UDC 338.48 EDN: BSQPUB
DOI: 10.24412/1995-0411-2022-2-65-80

Drielli Raquel Vardieiro de OLIVEIRA
Federal University of Juiz de Fora (Juiz de Fora, State of Minas Gerais, Brazil)
Bachelor in Tourism Management
Mariana Pereira Chaves PIMENTEL
Federal University of Juiz de Fora (Juiz de Fora, State of Minas Gerais, Brazil)
PhD in Social Sciences, Professor
Caio César Soares GONÇALVES
João Pinheiro Foundation, Statistics and Information Directorate
(Belo Horizonte, State of Minas Gerais, Brazil)
Researcher

METHODOLOGY FOR MEASURING THE TOURISM ECONOMY IN MUNICIPALITIES: RESEARCH APPLIED IN JUIZ DE FORA (BRAZIL)

Abstract. *Tourism is a challenge in terms of estimating its composition and economic participation due to its complexity and composition of actors from the most diverse production chains. This work seeks to measure the contribution of the tourism sector to the city of Juiz de Fora - MG through the Value Added - VA by Tourism Characteristics Activities - TCAs. Therefore, the publication of Gonçalves et al. (2020), by measuring the participation of tourism at the state level, proved to be of fundamental importance to guide the creation of the method then presented, for the municipal level. So, data from tourism supply side were used, obtained from the System of Regional Accounts - SCR and the Annual Social Information Report - RAIS, both managed and fed by the Brazilian Institute of Geography and Statistics - IBGE and the Ministry of Labor and Social Security, respectively. This measurement was done through the creation of a method that uses equations to calculate the proportionality of municipal data in relation to state data and through the application of a simple rule of three, obtaining the VA at the municipal level. The results showed that the tourism sector represents, on average, 4.55% of the total Gross Value Added in Juiz de Fora and 0.11% of the Gross Value Added in Minas Gerais. The subsector with the largest representation in the number of formal jobs in the TCAs in Juiz de Fora is the Accommodation and Food Industry, whose degree of occupation of formal jobs represents 88.31% in the average of the nine years in relation to the general total of jobs in the sector. However, this subsector represented the lowest average value added per formal employee/year. The greatest contribution in terms of value added, in each of the nine years in the same period, was attributed by Arts, Culture and Leisure activities. Still, it can be stated that, in the municipality, the index of formal jobs in the characteristic activities of tourism, in a certain subsector, is not directly related to its contribution in the VA of the municipality. A decrease in the contribution of the tourism sector to the municipality's economy from 2010 to 2018 was registered, and it was possible to conclude that the tourism sector has been weakening in the period and, therefore, the need for investments that foster this sector becomes urgent.*

Keywords: *tourism, tourism economics, Value added, tourism characteristic activities, Juiz de Fora*

Citation: Oliveira, D. R. V. de, Pimentel, M. P. C., & Gonçalves, C. C. S. (2022). Methodology for measuring the tourism economy in municipalities: Research applied in Juiz de Fora (Brazil). *Sovremennye problemy servisa i turizma [Service and Tourism: Current Challenges], 16*(2), 65–80. doi: 10.24412/1995-0411-2022-2-65-80.

Article History
Received 18 April 2022
Accepted 1 June 2022

Disclosure statement
No potential conflict of interest was reported by the author(s).

© 2022 the Author(s)
This work is licensed under the Creative Commons Attribution 4.0 International (CC BY-SA 4.0).
To view a copy of this license, visit https://creativecommons.org/licenses/by-sa/4.0/

УДК 338.48 EDN: BSQPUB
DOI: 10.24412/1995-0411-2022-2-65-80

Дриелли Ракель Вардейру де ОЛИВЕЙРА
Федеральный университет Жуис-де-Фора (Жуис-де-Фора, шт. Минас-Жерайс, Бразилия)
бакалавр туризма
Мариана Перейра Чавиш ПИМЕНТЕЛЬ
Федеральный университет Жуис-де-Фора (Жуис-де-Фора, шт. Минас-Жерайс, Бразилия)
кандидат социологических наук, профессор
Кайо Сезар Соареш ГОНСАЛВИС
Фонд Жуана Пиньейру, Управление статистики и информации
(Белу-Оризонти, шт. Минас-Жерайс, Бразилия)
научный сотрудник

МЕТОДОЛОГИЯ ПАРАМЕТРИЗАЦИИ ЭКОНОМИКИ ТУРИЗМА В МУНИЦИПАЛИТЕТАХ: КЕЙС ЖУИС-ДЕ-ФОРА (БРАЗИЛИЯ)

Исследования в сфере туризма усложняются комплексностью самой туристической индустрии и разнообразным составом участников производственных цепочек туристических услуг. Работа направлена изучение значения туристической индустрии в экономике города Жуис-де-Фора на основе изучения добавленной стоимости (ДС) и характеристике отдельных видов туристской деятельности (ТСА). В статье были использованы данные о территориальном туристическом продукте, полученные из Системы региональных счетов (SCR) и Ежегодного отчета по социальной информации (RAIS), которые составляются Бразильским институтом географии и статистики (IBGE) и Министерством труда и социального обеспечения. Исследование выполнено на основе метода, использующего уравнения для расчета пропорциональности муниципальных данных по отношению к государственным данным, и применения простого правила «трех» для получения данных о добавленной стоимости на муниципальном уровне. Результаты показывают, что на сектор туризма приходится в среднем 4,55% от общей валовой добавленной стоимости в Жуис-де-Фора и 0,11% от валовой добавленной стоимости в штате Минас-Жерайс. Наибольшее количество официальных рабочих мест в сфере туризма в Жуис-де-Фора дает гостиничная и ресторанная сферы, степень занятости в которых составляет 88,31% в среднем за девять лет по отношению к общему количеству рабочих мест в отрасли. Однако в этом подсекторе наблюдается самая низкая средняя добавленная стоимость на одного работника в год. Сфера культурного и развлекательного туризма приносит наибольший доход в экономику муниципалитета. Тем не менее, можно констатировать, что в муниципалитете нет зависимости от уровня занятости и доходности от отрасли. С 2010 по 2018 гг. наблюдалось снижение вклада туристического сектора в экономику муниципалитета. Это актуализирует потребность в инвестициях для поддержки туристического сектора.

Ключевые слова: *туризм, экономика туризма, добавленная стоимость, характерные для туризма виды деятельности, Минас-Жерайс*

Для цитирования: Оливейра Д.Р.В., Пиментель М.П.Ч., Гонсалвис К.С.С. Методология параметризации экономики туризма в муниципалитетах: кейс Жуис-де-Фора (Бразилия) // Современные проблемы сервиса и туризма. 2022. Т.16. №2. С. 65–80. DOI: 10.24412/1995-0411-2022-2-65-80.

Дата поступления в редакцию: 18 апреля 2022 г.
Дата утверждения в печать: 1 июня 2022 г.

1. Introduction

Tourism not only involves a wide range of productive sectors of the economy that range from activities of travel agencies, hotels, restaurants, museums, parks to the most varied types of transportation, but has as one of the main players those consumers who move in the geographical space leaving their usual environment. Thus, tourism shows itself as a complex phenomenon that includes social, cultural and economic dimensions, and, therefore, has several possibilities regarding its conceptualization and analysis.

From an economic perspective, tourism can be understood as a set of productive activities associated with the consumption of tourists. The characteristic products consumed by tourists and consequently the activities that produce them can be measured to answer one of the main questions of researchers in the area: how big is the tourism economy? It is also noteworthy that as interesting as it is to obtain this answer for a national level, tourism is a predominantly local / regional phenomenon, since most trips are of short distance and duration, a pattern that has strengthened after the relaxation of measures of social isolation imposed by the pandemic of COVID-19.

The contribution to the understanding of the existing methodologies for measuring the tourism economy comes from the international literature, which in terms of the production of tourism statistics indicates the construction of the so-called Tourism Satellite Account (TSA), a broad set of data systematized in tables that portray different aspects of tourism, including its size, and which has the advantage of creating international comparability by standardizing the calculation methods (UNStats, 2008a; UNStats, 2008b). Given that Brazil does not have a TSA, the studies present in the Brazilian literature, works such as that of Casimiro Filho (2002), IPEA (2006), Takasago et al. (2010), Takasago & Mollo (2011), IBGE (2012) and Rabahy (2020) have dealt with fundamental issues for the understanding of the relevance of tourism, although they are not focused on the needs of obtaining more disaggregated data for the local level.

The works of Gonçalves (2016), Gonçalves & Castellane (2018) and Gonçalves et al. (2020) used the concept of value added at the state and municipal level. More specifically, the study by Gonçalves et al. (2020) developed a methodology for measuring tourism activities for the 27 Federation Units of Brazil, which, in general terms, creates a possibility for expanding this strand to the municipal level.

The studies of the Economics and Statistics Foundation (FEE, 2016) and João Pinheiro Foundation (FJP, 2018) also proposed the mea-surement of tourism by calculating the value added of the Tourism Characteristics Activi-ties[1] (TCAs), both at the state and municipal level, following the molds adopted in the study of Brazilian Institute of Geography and Statistics - IBGE (2012) for the tourism economy of Brazil. However, because they have data with restricted public access, it is not possible to replicate their methodologies in full, but other data can be used for disaggregation of activities according to Gonçalves et al. (2020), who used the basis related to employment ties.

Therefore, this paper seeks to measure the dimension of tourism in the municipality of Juiz de Fora, located in the state of Minas Gerais in Brazil, by obtaining the Value Added for the TACs using as reference the information at the state level, contained in the official databases of the Brazilian Institute of Geography and Statistics - IBGE, and to this end proposes a disaggregation methodology for obtaining this economic measure at the municipal level.

In order to measure the tourism sector, we use a cutout of the so-called Tourism Characteristics Activities (TACs) according to the National Classification of Economic Activities - NCEA 2.0[2], used in Brazil in most of its surveys and administrative records. The data sources

[1] Atividades Características do Turismo (ACTs).

employed are the database of the Annual Social Information Report (ASIR)[3] of the Ministry of Labor and Social Security and the data from the production accounts of the System of Regional Accounts (SRA)[4] developed by IBGE, Brazil's official statistics agency. We use data from 2010 to 2018 from these two cited databases, and both are compatible regarding the classification of TACs.

According to Gonçalves et al. (2020), although the international recommendations of the World Tourism Organization (WTO) for the measurement of tourism activity recommend the use of data from the demand side (UNStats, 2008a; UNStats, 2008b), the official sources in Brazil have mostly information from the supply side, a factor that does not prevent the approximation to the preferred results. However, the information obtained from the supply side does not break down the value of domestic consumption (local population) and non-residents (tourists).

In terms of the breakdowns for the municipal level, from the data referring to the total employment in the state of Minas Gerais and the Value Added (VA) corresponding to the groups of activities considered tourist - extracted from broader groups such as transport, storage and mail; accommodation and food services; professional, scientific and technical activities, administrative and complementary services; and arts, culture, sports and recreation - the values corresponding to the municipality of Juiz de Fora were disaggregated and the proportionality method was applied through equations based on a simple rule of three, to obtain the VA of the TACs at the municipal level.

In proposing the present methodology, we consider it unprecedented taking into account the absence of previous works whose focus is on measuring the economic contribution of tourism through the Value Added of TACs at the municipal level. In terms of its limitations, we highlight the fact that the data collected is based on the tourism supply side, which restricts the data to only the officially available information and does not consider the demand side, which is essential for tourism; the non-linearity of the tourism sectors at the municipal level and the challenge presented by the non-official accounting of informal jobs in the sector, even though in the state value added the informal economy is accounted for, in the disaggregation criterion the informality is not present. On the other hand, the advantages of this method are that it produces relevant information for the tourism sector that is not currently provided by official agencies and has comparability with other economic activities because it is constructed with data from the SRA of the IBGE.

Therefore, in addition to this introduction, this paper presents the aspects related to the tourism economy, as well as the TACs considered. Next, it presents the details of the proposed methodology. The next section analyzes the results found and, finally, closes with the final considerations.

2. Theoretical and Methodological Overview of Tourism Economics in Brazil

In its complexity, tourism can be observed both as a sociological phenomenon, regarding the diversity of possible interactions between tourists and locals in a symbolic space called "tourist destination", and as a productive activity, with respect to the practice of this phenomenon in the economic, social and cultural spheres, not being dissociated the two perceptions (Panosso Neto, 2009; Pimentel, 2017). As an activity, tourism is usually considered one of the most promising sectors of the world economy, accounting for much of the Gross Domestic Product - GDP of various localities and nations.

According to the annual report of the World Tourism Organization - UNWTO, published in 2019, tourism moved USD 1.7 trillion worldwide in the year 2018. Of this total, the Americas generated USD 334 billion through

[2] Classificação Nacional de Atividades Econômicas - CNAE 2.0.
[3] Relação Anual de Informações Sociais (RAIS).
[4] Sistema de Contas Regionais (SCR).

the movement of 216 million tourists, a 2% growth with respect to the previous year. South America represents 17% of total international tourist arrivals and 9% of global revenue. Brazil, in turn, accounted for 1.8% of total international tourism revenue (UNWTO, 2019).

In the case of Brazil, according to data from the survey conducted by the National Confederation of Commerce of Goods, Services and Tourism (CNC), released by the Ministry of Tourism, between the periods of June/2018 and July/2019, the country collected about R$136.7 billion[5] with record growth in the sector. The year 2019 closed with a total revenue of R$216 billion (Ministério Do Turismo, 2019a).

The state of Minas Gerais had an estimated tourist flow of 27.4 million tourists, totaling revenue of R$18.2 billion in the year 2018. Already in 2019, the state received an average of 30.3 million tourists, with an estimated revenue of R$20.5 billion, representing a growth of 11.8%. In 2020, due to the health crisis experienced by the COVID-19 pandemic, Minas Gerais was considered the 3rd state in the country with the greatest loss in the tourism economy, totaling a drop of 42% compared to the previous year (OTMG, 2020).

In a scenario of growth compared to 2017, in the year 2018 tourism represented 10.4% of the world GDP, while in Brazil, the same contribution grew 3.1% in 2018. According to Neves and Souza (2021), due to the pandemic of COVID-19, tourism data globally are showing a sharp decline. However, even if faced with an uncertain outlook, a considerable recovery is expected after a mass immunization, globally (Ministério Do Turismo, 2019b; Neves et al., 2021).

Already in early 2022 the Federal Government reported a considerable increase in tourism activity in Brazil in 2021. According to data released by the IBGE, in 2021 the country had a 21.1% growth compared to the previous year. Minas Gerais is among the states with the highest percentage of contribution, representing 31.6% of this total.

In economic terms, it is of fundamental importance that the participation of tourism can be measured through reliable and updated sources, built through official data, so that they are able to provide information for decision making at federal, state and local levels. Because of the scarcity of these data, measuring the contribution of tourism in the economy becomes a challenge and, in the case of Brazil, it has been necessary to adapt the methodologies used internationally to the level of information available in national sources (Casimiro Filho, 2002; Takasago et al., 2010; Gonçalves et al., 2020).

Tourism contribution is understood as the effective participation of this activity in the economy. Takasago et.al (2010) and Gonçalves & Castellane (2018) highlight the importance of sizing this contribution, in a disaggregated way, to subsidize priority public policies, capable of promoting tourism and potentiating the generation of employment and income.

In Brazil, it was only in the 1980s, almost 20 years after the creation of EMBRATUR[6] in 1966, that tourism appears in the national accounts – through the average expenditure of tourists. From then on, the first investments in official databases appeared (BRASIL, 2007). The lack of information culminated in the scarcity of data capable of guiding the measurement of the socioeconomic contribution of tourism, especially at regional levels, which can lead to the failure of some research, in addition, the complexity in determining the activities that make up the tourist activity also presents itself as a complicating factor in the measurement process (Casimiro Filho, 2002; Bull, 1991 apud. Casimiro Filho, 2002; Gonçalves et al., 2020).

Faced with the challenges, researchers in the tourism economy have been developing and/or adapting methodologies that are guided by the tourist supply side. Although

[5] 1 real (BRL, R$) quoted at 0,21 US dollars (USD). Sourse: https://www.conversor-dolar.com.br/BRL_INR (access Apr. 2, 2022).
[6] Brazilian agency for international tourism promotion

the UNWTO recommend analysis based on demand, in Brazil there is a lack of data of this type, therefore, adaptation to this reality is necessary.

According to Gonçalves et al. (2020), to create uniformity in the comparisons of statistics at international level, the WTO developed the Uniform International Classification of Tourist Activities - CIUAT, which made it possible to delimit the Tourism Characteristics Activities - TCAs.

Also according to the same author, in Brazil, the classification of economic activities officially adopted by the National Statistical System and by Public Administration registries is the National Classification of Economic Activities - CNAE. The IBGE, in its studies on tourism in Brazil, made the Tourism Characteristics Activities compatible with the CNAE in its most recent version (2.0). The Integrated Information System of the Labor Market in the Tourism Sector (SIMT) of the Institute of Applied Economic Research (IPEA) (Gonçalves et al., 2020, p. 92).

From the delimitation of these activities, it becomes possible to disaggregate relevant and specific data in terms of sector numbers. In view of the results obtained, it is possible to verify, in approximate values, the volume of participation of a certain activity in the economy and extract guiding indexes of actions aimed at the development and promotion of tourism at the federal, regional or municipal level.

Santos (2016) analyzes the history of studies on the economy of tourism in the country and highlights a series of productions that stand out for their contributions at the national level. It can be highlighted that the studies advocated the dimensioning of tourism and/or its economic impacts through the input-output matrix to evaluate the relationship between production and inputs and, equally, for the balance between demand and supply.

The first study was carried out by EMBRATUR in 1991 and sought to measure the production and income generated by tourism in the country. In 2002, Abrahão Rabahy and Décio Kadota, in response to a request for each economic activity characteristic of tourism, produced results that were representative of tourism itself, and not of the TCAs in isolation. Therefore, this study can be classified as the first Brazilian version of the Tourism Satellite Account (CST). Then, in the same year, Casimiro Filho (2002), based on the input-output matrix, also applied in the previous study, presented the intersectoral relationships of the TCAs and measured their impacts on production and generation of employment and income, although not has presented the distinction between tourist and non-tourist consumption (generally carried out by the demand of local residents).

In 2003, the IBGE became responsible for the creation of the CST, however, it found the same limitation to distinguish the types of consumption – tourist and non-tourist, so, even today, Brazil does not have this system that, in internationally, it is extremely important for monitoring and measuring the tourism economy, its capacity to generate employment and income and its effective participation in many countries.

The disaggregation of data provided by official sources at the federal level proves to be of fundamental importance for understanding and measuring the size of tourism, both for pointing out the contribution of the sector to the states, and especially in the case of this work, for the estimation of this contribution at the municipal level in order to provide information capable of guiding actions aimed at monitoring, controlling and developing tourist activity by them.

According to some authors (Gremaud, Braga, Vasconcellos & Toneto (2008) apud Silva et al., 2020), there is an alternative method to account for the product other than the direct sum of the final goods and services produced. This methodological mechanism aims to account for the product through the Value Added, which is defined as the value that was, in each production phase, added or added to the value of intermediate goods (Silva, 2020).

Value Added (VA) represents the value of all goods and services in an economy minus production inputs. In other words, it is how

much each production step adds value to the product to avoid double counting. In mathematical terms, added value is the difference between the gross value of production and intermediate consumption (Gonçalves, 2016).

Thus, the examination of the result achieved by the Value Added produced represents an analysis of the efficiency and productivity of companies by measuring the set of wealth generated and distributed by them, including an increase in tax collection, remuneration with personnel (employment), and retention of profits for investments (Lima, 2017).

In Brazil, the surveys carried out by the IBGE perform this data disaggregation by taking the Value Added in the sectors of the economy at the federal level, through the System of National Accounts. Goncalves et al. (2020), in turn, present a unique work when mentioning the dimension of tourism in the state of Minas Gerais. The authors investigate the differentiation of TCAs between Federation Units, allowing the calculation of a measure of tourism production consistent with the National Accounts and with comparability of results in time, space and between sectors at a regional level (Gonçalves et al., 2020).

Casimiro Filho (2002) points out in his results that, based on investment in some sectors of the economy, tourism would be among the greatest potential for generating employment and income in the country. According to the author, accompanied by Takasago and Mollo (2008) and Rabahy (2020), domestic tourism is more efficient than international tourism in terms of the unit of employment and monetary unit of net indirect taxes, household income and value added per unit of increase in tourist consumption, despite the fact that international tourism represents an important generator of foreign exchange. In addition, despite the still low percentage of investments in the sector, tourism, in 2000, had a share of 7.54% of the national GDP, with a growth trend in subsequent years.

Specifically in Juiz de Fora, a municipality that belongs to the state of Minas Gerais, the Municipal Tourism Plan - 2020 points out that the municipality has a wide range of equipment and tourist attractions, especially in the subsectors of Accommodation and Food and Arts, Culture and Leisure, with emphasis on bars and restaurants, spaces and services for events, hotels and natural and cultural attractions, many of them free of charge. In 2018, the installed supply employed 7,931 formal workers in the TCAs.

3. Methodology

The present work has a quantitative approach, which focuses on objectivity and mathematical language to describe the causes of a phenomenon and the relationships between variables based on the analysis of data collected with the aid of standardized and neutral instruments. As for its nature, it is an applied research, for its purpose of generating knowledge for practical application, aimed at solving specific problems (Fonseca, 2002), in this case, the absence of methods and data for measuring the tourism economy in municipalities.

As for the procedures, the methods used were a bibliographic review, in order to recognize the methodologies available for obtaining data. The main database used in this review was the platform Tourism Publications[7], of the Post-Graduate Program in Tourism of the University of São Paulo - USP, which has publications in Iberian-American scientific journals. Through open access (free of charge) it is possible to search by one of the following filters: title, *author, keyword, abstract,* or *all fields.* We chose to search for specific terms in *all fields.*

The work of cooperation between the Institute of Applied Economic Research - IPEA and the Ministry of Tourism developed by Sakowsky (2013) was highlighted. It elucidates in detail the aspects and challenges for the collection of data on the occupation of tourism in Brazil. Among the most relevant information identified in this phase are: a) the divergence of national data due to non-uniformity in the

[7] Available in: http://www.each.usp.br/turismo/publicacoesdeturismo/index.html

activities considered as belonging to the tourism sector until 2012; b) the difficulties in measuring informal jobs; c) the definition of 08 groups considered TCAs according to the guidelines of the UNWTO.

The article by Gonçalves et al. (2020) presented a strong relation with the central theme of this project regarding the methodological procedures. Gonçalves et al. (2020) sought to measure the size of the tourism sector in Minas Gerais, which, according to the authors, can be indicated by the added value of the Tourism Characteristics Activities (TCAs).

One can consider that the great contribution of this work is the method, although one recognizes the relevance of the data obtained from its application. The authors developed a methodology to disaggregate the national data to the level of Federation Units (states), making it possible to understand the contribution of Minas Gerais to tourism at the national level and to dimension the tourism sector of the state.

3.1 Database

The consultation sources are contained in the System of Regional Accounts, in the period 2010 - 2018, fed with information regarding consumption in the sectors of the economy, through IBGE. The databases used were:

a) The Annual Social Information Report – RAIS[8] database, which provides the total number of formal jobs per year, per CNAE, in its most updated model, the CNAE 2.0. This tool presents a high potential for disaggregating information through a set of filters that can be delimited by the consultant, generating particular tables for each survey.

b) The table Production Accounts 2010 – 2018[9] , developed by IBGE through the SCR - System of Regional Accounts which, in turn, presents the calculation of GDP and Value Added of Economic Activities (A, B, C and D) at Current Prices, being necessary, however, to disaggregate the TCAs of these activities A, B, C and D when the intent is to investigate the value added by tourism. The four groups of economic activities based on TCAs are:

A) Transportation, storage and mail services;
B) Accommodation and food services;
C) Arts, culture, sports, and recreation;
D) Professional, scientific and technical activities, administrative and complementary services.

Tables 1 present the four groups of TCAs and list their respective activities according to CNAE 2.0 codes.

3.2 Procedures

To measure the Value Added of the TCAs, a quantitative survey was initially conducted that sought to estimate:

1) The Gross Value Added for the years 2010 to 2018[10] for the state of Minas Gerais.
2) The total number of formal employment ties in the TCAs in the state of Minas Gerais, by year. The links were extracted from the national RAIS database, using the filters "section" (class), representing the tourism sectors; and "subclass", equivalent to the TCAs in each group.
3) The total number of formal employment contracts of the TCAs in Juiz de Fora, by year, available in the same database with the same previous filters.

As for the data present in the RAIS database, a filtering of the formal employment ties was carried out only for the CNAEs considered as Tourism Characteristics Activities in the four groups of activities (A, B, C and D) and in all available years (2010 to 2018). With the information obtained and duly listed in specific tables, the following variables are obtained:

- *VAmg* - Gross Value Added in the state of Minas Gerais for a given group of ACTs;
- *VEmg* – total number of ties in formal employment in the state of Minas Gerais for a given group of TCAs;

[8] Available in: http://pdet.mte.gov.br/acesso-online-as-bases-de-dados
[9] Available at: https://www.ibge.gov.br/estatisticas/economicas/contas-nacionais/9054-contas-regionais-do-brasil.html?=&t=resultados > Conta da Produção - Tabela 20.
[10] Period delimited by the Regional Accounts published by the Brazilian Institute of Geography and Statistics (IBGE) with a two year lag.

- *ve* – total number of formal employment ties in Juiz de Fora for a given group of TCAs.

To find the desired values, the proportionality method was used by applying the Simple Rule of Threes on these variables. Thus, we have that:

Equation 1 delimits the variable Gross Value Added for the municipality of Juiz de Fora from each group of TCAs, here called *va*.

Equation 1:

$$\frac{VEmg}{ve} = \frac{VAmg}{va}$$

soon $VEmg\ x\ va = ve\ x\ VAmg$

it follows that

$$va = \frac{ve\ x\ VAmg}{VEmg}$$

Equation 1 specifies that the value added of an activity in the TCAs group is obtained by the share of Juiz de Fora's formal employment in relation to the total formal employment of the state of Minas Gerais in that activity group being calculated.

From the results for *ve*, only the CNAEs corresponding to the TCAs were disaggregated, which allowed delimiting the variable *ve(mun)*, which corresponds to the total number of formal employment ties in the TCAs of the municipality. That is, the disaggregation of *ve* for TCAs determines the value of *ve(mun).*

Table 1 – Classification of Tourism Characteristics Activities – Group A – D

Activity Group		*CNAE 2.0*	*Description of CNAE*	
Level Section CNAE 2.0	*Nomenclature only with ACTs*			
1	*2*	*3*	*4*	
Reference Group A				
Transportation, Storage and Mail	Transport	4912401	Intercity and interstate passenger rail transport	
		4922101	Public road transport of passengers, with fixed itinerary,	intermunicipal, except RM
		4922102		interstate
		4922103		international
		4923001	Taxi service	
		4929902	Public road transport of passengers, under charter, intermunicipal, interstate and international transport	
		4929904	Organization of excursions in own road vehicles, intermunicipal, interstate and international	
		4950700	Tourist trains, cable cars and the like	
		5011402	Maritime passenger cabotage	
		5012202	Long-haul sea transport – passengers	
		5022002	Inland passenger transport on regular, intercity, interstate and international lines except crossing	
		5091202	Intermunicipal, interstate and international crossing transportation	
		5099801	Water transport for sightseeing	
		5111100	Regular passenger air transport	
		5112901	Air taxi service rental of aircraft with crew	
		5112999	Other non-regular passenger air transport services	
		5222200	Road and rail terminals	
		5229001	Taxi transport support services, including call centers	
		5229099	Other ancillary land transport activities not previously specified	
		5240101	Operation of airports and landing fields	
		5240199	Ancillary activities of air transport, except for airports and landing fields	
Reference Group B				
		5510801	Hotels	
		5510801	Aparthotels	
		5590601	Hostels, except assistance	
		5590602	Camping	

1	2	3	4
Accommodation and Food Services	Accommodation and Food	5590603	Pensions (accommodation)
		5590699	Other accommodations not previously specified
		4929904	Restaurants and the like
		4950700	Bars and other establishments specializing in serving drinks
		5011402	Snack bars, tea houses, juices and the like
		5012202	Walking food services
Reference Group C			
Arts, culture, sport and recreation	Arts, culture and leisure	9001901	Theatrical production
		9001902	Music production
		9001903	Production of dance shows
		9001904	Production of circus shows, puppets and the like
		9001905	Production of rodeo shows, vaquejadas and the like
		9001999	Performing arts, shows and complementary activities not previously specified
		9002701	Activities of artists, independent journalists and writers
		9102301	Museum and exploration activities of historic places and buildings and similar attractions
		9103100	Activities of botanical gardens, zoos, national parks, ecological reserves and protection
		9200301	Bingo houses
		9200302	Exploitation of betting on horse racing
		9200399	Exploitation of gambling and betting not previously specified
		9319199	Other sports activities not previously specified
		9321200	Amusement parks and theme parks
		9329801	Nightclubs, nightclubs, dance halls and the like
		9329802	Bowling exploration
		9329803	Exploration of snooker games, billiards and the like
		9329804	Exploration of recreational video games
		9329804	Other recreation and leisure activities not previously specified
Reference Group D			
Professional, scientific and technical activities	Complementary services	7711000	Rental of driverless cars
		7721700	Rental of recreational and sports equipment
		7911200	Travel agencies
		7912100	Tour operators
		7990200	Booking services and other tourism services not previously specified

Source: own elaboration based on the ACT database.

Then, through *Equation 2*, the key variable of this methodology was defined: Value Added of TCAs at the municipal level - *va(mun).*

Therefore, the process employed by *Equation 2* follows:

$$\frac{ve}{va} = \frac{ve(mun)}{va(mun)}$$

then:

$$ve\ x\ va(mun) = va\ x\ ve(mun)$$

Thus, the value of the variable *va(mun)* is given by the ratio:

$$va(mun) = \frac{va\ x\ ve(mun)}{ve}$$

In this way, the value added of a given group of TCAs at the municipal level is obtained by the participation in formal employment of those activities in the total of the municipality of Juiz de Fora.

A	B	C
VINC. TOTAL MG	VALOR ADC.	
337.618	20.361	
VINC TOTAL JF	X	TOTAL
11.786	X	R$ 710,79
VINC. TOTAL JF	VALOR ADC. JF	
11.786	711	
ACTs JF	X	TOTAL
243	X	R$ 14,65

Figure 1 – Example of application of the equations

Source: Prepared by the authors, 2021.

Equations *1* and *2* were applied to each of the four groups (A, B, C, and D) in all years from 2010 to 2018. Figure 1 shows an example of the application of these equations. The totals obtained correspond to Brazilian Real (R$) in millions at current prices.

It should be noted that the System of Regional Accounts adopts a classification of products and activities that makes it compatible with the information obtained from RAIS, in relation to the CNAE 2.0 data (IBGE, 2018), a fact that ensures balance in the proportionality applied by the method developed. Moreover, the choice to use the data "employment contracts in TCAs" is based on the fact that the number of salaries paid to formal employees in the sector (salary mass) is directly related to the increase in the Gross Domestic Product - GDP since it presupposes the increase in production.

Although these bases are compatible with each other, it is fundamental to highlight some limitations inherent to them and that, therefore, have an influence on the method and the results found:

- Obtaining the proportionality calculation for the municipality in relation to state data presupposes a certain linearity in the behavior of the groups that encompass the TCAs, which does not occur in practical terms, that is, the groups that make up the Tourism Characteristics Activities behave in a specific ways in each municipality, even within the same state. This is due to the particularities of each location, both with regard to its supply and demand, as well as the cultural and social nuances of its local population.
- The data collected in the aforementioned sources only portray formal jobs, not considering the percentage of informality due to the scarcity of concrete data compatible with pre-existing databases. However, some studies (Meliane, 2012; IPEA, 2015) indicate that, in the Southeast region of Brazil (where Juiz de Fora is located), informal workers represent, on average, 47% of total occupations in TCAs, considering the period analyzed by the studies, from 2002 to 2006 and 2013.
- Some TCAs are overestimated in terms of their contribution to Added Value, since they include in their total consumption by tourists without disaggregating the consumption routinely carried out by the local population (such as restaurants; collective road transport of passengers; discotheques, discos, dance halls and similar; etc.) – such disaggregation is not possible for models that start from the supply side. Therefore, a certain trade-off between the absence of informal employment data and the overestimation of specific TCAs can be considered.

Thus, it can be said that although the method presents consistency in its data and application, it does not present the final economic values of the contribution of the Tourism Characteristics Activities in Juiz de Fora - MG, but estimates them with some proximity.

4. Results

With the application of the proposed procedures, it was possible to obtain six variables capable of presenting concise information, compatible and understood within the aforementioned methodological limitations, with regard to tourism numbers at the geographic levels in which they are presented, they are:

- *VAmg* – Gross Value Added for the state of Minas Gerais for each group of TCAs;
- *VEmg* – total number of formal state employment contracts in TCAs;
- *va* – Gross Value Added for the municipality of Juiz de Fora;
- *ve* – total number of formal employment bonds in the municipality of Juiz de Fora;
- *va(mun)* – Value Added of TCAs at the municipal level.
- *ve(mun)* – total number of formal employment links in the municipality in the TCAs.

The quantitative research presented, at first, gathered information about the state of Minas Gerais, as justified by its variables *VAmg* and *VEmg*, and was used for later data extraction at the municipal level.

The report issued by the Regional Accounts system provides information on the Gross Value Added in the state of MG, in addition to the Gross Value of Production and Intermediate Consumption for the same period

of time – data that were not directly used.

The RAIS reports provide the total number of formal employment relationships in the classes of CNAEs considered to be tourist, in addition, the disaggregated values for each subclass within such sectors.

Based on the Gross VA of the state, it was possible to record the Gross VA for the municipality, through the proportionality obtained with the application of *Equation 1*. Consequently, the report was obtained with the total of formal employment ties in Juiz de Fora in all TCAs for each year and, based on these values, *Equation 2* allowed the accounting of the Value Added of TCAs at the municipal level, relevant information for the scope of the following analyses.

Based on the data obtained in each of the variables reported, the results were compiled by group of Tourism Characteristics Activities, from 2010 to 2018. Next, the analyzes of the main data are based, above all, on the year 2018, as it depicts the most recent numbers obtained.

We found that the sector with the largest representation in the number of formal jobs in the TCAs, at the municipal level, is Accommodation and Food Services (Group B), whose level of occupation of vacancies represents 88.31% in the average of the nine years in relation to the general total of jobs. However, when we divide the average *va*(*mun*) - Value Added in Juiz de Fora in the TCAs by *ve*(*mun*) - total number of jobs in the municipality's TCAs, in each year of the period, we find that this sector represents the lowest average value added per formal employee/year, a reality that applies to all years from 2010 to 2018.

The largest contribution, in each of the nine years of the same period, is allocated to Group C - Arts, Culture and Leisure which, in 2018, represented almost R$345,000 per formal employee in *va(mun).* This amount exceeds, by more than five times, the same analysis for Group B, which obtained R$65,434 per employee/year. Groups A and D, in 2018, show, respectively, the figures of R$105,931 and R$114,670 in *va(mun),* per formal employee.

It can be said, at the municipal level, that the rate of formal jobs in the Tourism Characteristics Activities, in a given sector, is not directly related to its contribution to the VA, since the sectors with the highest percentage of employees in the TCAs are not those who have the highest annual VA per bond. However, Group B has the highest *va*(*mun*) although it represents the lowest *va*(*mun*) for formal employment, a fact that can be justified by the low wages paid in the Accommodation and Food sectors.

Although Group A (Transport) represents a total of 12,668 links in the municipality in 2018, only 644 are contained in the TCAs, representing only 5.08% of occupation by the tourism sector. The same occurs in Group D - Administrative and complementary services to tourism which, in the same year, had 13,473 employment relationships and only 182 in the municipality under study, that is, 1.35% of the total jobs occupied by the TCAs.

Among other analyses, it is noteworthy that based on the total Gross Added Value of Minas Gerais, for each year in the period 2010 - 2018, given by the IBGE Regional Accounts, the contribution of tourism from Juiz de Fora to Minas Gerais was obtained. The results are shown in Table 2.

As can be inferred, the participation of *va(mun)* in Minas Gerais cannot be considered totally significant although it contributes economically to it. Participations remain stable within the period, highlighting the highest increase in 2014 and a retraction in 2018 compared to the previous four years.

Table 3 shows the contribution of the variable *va(mun)* on the Gross Value Added of Juiz de Fora for all sectors of the economy (without the breakdown of TCAs). It is noteworthy that the latter was extracted from the Statistical Annex on the GDP of Minas Gerais, developed by João Pinheiro Foundation for the period 2010 - 2018 based on data from the IBGE[11].

Table 2 – Total Gross Value Added for Minas Gerais, Gross Value Added of Juiz de Fora TCAs and contribution of tourism in the state - 2010-2018

Year	**Total Gross VA of Minas Gerais** Value in R$ bi	***va*(*mun*) - sum of the TCAs of the 04 groups** Value in R$ mi	**JF's Contribution to the VA of the state** (%)
2010	305.174	391.820	0,128
2011	349.632	423.560	0,121
2012	387.096	456.330	0,118
2013	428.810	502.780	0,117
2014	454.153	591.990	0,130
2015	457.443	554.190	0,121
2016	478.473	565.700	0,118
2017	505.076	604.170	0,120
2018	538.785	605.160	0,112

Source: Prepared by the authors, 2021.

Table 3 – Total Gross Added Value of Juiz de Fora, Gross Added Value of Juiz de Fora ACTs and contribution of tourism in the municipality - 2010-2018

Year	***va* – JF's Gross Value Added** Value in R$ mi	***va(mun)* – sum of the TCAs of the 04 groups** Value in R$ mi	**Contribution of *va*(*mun*) in *va*** (%)
2010	8.235.872	391.820	4,76
2011	8.664.308	423.560	4,89
2012	9.900.689	456.330	4,61
2013	11.267.227	502.780	4,46
2014	12.209.486	591.990	4,85
2015	12.524.683	554.190	4,42
2016	12.732.858	565.700	4,44
2017	13.859.159	604.170	4,36
2018	14.465.952	605.160	4,18

Source: Prepared by the authors, 2021

An average contribution share of 4.55% is observed for all years, however, a downward behavior in the general picture of the entire period. Although the years 2011 and 2014, with the percentages of 4.89 and 4.85% respectively, show a slight increase compared to previous years, the decline profile remains constant. The lowest participation rate was for the year 2018, with 4.18%. Given this scenario, it is possible to conclude that the tourism sector has been weakening in the municipality in terms of economic contribution, over the years and, therefore, the need for investments that promote this sector becomes urgent.

Finally, it is possible to state that the variable *va(mun)* - Value Added of TCAs at the municipal level does not follow the behavior of *va* - Gross Added Value for the municipality of Juiz de Fora in all groups. Although groups A, B and D show an evolution, in terms of growth in participation over the years, as well as *va*, Group C - Arts, culture, sport and recreation showed a sharp drop in 2012 and remained at an average much lower than in 2010 and 2011, except for the year 2013, which showed a clear recovery. It is noteworthy, therefore, that the group of TCAs that most contributed to the *va(mun)* is also the group that had the most drop in this variable over the period, which suggests that the investigation of this behavior by managers is inevitable, researchers and/or entrepreneurs in the tourism sector in the municipality.

The research presented some limitations, among them the filtering of information in the RAIS database at the municipal level,

[11] Available in: http://fjp.mg.gov.br/produto-interno-bruto-pib-de-minas-gerais/

which suppressed CNAE *5229099 - other auxiliary activities of land transport not previously specified*, in the Transport group, which did not participate in the accounting general. However, it represents a simple number of formal jobs – average 34 for the period and, therefore, did not show significant weight in the final values.

Due to the scope of existing research in Brazil that investigates the informal labor market, it is not possible to measure the total number of informal jobs in the sector and at the municipal level. Given this situation, the numbers presented in this work refer to approximate values of the reality of the TCAs in Juiz de Fora.

5. Conclusion

The objective of this work was to develop a methodology capable of measuring the contribution of the tourism sector within the municipality of Juiz de Fora - MG. To this end, quantitative research was conducted in order to understand the universe of work centered on the tourism economy in general.

From these researches it was possible to understand the most diverse methodologies, from which their main researchers depart, to obtain the tourism Value Added, which also revealed the scarcity of methods for the disaggregation of data at the municipal level.

The work by Gonçalves et al. (2020) presented a method for the same measurement category, however, at a regional level, which served as a contribution to the development of the methodology presented in this study. Through the selection of the Tourism Characteristics Activities- TCAs, it was possible to measure data at a regional level on the Value Added of these TCAs. Subsequently, the proportionality method was applied through the simple rule of three to obtain disaggregated data at the local level, which are comparable with the measurement of other economic activities and consistent with the System of Regional Accounts. With these data, it became possible to visualize the photograph that includes the economic data of the tourism sector in Juiz de Fora until the year 2018 for purposes of further interpretation.

It is worth noting that all the bases for the quantitative research carried out come from official sources that are periodically updated by the IBGE and the Ministry of Labor and Social Security, which makes them reliable. Such research, initially, made it possible to obtain databases at state and municipal levels and may serve as a contribution to the continuity of this study, in addition to the present work enabling the application to any Brazilian municipality.

Some challenges were pointed out in the development of the methodology and in the results session, even so, it is worth highlighting the need to bring tourism closer to the discipline of economics since, although they are directly interconnected, they still do not talk intrinsically, making the process of obtaining statistical data for tourism researchers.

In view of the above, it can be said that the great contribution of this work was its methodology, since, it is hoped that it can play the role of providing a basis for other municipalities that wish to diagnose their participation in tourism at local levels and, consequently, regional and federal. Although guided by the method developed by Gonçalves et al. (2020) to the state level, the present differentiates itself by creating and applying a form of measurement at the municipal level.

This work represents only an initial test to measure the contribution of tourism in Juiz de Fora and does not exhaust theories and research sources for this purpose. The resources found after quantitative research of data and methods that served as a contribution to the central proposal were presented and, it is believed that it can serve as a contribution to research and consultations aimed at information at the municipal level.

Finally, it is recommended to continue to improve the method and obtain new information that can justify new public investment policies in the sector and the consequent increase in its contribution to the municipality in social and economic terms. In addition, given the wide range of equipment and tourist attractions listed in the Municipal Tourism Plan of Juiz de Fora, it is understood that the municipality has great potential for the

resumption of post-pandemic tourism, as well as the growth and strengthening of the tourism sector new investments.

International productions were not referenced, since the most relevant ones are based on primary data (demand) and, therefore, could not serve as a contribution to the methodology then developed, which had information on supply in the face of scarcity of those. With the creation and maintenance of a Tourism Satellite Account (CST) to measure this side of the economy, such references are fundamental for the development and application of econometric methods.

References

BRASIL, W. F. W. (2007). *Memória do turismo:* trajetória histórica da EMBRATUR no período de 1966 a 2006. Centro de Excelência m Turismo. Universidade de Brasília – UNB. Biblioteca Central, Brasília – DF. Link: https://bdm.unb.br/handle/10483/258

Casimiro Filho, F. (2002). *Contribuições do turismo à economia brasileira.* 2002. 220 p. Tese (Doutorado) – Escola Superior de Agricultura Luiz de Queiroz, Universidade de São Paulo. Piracicaba - SP.

COMTUR (2020). Conselho Municipal De Turismo. *Plano Municipal de Turismo de Juiz de Fora.* Prefeitura municipal de Juiz de Fora – MG. Available in: https://www.pjf.mg.gov.br/turismo/arquivos/plano_turismo/plano_municipal_de_turismo.pdf Accessed on: 15 Aug. 2021.

FEE (2013). Fundação De Economia E Estatística. *Atividades Características do Turismo no RS em 2013:* Valor Adicionado Bruto no Estado, Regiões do Turismo e municípios. Porto Alegre.

FJP (2017). Fundação João Pinheiro. *Economia do Turismo de Minas Gerais (2010-2014).* Belo Horizonte: FJP. Publicado em 07/03/2019 14h00. Accessed on: 29 Jun. 2021.

FJP (2017). Fundação João Pinheiro. *Economia do Turismo de Minas Gerais* (2010-2014). Belo Horizonte. Available in: http://www.bibliotecadigital.mg.gov.br/consulta/consultaDetalheDocumento.php?iCodDocumento=76865. Accessed on: 09 Apr. 2022.

FJP (2018). Fundação João Pinheiro. *Produto Interno Bruto dos municípios de Minas Gerais*. Estatística & Informações. Belo Horizonte, n. 37. Available in: http://fjp.mg.gov.br/produto-interno-bruto-pib-de-minas-gerais/. Accessed on: 17 Aug. 2021.

Fonseca J. J. S. (2002). *Metodologia da pesquisa científica.* Fortaleza: UEC. Apostila.

Gonçalves, C. C. S. (2016). *Valor adicionado do turismo de Minas Gerais:* um cálculo com os coeficientes de atendimento turístico. *Boletim de Conjuntura Econômica de Minas Gerais Belo Horizonte, 9*(2), 59-71.

Gonçalves, C. C. S.; & Castellane, L. (2018). Determinantes do valor adicionado do turismo de Minas Gerais: uma análise com modelos de dados em painel. *Marketing & Tourism Review.* NEECIM TUR - Núcleo de Estudos e Estratégias em Comunicação Integrada de Marketing e Turismo – UFMG, Belo Horizonte - MG, Edição Especial.

Gonçalves, C. C. S.; Faria, D. M. C. P.; & Horta, T. A. P. (2020). Metodologia para Mensuração das Atividades Características do Turismo: uma aplicação para o Brasil e suas Unidades da Federação. *Revista Brasileira de Pesquisa em Turismo – RBTUR,* 14(3). DOI: 10.7784/rbtur.v14i3.1908.

Governo Federal. (2021). *Índice de Atividades Turísticas fecha 2021 com alta superior a 21% no Brasil.* Available in: https://www.gov.br/pt-br/noticias/viagens-e-turismo/2022/02/indice-de-atividades-turisticas-fecha-2021-com-alta-superior-a-21-no-brasil. Accessed on: 29 Apr. 2022.

IBGE (2012). *Economia do turismo: uma perspectiva macroeconômica: 2003-2009.* Rio de Janeiro: Estudos e Pesquisas, 18.

IBGE (2018). *Contas nacionais:* SCR - Sistema de Contas Regionais. Available in: https://www.ibge.gov.br/estatisticas/economicas/contas-nacionais/9054-contas-regionais-do-brasil.html?=&t=sobre. Last access on: 12 Aug. 2021.

IPEA (2006). *Metodologia do cálculo dos coeficientes de atendimento turístico e estimativas relativas ao emprego formal no setor do turismo com base nos dados da RAIS.* Brasília: Ipea.

IPEA (2015). *Relatório com as estimativas da caracterização da ocupação formal e informal do turismo, com base nos dados da RAIS e da PNAD 2013,* para o Brasil e regiões, Instituto de Pesquisa Econômica Aplicada (IPEA), Brasília.

Lima, L. V. A. (2017). *Incentivos fiscais e sua influência no valor adicionado produzido pelas empresas.* Dissertação de mestrado - Centro de Ciências Sociais e Aplicadas (CCSA) - Programa de Pós-Graduação em Ciências Contábeis. UFPB. https://repositorio.ufpb.br/jspui/handle/123456789/12561

Meliane, P. F. (2012). Estrutura e distribuição espacial do trabalho formal e informal no turismo do Brasil: contributos geográficos ao planejamento turístico regional brasileiro. *Revista Turismo & Desenvolvimento;* v. 1, n. 17/18, p. 467- 478.

Ministério Do Trabalho (2021). PDET - Programa de Disseminação de Estatísticas do Trabalho**.** *Base de dados RAIS/CAGED.* 2021. Available in: https://bi.mte.gov.br/bgcaged/login.php. Accessed on: 30 Jun. 2021.

Ministério Do Turismo (2019a). Turismo tem faturamento recorde de R$ 136,7 bilhões em 2019. Available in: https://www.gov.br/pt-br/noticias/viagens-e-turismo/2019/10/turismo-tem-faturamento-recorde-de-r-136-7-bilhoes-em-2019. Accessed on: 29 jun. 2021.

Ministério Do Turismo (2019b). *Cresce a participação do Turismo no PIB nacional.* Available in: https://www.gov.br/turismo/pt-br/assuntos/noticias/cresce-a-participacao-do-turismo-no-pib-nacional

Neves, C. S. B.; Carvalho, I. S. F. L. S.; & Filippim, M. L. (2021). Os impactos da Covid-19 nas viagens de turistas brasileiros: conjuntura e perspectivas na eclosão e n expansão da pandemia no Brasil. *Revista Turismo, Visão e Ação,* 23(1), 2-25. DOI: 10.14210/rtva.v23n1.

OTMG (2020). Observatório do Turismo de Minas Gerais (2020). Anuário 2020. Available in: https://www.dropbox.com/s/2a509wqvufqzwnh/Relat%C3%B3rio%20Anual%20Turismo%20em%20Minas%202020.pdf?dl=0>. Acess in 10 Apr. 2022.

Panosso Netto, A. (2009). *Segmentação do mercado turístico: estudos, produtos e perspectivas.* Barueri: Manole.

Pimentel, M. P. C. (2017). Sistematização da disciplina do turismo. *Anais Brasileiros de Estudos Turísticos - ABET,* Juiz de Fora, p. 8-19, out.

Portal G1.com (2019). Turismo brasileiro tem alta de 2,2% no faturamento e cria 35 mil novos empregos em 2019, aponta pesquisa. Available in: https://g1.globo.com/turismo-e-viagem/descubra-o-brasil/noticia/2020/03/09/turismo-brasileiro-tem-alta-de-22percent-no-faturamento-e-cria-35-mil-novos-empregos-em-2019-aponta-pesquisa.ghtml. Accessed on: 20 Dec. 2020.

Rabahy, W. A. (2020). Análise e perspectivas do turismo no Brasil. *Revista Brasileira de Pesquisa em Turismo,* 14(1), 1-13. DOI: 10.7784/rbtur.v14i1.1903.

Sakowsky, P. A. M. (2013). Aspectos metodológicos do sistema integrado de informações sobre o mercado de trabalho no setor de turismo. Texto para discussão / Instituto de Pesquisa Econômica Aplicada - IPEA, Rio de Janeiro. Governo Federal, Secretaria de Assuntos Estratégicos da Presidência da República, Brasília.

Santos, G. E. De O. (2016). Pesquisa científica em turismo no Brasil. *Turismo & Desenvolvimento,* 26, 79–88. Available in: https://proa.ua.pt/index.php/rtd/article/view/10773/7019.

Silva, B. J. B.; Sousa Neto, P. B. De; Medeiros, L. S. De; Medeiros, E. H. O. De; Menezes, A. M. De; Sousa, P. T. De; Ramalho, K. De M. (2020). La correlación entre el sector servicios y el producto interno bruto en Brasil. *Research, Society and Development, [S. l.]*, 9(4), e163943040. DOI: https://doi.org/10.33448/rsd-v9i4.3040.

Takasago, M. G. J. J. M., & et al. (2010). O potencial criador de emprego e renda do turismo no Brasil. *Pesquisa e planejamento econômico – PPE*. Rio de Janeiro, v. 40, p. 439-468. http://repositorio.ipea.gov.br/handle/11058/5092.

Takasago, M., & Mollo, M. (2011). O potencial gerador de crescimento, renda e emprego do turismo no Distrito Federal - Brasil. *Turismo em Análise,* 22(2), 445-469. doi: 10.11606/issn.1984-4867.v22i2p445-469.

Universidade De São Paulo. (2020). PPGTUR – Programa de Pós-Graduação em Turismo. Publicações de turismo. Dados econômicos do turismo. Available in: http://www.each.usp.br/turismo/publicacoesdeturismo/lista.php?busca=econ%F4mica&campc=todos. Accessed on: 02 Sep. 2020.

UNStats (2008a). *International Recommendations for Tourism Statistics 2008*. New York: United Nations, Department of Economic and Social Affairs - Statistics Division.

UNStats (2008b). *Tourism Satellite Account: Recommended Methodological Framework 2008.* New York: United Nations, Department of Economic and Social Affairs - Statistics Division. DOI: 10.1787/9789264274105-en.

UNWTO (2019). World Tourism Organization. *International Tourism Highlights*, 2018; 2019, Madrid. Available in: http://www.dadosefatos.turismo.gov.br/estat%C3%ADsticas-e-indicadores/estat%C3%ADsticas-e-indicadores-turismo-mundial.html Accessed on Jan 03, 2021.