. Price Competitiveness;
9. Environmental Sustainability;

10. Air Transport Infrastructure;
11. Ground and Port Transport Infrastructure;
12. Tourist Service Infrastructure;
13. Natural Resources;
14. Cultural Resources and Business Travel.

Data have been obtained from the Travel & Tourism Competitiveness Report by the World Economic Forum (WEF). In the next stage of the research, we identified the change in the indicators of the pillars in the twelve-year dynamics (from 2008 to 2020), and we established and classified the relationships between the pillars. Every indicator has a point from 0 to 7, which assesses the level of each indicator throughout the studied years. In the process of conducting the research, a lack of information was revealed in some indicators, which led to their filling with the help of additional sources (for example, Doing Business, International Property Rights Index, and others). In addition, we identified outliers of pillars by years using the interquartile range (IQR) method, which revealed outliers in 5 pillars: Health and Hygiene; Price Competitiveness; Ground and Port Transport Infrastructure; Natural Resources; Cultural Resources; and Business Travel. Industry experts were interviewed to establish the problems and find ways for improvement.

The qualitative aspect of this study involved in-depth interviews with industry experts who possess substantial experience, with a criterion of seven or more years of active involvement in their respective fields. Specifically, a total of ten experts from the industry were selected as participants in this qualitative inquiry. It is noteworthy that these individuals primarily held, or currently hold, significant positions within governmental and non-governmental organizations. The qualitative interviews were conducted employing an open-ended questionnaire structured to provide participants with the flexibility to elaborate on their insights. The questions posed to the interviewees were developed iteratively, with subsequent questions informed by the responses to previous inquiries. This adaptive approach allowed for a deeper exploration of the themes and ideas emerging from the participants, enhancing the richness and depth of the qualitative data collected.

All the stages of the research design are given below (see Table 2).

Table 2. Research framework

1.	Determining and collecting the range of multi-year competitive indicators for the tourist destination;
2.	Conducting quantitative and qualitative data analysis to identify the causal relationships between the indicators and determine the problematic components;
3.	Clustering the "problems" into categories based on their potential to impact the destination's competitiveness

Data collection was challenging, as all the variables of the fourteen pillars of the five countries in a study in dynamics were collected.

A statistical test called Analysis of Variance (ANOVA) was used to compare the means between different groups. This test helps to determine if there are any significant differences among the means of multiple groups. In simpler terms, it allows us to find out if the values we are comparing are truly different from each other:

To explore the relationships between different indicators in a destination's competitive environment, we formulated an additional hypothesis (here we mention it as H_{stat}) that was used only for statistical test purposes:

H_{stat} : There are significant variations in the influence potential of indicators within a destination's competitive environment.

To investigate this, we conducted hypothesis testing where:

H_{stat0} : Null Hypothesis: The means of all indicators are equal.

H_{stat1} : Alternative Hypothesis: At least one pair of indicators has significantly different means.

or

$$H_0: \mu_1 = \mu_2 = \dots = \mu_k$$

$$H_1: \mu_i \neq \mu_j \text{ for at least one } i \neq j$$

In simpler terms, we aimed to determine whether certain indicators have a more pronounced impact on a destination's competitiveness than others. The results of this test provided valuable insights into the dynamics of these indicators and their potential implications for destination competitiveness.

To test the above hypothesis, we introduced the following:

$$\bar{Y}_{i*} = \frac{1}{n_i} \sum_{j=1}^{n_i} y_{ij}, i = 1, \dots, k$$

Let be the mean value of i^{th} group and be the mean value of all observed values.

$$\bar{Y}_{**} = \frac{1}{n} \sum_{i=1}^k \sum_{j=1}^{n_i} n_i \bar{Y}_{i*}$$

Let the deviations of means of each group from the total mean value be defined as

$$SSB = \sum_{i=1}^k n_i (\bar{Y}_{i*} - \bar{Y}_{**})^2$$

The sum of squares within groups is given by

$$SSW = \sum_{i=1}^k \sum_{j=1}^{n_i} (Y_{ij} - \bar{Y}_{i*})^2$$

and the total sum of squares, which represents the total squared deviation of all observed values from the mean was computed as

$$SST = \sum_{i=1}^k \sum_{j=1}^{n_i} (Y_{ij} - \bar{Y}_{**})^2$$

To test the hypothesis, the f statistics were computed by the following quotient

$$f = \frac{\frac{SSB}{k-1}}{\frac{SSW}{n-k}}$$

which in turn was compared to the critical value of the F distribution corresponding to α significance level.

$$f > F_{k-1, n-k, \alpha}$$

Based on the data, $k = 5$; $n_j = 111, j = 1, \dots, 5$.

$$\bar{Y}_{1*} = 3.83, \bar{Y}_{2*} = 3.94, \bar{Y}_{3*} = 4.04, \bar{Y}_{4*} = 4.18, \bar{Y}_{5*} = 4.28$$

$$\bar{Y}_{**} = 4.05$$

$$SST = 724.57, SSB = 14.33, SSW = 710.24$$

The f -test statistics surpassed the critical value (using $\alpha = 0.05$)

$$f = 2.77 > 2.46 = F_{4, 106, 0.05}$$

After performing the ANOVA test, we compared a calculated statistic (f) with a critical value. In our case, the f -statistic was greater than the critical value, so we rejected the idea that all group means are the same.

To identify the differences between specific indicators, we applied a hypothesis for comparing the mean values of paired populations:

$$H_0: \mu_1 - \mu_2 = 0$$

$$H_1: \mu_1 - \mu_2 > 0$$

where μ_1 and μ_2 denote the average values of each group. This would be interpreted as the first country in comparison, which leads to the second one in terms of the average tourism score. Alternatively, the reverse hypothesis could have been formulated as

$$H_0: \mu_1 - \mu_2 = 0$$

$$H_1: \mu_1 - \mu_2 < 0$$

which similarly would be interpreted as the second country outperforming the first one by the mean tourism score.

The mixed variance was computed by:

$$S'_{n,m}{}^2 = \frac{1}{n+m-2} \sum_{i=1}^n (X_i - \bar{X}_n)^2 + \sum_{i=1}^m (Y_i - \bar{Y}_m)^2.$$

Plugging the square root of this value into the denominator of the following quantity

$$T_{n,m} = \frac{(\bar{X}_n - \bar{Y}_m)}{S'_{n,m} \sqrt{\frac{1}{n} + \frac{1}{m}}} \sim t(n+m-2)$$

yielded the random variable $T_{n,m}$ which is the Student's t distributed by the degrees of freedom $n+m-2$ and the predetermined significance level α . The rejection criteria for the first hypothesis are given below

$$t_{n,m} = \frac{\bar{x}_n - \bar{y}_m}{s_{n,m} \sqrt{\frac{1}{n} + \frac{1}{m}}} > t_{n+m-2, \alpha}$$

while its opposite condition rejects the second null hypothesis.

$$t_{n,m} = \frac{\bar{x}_n - \bar{y}_m}{s_{n,m} \sqrt{\frac{1}{n} + \frac{1}{m}}} < -t_{n+m-2, \alpha}$$

RESEARCH OUTCOMES AND DISCUSSION

To identify differences between the analyzed indicators, we conducted pairwise comparisons of selected countries, which involved testing each of the hypotheses postulated above by comparing the critical value of the Student t -distribution with the selected significance level to the test statistics given by the formulas of $t_{n,m}$ (see Table 3).

Table 3: The mixed standard deviations corresponding to each pair of countries

	Armenia	Azerbaijan	Georgia	Russia	Turkey
Armenia					
Azerbaijan	1.287904				
Georgia	1.329669	1.30344			
Russia	1.144207	1.113618	1.161665		
Turkey	1.04119	1.007478	1.060346	0.815796	

The inclusion of calculated values in the $t_{n,m}$ differences (see Table 4).
formulas revealed cases of significant statistical

Table 4: The values of statistics

	Armenia	Azerbaijan	Georgia	Russia	Turkey
Armenia					
Azerbaijan	0.612319				
Georgia	1.145792	0.563828			
Russia	2.265916	1.620006	0.920361		
Turkey	3.19015	2.514143	1.695698	0.893453	

The statistics:

$$t_{220,0.05} = 1.65 \approx z_{0.95}$$

$$-t_{220,0.05} = -1.65 \approx -z_{0.95}$$

The given example is for the indexes (general values) of the five countries that revealed that there are significant differences between the values of Georgia and Turkey. We also conducted the same analysis for fourteen pillars, which allowed us to reveal the differences and similarities between the values and determine the problematic components (pillars) that create

general indexes.

The table below illustrates the values of $t_{n,m}$ ($t_{111,111}$). Wherever $t_{111,111} > 1.65$ we conclude that Georgia outperforms the corresponding country in terms of that particular pillar (highlighted in green). Conversely, for $t_{111,111} < -1.65$, we conclude that Georgia is falling behind (highlighted in red) compared to the respective countries in terms of that particular pillar (see Table 5).

Table 5: The results of statistical tests

Indicators		Armenia	Azerbaijan	Russia	Turkey
1	Business Environment	1.31	1.73	-4.78	-0.36
2	Safety and Security	0.44	0.36	-6.16	-5.95
3	Health and Hygiene	0.51	1.27	4.03	-5.33
4	Human Resources and Labor Market	1.29	-0.42	1.66	-2.04
5	ICT Readiness	0.19	-0.45	1.74	0.80
6	Prioritization of Travel and Tourism	2.48	1.43	-3.40	-1.27
7	International Openness	0.21	0.46	-1.13	0.19
8	Price Competitiveness	-0.44	-0.94	0.14	-1.36
9	Environmental Sustainability	4.10	1.20	-3.44	-3.08
10	Air Transport Infrastructure	-1.08	-3.99	27.87	9.65
11	Ground and Port Transport Infrastructure	5.28	-4.22	-2.25	2.93
12	Tourist Service Infrastructure	0.34	1.07	1.81	2.48
13	Natural Resources	-0.33	0.29	6.97	2.09
14	Cultural Resources and Business Travel	0.33	0.37	2.18	3.42

Source: Author's work

To summarize the outcomes of the statistical analysis, significant differences were not revealed only in the case of the following two pillars: "International Openness" and "Price Competitiveness". This result means that in the case of these two pillars, the countries have intense competition. In contrast, differences were revealed in the case of the remaining twelve pillars: "Business Environment"; "Safety and Security"; "Health and Hygiene"; "Human Resources and Labor Market"; "ICT Readiness"; "Prioritization of Travel and Tourism"; "Environmental Sustainability"; "Air Transport Infrastructure"; "Ground and Port Transport Infrastructure"; "Tourist Service Infrastructure"; "Natural Resources"; "Cultural Resources and Business Travel".

Having established the significance of

differences among the various indicators through the ANOVA test, we then turned our attention to categorizing the observed challenges according to their potential impact on the overall competitiveness of the tourism industry. This next step involved leveraging the terminology and classification framework proposed by Freyer et al. (2017), which was also employed in the study of a resort in Georgia by Khelashvili, Khartishvili, and Khokhobaia (2019). By adopting this classification approach, we aim to systematically assess the diverse challenges that the tourism industry faces, offering insights into their varying degrees of influence and potential consequences.

The subsequent phase of the research endeavored to ascertain the causal interrelationships among the pillars. To achieve

this objective, a series of in-depth interviews were conducted with eminent professionals from the industry in 2021-2022. Leveraging the outcomes of the preceding stages, the discerned 'challenges' were systematically categorized, considering their plausible influence on competitive performance. This classification process was facilitated through the implementation of "problem-centered interviews" (Döringer, 2021) with industry experts, who assessed each challenge by the envisaged outcomes of potential solutions.

To determine the relationships between the pillars within the framework of the research, the terminology and classification proposed by Freyer were used (Freyer et al., 2017), which also used about a resort in Georgia. According to this concept, four main categories are used for classification: "leveraged", "critical", "limited impact" and "buffer" problems (Freyer et al., 2017; Khelashvili, Khartishvili, Khokhobaia, 2019). These categories classify challenges based on their potential impact and influence (see Figure 1):

- Leveraged problems are challenges that, when addressed, have the potential to bring about significant positive changes across various aspects. They are less influenced by other factors (pillars) but have a strong influence on other pillars. Essentially, solving these challenges could lead to broad positive outcomes in the overall competitiveness of the tourism industry.
- Critical problems are challenges that have widespread impacts on multiple factors. These challenges are influenced by many other factors and, in turn, influence many other aspects. They play a pivotal role in shaping the overall competitiveness of the tourism industry due to their intricate connections and significant influence.
- Limited impact problems challenges have a more significant impact on themselves compared to the impact they have on other aspects. In other words, their effects are somewhat contained and do not propagate extensively through the system. While they might need attention, their influence on the broader competitive landscape might be more limited.
- Buffering problems are challenges that are relatively disconnected from other factors in terms of both receiving and exerting

influence. Their impact on the overall competitiveness might be minimal due to their isolated nature.

These four main categories are given in the analytical tool - "influence matrix" (Khelashvili, Khartishvili, Khokhobaia, 2019) (see Figure 2).

Subsequently, the pillars were clustered as "leveraged," "critical," "limited impact," and "buffer" problems (see Figure 1). However, our analysis primarily concentrated on the category of "leveraged" problems, as these are deemed to be the most impactful to address. Furthermore, the values associated with these pillars underscore the existence of intense competition among the countries.

The "leveraged" category pertains to challenges that possess a relatively lower dependence on preconditions and, upon resolution, have the potential to yield expansive positive outcomes – hereafter referred to as "problems." "Leveraged problems" exhibit a lesser degree of "incoming" effects, indicating a reduced influence from other pillars, while concurrently demonstrating greater than average "outgoing" effects, signifying their enhanced influence on other pillars (Khelashvili, Khartishvili, Khokhobaia, 2019). This classification aligns with Freyer's concept, positioning these problems within the northeastern quadrant (Freyer et al., 2017; Meadows, 1999; Wirth et al., 2014).

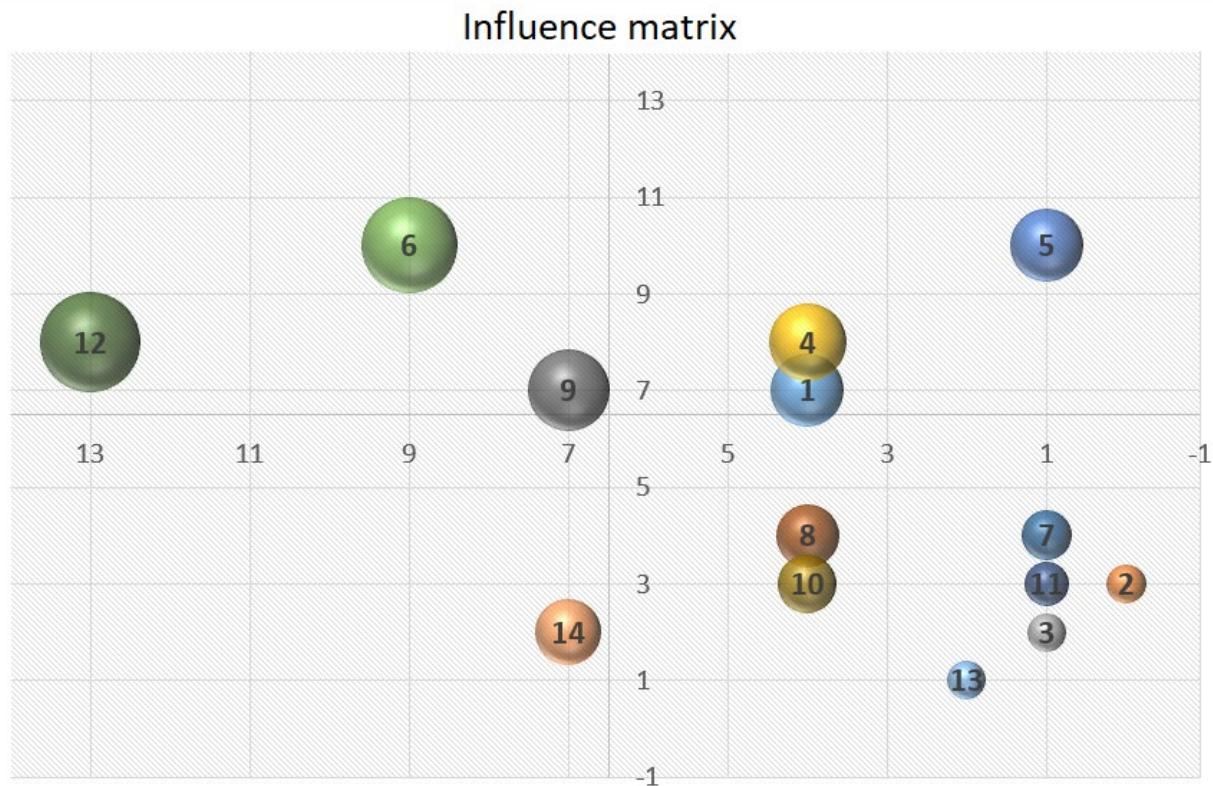
The "critical problems" category follows, encompassing challenges in which numerous factors contribute to their resolution, resulting in a positive impact on a multitude of factors. In this scenario, both "outgoing" and "incoming" effects are numerous. According to Freyer, these challenges are situated in the "northwest quadrant" (Freyer et al., 2017; Meadows, 1999; Wirth et al., 2014).

The third quadrant encompasses "problems of limited impact." These challenges exhibit a greater impact on themselves compared to the influence they exert on other environmental factors.

Lastly, the fourth quadrant encompasses "buffering problems." These factors possess minimal connections with other environmental factors, both in terms of receiving influence and exerting influence.

Critical problems

Leveraged problems



Problems of limited impact

Buffering problems

Figure 2. The Influence Matrix

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Business Environment; 2. Safety and Security; 3. Health and Hygiene; 4. Human Resources and Labor Market; 5. ICT Readiness; 6. Prioritization of Travel and Tourism; 7. International Openness; | <ol style="list-style-type: none"> 8. Price Competitiveness; 9. Environmental Sustainability; 10. Air Transport Infrastructure; 11. Ground and Port Transport Infrastructure; 12. Tourist Service Infrastructure; 13. Natural Resources; 14. Cultural Resources and Business Travel |
|--|--|

Source: Author's work

The statistical analysis results highlight significant differences in only two pillars: "International Openness" and "Price Competitiveness". This outcome signifies intense competition among the countries within these particular pillars. Conversely, disparities emerged across the remaining twelve pillars: "Business Environment,"; "Safety and Security"; "Health and Hygiene"; "Human Resources and Labour Market"; "ICT Readiness"; "Prioritization of Travel and Tourism"; "Environmental Sustainability"; "Air Transport Infrastructure"; "Ground and Port Transport Infrastructure"; "Tourist Service Infrastructure"; "Natural Resources"; "Cultural Resources and Business

Travel".

Leveraged Problems:

We focused our analysis on "leverage problems", which have fewer "incoming" and more "outgoing" (positive impact) connections. In this context, our investigation centers on three pillars - "Business Environment", "Human Resources and Labor Market", and "ICT Readiness". These pillars exhibit values suggesting robust competition within the economies studied.

Business Environment (Pillar 1):

Georgia's performance surpasses that of Azerbaijan and lags behind the Russian Federation in the "Business Environment". Noteworthy generalized challenges within this pillar include:

- "Human Resources and Labor Market" (pillar 4)
- "Prioritization of Travel and Tourism" (pillar 6)
- "Price Competitiveness" (pillar 8)
- "Environmental Sustainability" (pillar 9)

Further scrutiny of these challenges reveals specific issues for enhancing Georgia's business environment, such as:

- Addressing gaps in the judicial system (rights and law base)
- Enhancing market dominance

Improvements in this direction not only boost the "Business Environment" indicators but also influence other interconnected pillars like "Human Resources and Labor Market", "ICT Readiness", "Price Competitiveness", "Environmental Sustainability", "Air Transport Infrastructure", "Ground and Port Transport Infrastructure", and "Tourist Service Infrastructure".

Human Resources and Labor Market (Pillar 4):

Georgia outperforms the Russian Federation and falls behind Turkey in "Human Resources and Labor Market". This pillar's dynamics are significantly influenced by:

- "Business Environment" (pillar 1)
- "Prioritization of Travel and Tourism" (pillar 6)
- "Environmental Sustainability" (pillar 9)
- "Tourist Service Infrastructure" (pillar 12)

Key indicators within the "Labor Market" segment include balancing pay and productivity, staff training/retraining, finding skilled employees, and customer treatment. Addressing these challenges and enhancing staff training can enhance Georgia's competitiveness in this pillar and subsequently positively impact several other pillars.

ICT Readiness (Pillar 5):

Georgia leads the Russian Federation in the

"ICT Readiness" pillar. This pillar's influence extends to numerous other pillars:

- "Health and Hygiene" (pillar 3)
- "Human Resources and Labor Market" (pillar 4)
- "Prioritization of Travel and Tourism" (pillar 6)
- "International Openness" (pillar 7)
- "Environmental Sustainability" (pillar 9)
- "Air Transport Infrastructure" (pillar 10)
- "Ground and Port Transport Infrastructure" (pillar 11)
- "Tourist Service Infrastructure" (pillar 12)
- "Natural Resources" (pillar 13)
- "Cultural Resources and Business Travel" (pillar 14)

Hypothesis Testing:

The hypotheses formulated at the outset of this study aimed to provide insights into the competitiveness dynamics among the analyzed countries. The statistical analysis has confirmed significant differences in only two pillars: 'International Openness' and 'Price Competitiveness'. These findings support Hypothesis 1, suggesting that these pillars are marked by intense competition among the countries. Conversely, the analysis has revealed disparities across the remaining twelve pillars, indicating variations in competitiveness. These results provide partial support for Hypothesis 2, which posited that various pillars would exhibit differing levels of competition.

CONCLUSIONS AND RECOMMENDATIONS

The presented research has aimed to analyze the inter-country competitive environment of tourism, focusing on Georgia as a tourism destination. This research design can be adapted to analyze the cross-country competitive environment of any group of countries designated as tourism destinations. The study offers valuable insights to managers and policymakers on enhancing the competitiveness of a tourism destination. It not only identifies areas where Georgia (or any country) is competitive or lacking but also reveals interconnections and impacts among different attributes. This approach assists in determining the strength of interactions between different aspects (problems or issues) and the overall significance of individual issues.

From our research on Leveraged problems, it is

evident that the most effective directions for enhancing the competitive environment include "Business Environment", "Human Resources and Labor Market", and "ICT Readiness".

Strategic Option One: Improving the Business Environment. To achieve this, addressing challenges in the judicial system and enhancing market dominance are crucial. This improvement would also resolve issues in "Human Resources and Labor Market", "ICT Readiness", "Price Competitiveness", "Environmental Sustainability", "Air Transport Infrastructure", "Ground and Port Transport Infrastructure", and "Tourist Service Infrastructure".

Strategic Option Two: Enhancing Human Resources and Labor Market. Increasing staff training is pivotal here. Enhancing this aspect would also lead to improvements in "Safety and Security", "Health and Hygiene", "ICT Readiness", "Prioritization of Travel and Tourism", "Price Competitiveness", "Air Transport Infrastructure", "Tourist Service Infrastructure", and "Cultural Resources and Business Travel".

Strategic Option Three: Boosting ICT Readiness. Advancing Human Resources and Labor Market is essential for this goal. Progress in this area would also resolve challenges in "Health and Hygiene", "Human Resources and Labor Market", "Prioritization of Travel and Tourism", "International Openness", "Environmental Sustainability", "Air Transport Infrastructure", "Ground and Port Transport Infrastructure", "Tourist Service Infrastructure", "National Resources", and "Cultural Resources and Business Travel".

The analysis indicates that problems in the Leveraged quadrant possess the potential to improve multiple aspects simultaneously, making this quadrant more efficient for targeted interventions. Moreover, while the World Economic Forum's last Travel & Tourism Competitiveness Index was published in 2019, a new report, the Travel and Tourism Development Index, was released in 2021 as a logical continuation of the previous report. Future research could focus on adjusting indicators to assess tourism competitiveness in changing environments. While no similar study about Georgia analyzing the interdependence of Travel and Tourism Competitiveness Index pillars using a similar methodology exists, various studies

explore competitiveness at specific tourism destinations and countries or employ diverse methods to analyze the Travel and Tourism Competitiveness Index. In conclusion, the proposed approach can serve as a framework for future research on tourism competitiveness. Countries can utilize this methodology to identify critical areas requiring improvement and undertake measures to enhance their tourism competitiveness.

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