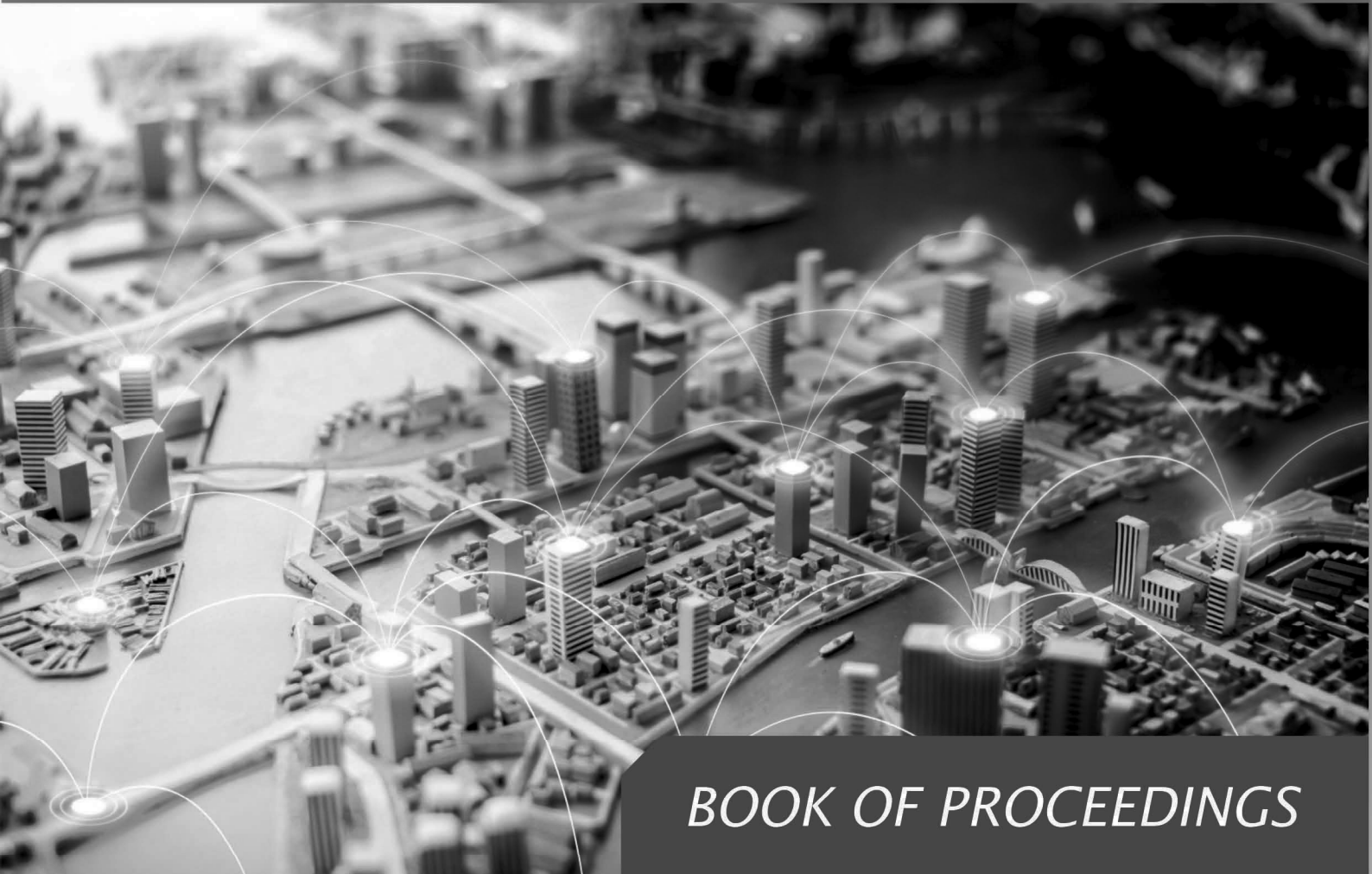


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Bullfighting and regional development

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ABSTRACT

Bullfighting is considered by Portuguese Authorities as a cultural event. It is recognized as part of the national cultural heritage. Although involved in some controversy in recent times, it is widespread in all regions of continental Portugal.

This paper addresses the concepts of regional development and bullfighting. It intends to achieve the quantification of both through the Regional Development Synthetic Index (ISDR), prepared by the National Statistics Institute (INE) for regional development, and through the Bullfighting Activity Index (IAT), this one for bullfighting specifications and its density studies.

It will be sought to establish relations between the presence of bullfighting and regional development through these two indexes.

The research was based on the methodology of participant observation, bibliographic and documentary analysis. The analyzes carried out in the different areas of investigation allowed us to understand how this cultural manifestation, with traditional roots, due to its component of differentiation and distinctiveness, can be an element of socioeconomic development. It seeks to perceive if this element should be taken into account in strategies for affirming identity, within a framework of relationships with global culture, and in the development of the regions where bullfight parties and the bulls' shows are more intensely experienced.

Keywords: regional development; cultural identity; Portugal; bullfighting.

1 INTRODUCTION

Bullfighting and development are, in general, concepts used in different disciplinary areas, and the concept of bullfighting has been studied at the level of the social sciences, while the concept of development has traditionally been associated with economic sciences.

This paper aims to understand the relationship between regional development and bullfighting, as a cultural and economic activity in continental Portugal. To achieve this objective, the bullfighting activity index was created and the hypothesis that bullfighting has an influence on regional development was tested.

The literature review for the present paper (section 2) sought to carry out the theoretical framework of the variables under study. First a literature review was considered, regarding regional development, where it seeks to present the concept, its evolution and the main factors that contribute to it, within the framework of the different existing theories on this matter. Then we analyzed the concept of bullfighting, where the fundamentals for the activity are presented in order to consider it as culture. It is followed by a historical review of the relevant facts of bullfighting, which allows us to know what the bullfighting is today and what was its historical evolution.

We continue with the presentation of the work methodology (section 3), whose research was based on the methodology of participant observation, bibliographic and documentary analysis. The quantification of the phenomena under study was based on the year 2018. The choice of this year is because it is the last year in which all data used for the construction of the analyzed indexes were complete. Still in section 3 of the paper, the general objective and the specific objectives previously presented will be explained.

In the discussion and results section (section 4), the Synthetic Regional Development Index (ISDR), developed by the National Statistics Institute (INE), applied to continental Portugal will be presented and analyzed. Following is the presentation and analysis of the Bullfighting Activity Index (IAT), initially built by Pereira (2010) and now adapted for the present paper, with the update of data for the year 2018. Finally, in section 4, we seek to find correlations between the presence of bullfighting and its regional development, where we try to test the hypothesis that, for the sample under analysis, bullfighting contributes to regional development.

Section 5 contains a set of final reflections on this paper.

2 LITERATURE REVIEW

2.1. Regional development

Economic-social development, or simply, development appears as an upward movement of an entire social system, expressed by a set of endogenous, economic or non-economic factors, and also by exogenous factors (Myrdal, 1974).

Throughout history several theories about arguments around the concept of development have been developed. As Aydalot (1985) reports, during the 60s to 80s of the 20th century, development was defined as a set of quantitative changes in the variables yield and product, from a functionalist and productivist perspective, in which space appears as the physical basis of economic activities.

According to the same author, the modern concept breaks with the functionalist perspective and suggests a return to the territorial perspective that values endogenous resources and the participation of local actors.

In another perspective, Scatolin (1989, p. 6) stated that there are few other concepts in Social Sciences that have lent themselves to such controversy. Concepts such as progress, growth, industrialization, transformation, modernization, have often been used as synonyms for development. In fact, they carry within themselves a specific understanding of the phenomena and constitute true diagnoses of reality, as the concept prejudices, indicating what action should be taken to achieve development,

Thus, the concept of development is presented as "in any conception, it must result from economic growth accompanied by an improvement in the quality of life", that is, it must include "changes in the composition of the product and the allocation of resources by different sectors of the economy, in a way for improving indicators of economic and social well-being (poverty, unemployment, inequality, health conditions, food, education and housing)" (Vasconcelos and Garcia, 1998, p. 205).

Regional development results from the integration of the spatial variable in the concept of economic and social development. This spatial variable is called a region, and can refer to a continent (for example, Europe), a community of states (for example, European Union (EU)), or a territorial region within a country (for example, Alentejo).

For Dallabrida (2011), regional development can be understood as a process of structural change undertaken by a territorially organized society, sustained in the enhancement of resources and assets (material and immaterial, generic and specific) existing in the place, pointing to economic dynamism and improving the quality of life of its population.

This definition follows the introduction to the concept of regional development considering a multiplicity of factors such as innovation, competitiveness, technology and

human capital. Additionally, tourism, infrastructure and equipment, and the energy sector have also proved to be important for regional development.

In the following paragraphs we look at each of these main drivers of regional development.

However, in historical terms, regional development began to be studied according to several economic theories, as those of Schumpeter, Perroux and Myrdal, between other possible examples. In this way, we verify that regional development at a conceptual level has evolved over the last century.

Perroux (1955) explained regional development with the aid of the Growth Pole theory. Industrial growth poles can emerge around a relevant urban agglomeration or along the major sources of raw materials, as well as in places of passage and significant commercial flows or even around a large dependent agricultural area.

According to his theory, these can become a development pole when they cause structural changes and expand production and employment in the environment in which it operates.

On the other hand, Myrdal (1957) resorted to the Cumulative Causality Theory, to affirm that the development of the richest nations and that of the poor nations can never converge, on the contrary, they can diverge, with the poor countries confined to the production of goods lower value-added commodities while rich countries continue to enjoy the profits associated with economies of scale.

In both cases, the authors argue that regional characteristics, with the agglomeration of economic activities and a developed labor market, give rise to economies of scale that make regions more attractive.

Following the same train of thought, Krugman (1989) and Scott (1998), relying on transaction costs, point to the theory of regional development as a theoretical support for the New Economic Geography, according to which, the geographical concentrations of the activity are explained by transaction costs, efficiency and commercial and economic expertise.

Schumpeter (1943) mentioned creative destruction or innovation as a stimulus for economic development, introducing in the discussion this factor, which Nelson and Winter (1982) extended to regional development. According to the authors, the way in which regional actors do things, meaning, their values, routines and norms affect behavior and are operationalized unevenly in different regions, leading to uneven regional development and, consequently, to the formation and deepening of regional asymmetries. The traditional functionalist view recognizes, however, that innovation promotes the competitiveness of companies and contributes to economic development.

Additionally, Rutten and Boekema (2007) state that technology is a fundamental condition, but not sufficient for regional economic development.

Previously, Maskell (1998) also considers that technology has become omnipresent, so it is no longer a sufficient condition for competitive advantage in relation to competitors. Today, in presence of many innovations, consumers are interested in products and services that make their lives more comfortable and that are linked to the values, fashions and lifestyles they aspire to or desire. Hertog et al. (1997), Porter (1998) and Rutten (2003) also state that technology is just one of the combinations of different types of knowledge that innovation requires.

Regional intangible assets, assuming a determining role, are part of a constant process of social relations (Granovetter, 1985), a case of social capital, understood by Putnam (2000) as the social organization and institutions. Reich (1991) also draws attention to the level of education and the workforce, that is, human capital, which, according to the author, is at the base of production.

For Diniz and Gerry (2005), regional development fits into two paradigms, the endogenous, based on the specific or internal resources of the region that values the acquisition of human resources skills and the exogenous supported on resources external to the region, which shows the free functioning of markets and the participation of regional companies in trade flows, thus reinforcing the concept of human capital.

The stock of human capital, according to Shapiro (2006), stimulates a region or place to provide a better quality of life for its residents. The author estimates that 40% of the effects of the increase in human capital are directly related to the increase in quality of life. Winters (2011) states that the existence of higher education institutions in the region is a key determinant to explain the level of human capital.

The stock of local human capital is significantly increased not only by the resident population that has access to higher education, but also by students from other regions who attend and settle there (Hickman, 2009; Winters, 2011).

In addition, Morgan (2004) mentions other intangible assets such as the social and cultural proximity of the actors whose function is to facilitate cooperation between network partners. The regions with high productivity have a greater capacity to attract qualified human resources, causing an increase in their population (Waldorf, 2009), leading to an increase in the price of housing (Shapiro, 2006).

For Glaeser et al. (2001) and Waldvogel (2008), highly educated residents can provide the diversity and density of consumer services to be politically active (Milligan et al., 2004) and less likely to commit crimes (Lochner and Moretti, 2004).

According to Jackson and Murphy (2006), tourism appears as an important factor to promote regional economic development, replacing jobs that are being lost in other sectors motivated by the increasing use of technologies or the migration of young people to large cities or more developed regions. Thus, tourism can prove to be a key agent for the economic recovery of certain regions, essentially the most isolated and low density, if they have a vast natural, patrimonial and cultural heritage. It should be noted, however, as Tisdell (1998) points out, that tourism cannot be the only solution for regional development.

Infrastructures and equipment to support economic activities and families also appear as a crucial factor for regional development strategies in contributing to improving productivity (Munnell, 1992). Arrow and Kurtz (1970) and Holtz-Eakin and Lovely (1995) describe the positive relationship between productivity and infrastructure efficiency. However, this relationship is reinforced by Aschauer (1990) when showing a substantial positive impact on public capital. Holtz-Eakin (1994) and Garcia-Mila et al. (1996), in turn, contest this position by documenting an opposite causality between productivity and public capital, the non-stationarity of the data and the failure to observe the particular characteristics of the State.

This position was later contested by Everaert and Heylen (2001), Fernald (1999), Canning (1999), Bonaglia et al. (2000), Canning and Pedroni (2004) and Destefanis and Sena (2005), who proved the existence of a positive relationship between public capital and productivity. The discussion leaves a new question: the extent to which public capital invested in a region contributes to increasing the productivity of neighboring regions.

It is certain that the public capital of a region contributes to the increase of the comparative advantage over the others, being able, thus, to capture factors of production of other territories that will see their production or productivity decrease (Boarnet, 1998).

Finally, according to Ramachandra (2007), the energy sector is fundamental for the sustainable economic and social development of a region, and economic development depends on the country's energy system and its decentralized planning (Rachamandra, 2003).

Based on the arguments previously presented, the theories of regional networks described by Lundvall (1992), Porter (1990) and Rutten and Boekema (2007) emerged, which explain regional development as the result of the interaction of agents in and between networks. The density of the networks and the interaction between them, together with their number, make each region specialize having a specific economic and social structure.

Regional economic development thus results from the interaction between innovation, social networks and the region's tangible and intangible assets such as knowledge and technology (Cooke, 2002; Teece, 2000).

It means the concept of regional development has undergone significant changes over the past 70 years, ceasing to be studied exclusively through economic theories such as the Theory of Growth Poles (Perroux, 1950) and the Theory of Cumulative Causality (Myrdal, 1957), to be a complex aggregate of factors such as competitiveness, innovation, technology and human capital.

Initially, regional development was measured through economic factors such as the agglomeration of economic activities, on the basis of industrialization in the 1950s. In the 1980s, the factor of transaction costs was introduced, adding to the cluster of economic activities the capacity of industries to be able to sell their products. The way in which the actors participated and contributed to regional asymmetries began to be studied.

Academics studying this issues added visions and factors to explain the phenomenon of development, such as the technology pointed out by Rutten and Boekema (2007); however, the fact that technology is ubiquitous today is no longer a differentiating factor in itself.

Now other factors arise, such as the capacity for innovation, the competitiveness of agents and human capital, which gain prominence in what is regional development.

Finally, investment areas such as tourism, infrastructure and equipment and the energy sector have contributed to mitigate the losses caused by technological advances, thus creating paths in search of development, especially in less developed regions.

2.2. Bullfighting

Bullfighting is an economic and cultural activity that throughout history has aroused passions for and against.

Although controversial, bullfighting is part of the Portuguese cultural heritage, being defined by all the NUTS III regions of continental Portugal.

We verify that bullfighting in its various aspects fulfills the requirements emanated by UNESCO for the definition of culture, since we are facing distinctive, spiritual and material, intellectual and affective marks, which characterize a society or a social group, in this case part of Portuguese population, especially the one whose regions of birth or residence present a greater presence of bullfighting activity.

Pedro Ribeiro, Mayor of Cartaxo, said in statements to the newspaper "Valor Local", on 11/4/2019, that bullfighting represents a "distinctive mark of Portuguese culture, with the most diverse intellectual and affective marks in Portuguese society, especially strong in several regions and social groups, being a performative art, which contains a system of values, traditions and beliefs that promote human excellence and humanism".

In addition to the accomplishment of the requirements listed by UNESCO, bullfighting is recognized by the Portuguese State, in the preamble to Decree-Law No.89/2014, the June/11, as a culture, stating that "bullfighting is, in its various manifestations, an integral part of the heritage of Portuguese popular culture".

Among the various expressions, social practices, festive events and rituals that make up bullfighting, the importance of bullring shows is reflected in the significant number of spectators who watch this type of spectacle" (Decree-Law No.89/2014).

We have also refer the Decree-Law No.23/2014, of February/14, that establishes the legal regime for shows of an artistic nature, stating in point 2 of article 2 that bullfighting is an artistic activity.

Bullfighting can be defined as the art of facing and dealing with brave bulls (Pereira, 2010). The cultural expression of bullfighting is widespread all over the world, and its main centers are located in the European continent, in Portugal, Spain and France, and in South America, in Venezuela, Ecuador, Colombia and Peru.

However, bullfighting has been expanding in several geographies, especially in North America, namely in Mexico, where the taurean presence is very strong. But since the end of the 20th century is also significant in the United States of America and Canada, by strong influence of the Portuguese and Spanish communities in those territories.

The bullfight, despite the controversy surrounding it, continues to win fans across the globe, especially in China, where the show has aroused strong interest on the part of major Chinese investors in Portugal. The year 2020 would have marked the return of bullfighting to the Asian continent, where before the pandemic COVID-19 races were being prepared to be held in Guizhou, sixteen years after the last race held in Chinese territory, more specifically in Shanghai.

Based on Franco (2008), a historical review of the evolution of bullfighting follows from its first records to nowadays, where it seeks to present the most relevant facts in its history.

Over the past few decades, bullfighting, although in a punctual way, has reached other geographical locations, such as Belgium, Greece or Indonesia (country where the biggest

flood in the history of bullfighting has been recorded, with three bullfights and approximately 100,000 spectators).

During the Portuguese colonial empire, the territories of Angola and Mozambique also received several bullfights and, at present, it is still possible to find bullring in these nations, despite their high state of degradation.

In the national context, bullfighting had its first reference in the year of 1258, as written in the Inquiries of D. Afonso III, where it is said that D. Sancho I (1154 -1211), the second Portuguese king, killed bulls with a spear in the Campo das Almoínhas.

Since the founding of Portugal, bull races have been held in the main public squares of cities and towns. Squares were assembled, typically with square shapes, made of wood, which were dismantled after the festivities.

In Lisbon, for example, until the end of the 18th century, these races were held in Terreiro do Paço and Rossio. In Viana do Castelo, in the 17th century, these were held in the current Praça da República and, in Évora, in Praça do Giraldo. So it was across the all the territory, from north to south, passing through the Islands.

Beyond Terreiro do Paço and Rossio, Lisbon also hosted bullfights in Xabregas (16th century), where King D. Sebastião performed several times, in Junqueira (Belém) and Estrela (both in the 18th century), with the intervention of kings and noblemen, in shows that were offered to the people, by the Senate of Lisbon or the Casa Real.

In these races, after lengthy and exuberant courtesies, about 20 bulls were dealt, and killed by the lance of the riders, who were assisted by "capinhas" (the current bullfight pawns). Later, in the 16th century, the rocket was used instead of the spear to kill bulls. From the 17th century onwards, the pitchforks gradually began to participate in the show (the first written reference dates from 1661) and, since the 18th century began the performance of matadors, who killed bulls on foot.

The great popularity achieved by these celebrations opened the door to its commercial exploitation. After the Praça da Junqueira, in Belém, opened in 1738 (the first in a circular format), the Plaza de Toros do Salitre opened in 1790, financed by a group of fans, with the presence of the future King D. João VI.

Since its origin bullfighting was only practiced on horseback and until the 18th century there were no differences between the battles in Portugal and Spain. From that time, in Portugal, bullfighting on horseback continued to predominate, and the activity was generally practiced by professionals, usually of popular origin, or by gentlemen, generally with the status of amateurs, and with the relevance of the figure of the pitchfork. On the other hand in Spain, due to political and social motivations, bullfighting on horseback has

lost relevance, with the growth expression of the bull killers, who today predominate in Spanish bullfighting.

On the initiative of the "bullfighter king" D. Miguel, a great fan, the bullring of Campo de Sant'Anna was inaugurated on July 3, 1831, which was the capital's square for sixty years.

Bull races were banned between 1836 and 1837, as a result of Prime Minister Passos Manoel, but popular discontent at this fact led to the ban being lifted after nine months. After this date bulls are no longer killed in the arena, although there was no legal prohibition to do so. Due to this situation bulls started to be dealt more than once, which was called "Running Bull".

The Campo de Sant'Anna bullring was closed in 1889 due to the lack of security conditions. The construction of Campo Pequeno bullring started immediately. It was owned by the Real Casa Pia de Lisboa and was inaugurated on August 18, 1892.

Throughout the history of bullfighting there have been many rivalries between performers that deeply mark various eras.

The bullfighting environment of the transition from the 19th to the 20th century is dominated by the competition between the knights Manuel Casimiro de Almeida and Fernando de Oliveira, who died in Campo Pequeno on 12 May 1904, harvested by the bull "Ferrador", the Marquês de Castelo Melhor livestock farm.

We have also to consider the rider Victorino de Avelar Froes, who stands out at this time, not only for his artistic and equestrian skills, but also for being one of the precursors of the replacement of the pure bull (dealt only once), initiating a transformation process, that will mark the 20th century bullfighting on horseback.

In 1915, António Gomes de Abreu founds the Group of Forcados Amadores de Santarém, the precursor of the amateur model of pitchforks that exists today, being the oldest group of amateurs with uninterrupted activity.

This period is marked by two extraordinary riders: João Branco Nuncio (1901-1976) and Simão da Veiga Jr. (1903-1958), who are the protagonists of the so-called "Golden Age of bullfighting on horseback". Nuncio revolutionizes bullfighting on horseback, imposing the pure bull (dealt only once), ending the bull running (dealt several times). This alteration allowed the equestrian bullfighting to definitively emancipate itself as Art.

During the 1927 season, four death bull races are held legally in Campo Pequeno. These races had charitable purposes, corresponding to the objective of restoring full leadership in Portugal. Despite this attempt, in 1928, there was a legal ban on death bulls.

In 1933, despite the legal prohibition, the struggle for the authorization of integral races continues, with the Government allowing four races with death bulls and simultaneously creating a Commission to express an opinion on this topic.

After many generations of famous Portuguese capinhas, who dealt bulls on foot, Portugal still had no professional bull killer (matador). The first Portuguese to appear in Spain, to fight bulls, in the novilheiro category, was Augusto Gomes Júnior (June/13, 1946 - Pamplona). However, the first Portuguese to take the bull matador alternative was Diamantino Vizeu (March/23, 1947 - Barcelona), opening the door to a new chapter in the history of Portuguese Bullfighting, where Manuel dos Santos (August/15, 1948 - Seville), Francisco Mendes (August/10, 1954 - Málaga), Armando Soares (September/30, 1962 - Seville), Amadeu dos Anjos (September/13, 1963 - Salamanca) are all relevant.

Manuel dos Santos was a world-renowned bull killer (matador), having been the one who performed most in the world in the 1950 season, with a total of 93 races. He was a businessman at Campo Pequeno, having promoted several innovations in the management area, which continue until today, such as TV Races, discounted tickets, student bursts and Calendar Races, with emphasis on the famous "Fabulous Summer Races".

In the equestrian chapter a new era began with José Mestre Batista who took the Alternative on September/15, 1958, in Moita do Ribatejo, after failing the test he had done in Campo Pequeno on July/15 of the same year. It is the only case in the history of bullfighting of a rider who failed the Alternative. Despite this historical fact his style revolutionized the art of bullfighting on horseback. It marked a time, being posthumously decorated by the President of the Republic, General Ramalho Eanes, with the Order of Infante D. Henrique.

Nowadays bullfighting is influenced by João Moura, who is considered a bullfighting genius and the knight who has most modified the bullfighting art in recent decades, being one of the most famous knights in the history of Bullfighting. His style is characterized by the connection between the horse and the bull, with the horse functioning as if it were the matador's cloak.

The generation of Portuguese knights from the last quarter of the 20th century and the beginning of the 21st century constitutes one of the most valuable suits in the history of bullfighting, due to quantity and quality of performers. In addition to the name of João Moura, also Emídio Pinto, Joaquim Bastinhas, Paulo Caetano, João Palha Ribeiro Telles, António Ribeiro Telles, Rui Salvador, João Salgueiro and Luís Rouxinol deeply influenced the evolution of bullfighting on horseback in Portugal and Spain and, today, it is the children of several of them, also knights, who ensure the continuity of their achievements in the arenas.

Regarding bullfighting on foot, these years are marked by the international projection of the Portuguese matador Vítor Mendes, who remained at the top for many seasons. The phenomenon "Pedrito de Portugal", a true media case, which as a novilheiro dragged a lot of fans, but whose career as a matador has failed to maintain that impact.

In conclusion, the Portuguese equestrian bullfighting is based on high school developments. From the eighteenth century, when using the banderilha, it took on more and more artistic forms, being now a consummate performative art.

The Portuguese race is the result of centuries of transformations, and today is the reflection of more than 800 years of the history of Portugal, a very valuable jewel of the Portuguese cultural heritage, being widespread throughout the country.

Bullfighting is not limited to bulls' racing. These are currently considered the "formal bullfighting", in which wild cattle are dealt, in fixed or mobile spaces specially destined to them, being regulated by specific regulatory decree and on the jurisdiction of General Inspection of Economic Activities and the Ministry of Culture, also containing the so-called "popular bullfighting".

Popular bullfighting are taurean manifestations, different from bullfighting in the square, where bulls are also dealt or even faced. Examples of this are the bullfights, the rope cow, cape "arraiana" or rope bullfighting. All are regulated by its own diploma and under the auspices of the City Councils of the cape "arraiana" in the Raiana zone of Beira Alta, the "bull to the rope" in the Azores, the "cow of the rope" in Ponte de Lima.

3 METHODOLOGY

The methodology consists in a set of approaches, techniques and processes used by science to formulate and solve problems of objective acquisition of knowledge in a systematic way. In this paper the methodological option used is the qualitative one, which “consists of describing modes or trends and aims to provide a description and a broad understanding of a phenomenon”, Fortin (2009, p. 27). In other words, we can define the qualitative methodology as descriptive, since it seeks to describe a process, analyzing the data inductively.

In order to continue the process, we have to define the working objective, which involves considering the different aspects of the phenomenon from the point of view of the participants, in order to be able to interpret this same phenomenon in its context, according to Parse (1996).

Data collection “may take the form of an interview, observation, printed documents and field notes” (Deslauriers and Kérisit, 1997, p. 441). In this paper data collection focused on the bibliographic review of monographs, magazines and specialized websites.

The sources of information for the elaboration of this paper were the laws associated with the Taurean sector, with special focus on Regulatory Decree 89/2014, and the bibliographic references, which allowed not only to acquire knowledge but to directly base the elaborated prepositions, as well as the consultation of statistical and financial data near official institutions (eg. INE, Bank of Portugal, IGAC, among others).

Data analysis was defined by Bardin (1977) as a set of communication analysis techniques aiming to obtain, by systematic and objective procedures for describing content, messages, indicators, that allow the inference of knowledge related to the conditions of production/reception of these messages.

“We try to examine and interpret the data as it is collected, aiming a global and broad understanding of the phenomenon under study” (Deslauriers and Grove, 1997).

In data analysis, data obtained through the sources of the information collections are interpreted, trying to describe the phenomena under analysis and building relationships between the data obtained, this being the phase of data treatment. This paper aims to establish the relationship between regional and cultural development with bullfighting in continental Portugal.

To achieve the objective, the Synthetic Regional Development Index (ISDR) was studied. Based on the analysis of its indicators, it will be possible to quantify the regional development in Continental Portugal in 2018.

Additionally, bullfighting as a whole was studied, through the creation of a Bullfighting Activity Index (IAT), where the number of shows held in 2018 will be analyzed, at the level of formal bullfighting, popular bullfighting, also considering the players: knights, matadors, groups of pitchforks and cattle ranches.

Finally, we tested the hypothesis that bullfighting contributes to regional development, using the analysis of ISDR and IAT, considering Continental Portugal in 2018 as a case study.

4 RESULTS AND DISCUSSION

4.1. ISDR and IST

According with announced methodology in section 3, we begin with the presentation of the Regional Development Synthetic Index (ISDR) and the Bullfighting Activity Index (IAT). ISDR, produced annually by INE since 2006, seeks to measure the performance of different national regions at the level of NUTS II and NUTS III, covering three dimensions: competitiveness, cohesion and environmental quality (INE, 2020). Each dimension functions as an index that has the goal of aggregating different indicators, so that in the end ISDR functions as an aggregator of these indexes.

The competitiveness dimension tries to measure a region through the financing capacity, the existence of qualified human resources, the ability to attract new visitors, the ability to compete with other regions and, finally, the quality of life in the region. This index aims to capture the potential (in terms of human resources and physical infrastructure) of each region pointing to competitiveness, as well as the degree of efficiency in the trajectory followed (measured by the educational, professional, business and productive profiles) and, furthermore, the effectiveness in creating wealth and the ability shown by the entrepreneurship environment to compete in the international context.

The cohesion dimension in ISDR is related to issues of access/quality and distribution, and, therefore, it meets indicators that measure the distribution of income, social exclusion or integration and accessibility or opportunities for access to services, equipment and infrastructure and reducing disparities. The cohesion index also seeks to reflect the population's potential access to basic collective equipment and services (health, education, culture), as well as profiles associated with greater social inclusion and the effectiveness of public policies translated into increased quality of life and reduction of territorial disparities.

Regarding the last dimension of ISDR, environmental quality, issues related to the environment are analyzed, namely, the quality of the environment, the levels of pollution and the mitigation of negative impacts on environment, carried out by each region. Environmental quality is also associated with pressures on environment and territory, but also with the respective effects on environmental status (water, air quality and efficient use of energy) and with responses in terms of individual behaviors and the implementation of public policies.

The quantification of bullfighting in the national territory is based on a Bullfighting Activity Index (IAT). The IAT previously used in studies by Pereira (2010) and Capucha (2020) was updated with data for 2018, with the assumptions and qualifications assigned in the original version remaining unchanged.

For the elaboration of this index, data from the General Inspection of Cultural Activities (IGAC) were used to qualify the official data of formal bullfighting; the data referring to the popular bullfighting were collected based on the information made available on the specialty's website/blogs, and the quantification of the livestock farms was based on the data collected from the Portuguese Association for the Creation of "Touros de Lide", (Deal Bulls).

The IAT translates "bullfighting density", an indicator of the presence of relevant elements of bullfighting in a given NUTS III region, ranging from a maximum value in regions where bullfighting is a "total social phenomenon" (Mauss, 1966) and a null value in cases where there are no traces of the current presence of relevant bullfighting elements. Greater density corresponds to a greater IAT, that is, a greater presence of these elements.

In 2018, a total of 1,128 bullfighting events were identified in continental Portugal, including 158 bullring shows in the different modalities provided in the Bullfighting Show Regulation (RET) and 970 popular bullfighting events (T.POP), as bullfights, bullfighting with broad sticks, cow of the ropes (Ponte de Lima), cape "arraiana", bullfighting with ropes, among others.

The regions were identified where there are fixed bullring (Squares), wild cattle creation (Ranches), groups of pitchforks (Pitchforks) and resident bullfighting artists (Performers). Each of these dimensions was then subject to a score according to the frequency at which they occur, as shown in figure 1. For each dimension, a value is assigned whose scale ranges from 0 to 40, 0 to 30 and 0 to 10, respectively, depending on the number of occurrences. The maximum score is 100.

Table 1 - Score used for data processing IAT

Records (n.º)	T.POP	RET	Bullring	Livestock	Pitchforks	Artists
0	0	0	0	0	0	0
>=1	10	10	5	1	10	1
>=2	20	15	10	5	-	4
>=5	30	20	-	10	-	7
>10	40	30	-	-	-	10

Source: Pereira, 2010

The third step consisted on assigning a specific weight to each of the dimensions (figure 2), which multiplied by the score achieved through the frequency of each dimension occurrences, obtains a value for each dimension. IAT corresponds to the sum of the value obtained in each dimension weighted by the weight attributed to each one of them. Thus, the following matrix is obtained:

Table 2 – Matrix of relative classification of each component of the IAT

	20%	20%	10%	10%	20%	20%
Records (n.º)	T.POP	RET	Bullring	Livestock	Pitchforks	Artists
0	0	0	0	0	0	0
>=1	2	2	0,5	0,1	2	0,2
>=2	4	3	1	0,5	-	0,8
>=5	6	4	-	1	-	1,4
>10	8	6	-	-	-	2

Source: Pereira, 2010

To assist in reading figure 2, the following example is given: a region with popular bullfighting (T.POP) between 2 and 4 records, with 1 spectacle in square (RET), 1 fixed bullring (Squares), no ranch (Ranches), 1 group of pitchforks (Pitchforks) and between 5 and 10 resident bullfighting artists (Performers), registers 4 points in the first dimension, 2 points in the second, 0.5 in the third, 0 in the fourth, 2 in the fifth and 1.4 on last one. Total is 9.9 points on a scale of 0 to 20.

4.2. ISDR vs IST

Globally known the indexes studied in this paper, we intend to relate ISDR to IAT, based on the geographical distribution by NUTS III.

When assessing the relationship between these two statistical indicators, we look not for a cause-effect relationship, but to register the simultaneous occurrence of the phenomena that the statistical indicators give us.

In other words, the aim is not to establish a causal relationship, but only to explore, based on empirical indicators and not ideological prejudices, the existence of a correlation between the two sets of indicators (bullfighting and development), which are summarized in Table 1.

Table 3: Summary of IAT and ISDR for the NUTS III Regions of Continental Portugal (2018)

Regions	IAT	ISDR
Área Metropolitana de Lisboa	20	Above average
Lezíria do Tejo	20	Below average
Alentejo Central	19,4	Within the average
Alto Alentejo	19,4	Below average
Baixo Alentejo	18,8	Below average
Oeste	17,9	Below average
Beiras e Serra da Estrela	12,2	Below average
Médio Tejo	10,2	Below average
Região de Coimbra	10	Within the average
Terras de Trás-dos-Montes	8	Within the average
Região de Leiria	7,5	Within the average
Algarve	6,7	Below average
Beira Baixa	6,5	Below average
Alto Tâmega	6	Below average
Ave	6	Within the average
Área Metropolitana do Porto	5,7	Above average
Alto Minho	4,5	Within the average
Alentejo Litoral	4,1	Below average
Viseu Dão-Lafões	4	Below average
Região de Aveiro	4	Above average
Douro	2	Below average
Tâmega e Sousa	2	Below average
Cavádo	2	Above average

IAT

- Strong
- Medium
- Weak

ISDR

- Above average
- Within the average
- Below average

Source: Own Authorship

Considering the data presented in Table 1, it appears that it is not possible to establish a positive relationship between regional development and bullfighting.

Such a finding is possible by analyzing, as an example, the regions where bullfighting was classified by the IAT as “strong”, Lisbon Metropolitan Area (AML), Lezíria do Tejo, Central Alentejo, High Alentejo, Down Alentejo and West, at the same time that regional development is classified as “above the national average” for AML, “within the national average” for the Central Alentejo region, with the remaining regions considered (Lezíria do Tejo, High Alentejo, Down Alentejo and West classified as “below the national average”.

On the other hand, the regions of Beiras and Serra da Estrela, Medium Tejo, Region of Coimbra, Lands of Trás-os-Montes and Region of Leiria, were classified according to the IAT as “average” regarding the density of bullfighting. These regions, regarding ISDR, are classified according to regional development as “within the average” in the cases of the Region of Coimbra, Lands of Trás-os-Montes and the Region of Leiria, with the regions of Beiras and Serra da Estrela, and Medium Tejo, having a rating “below average”

Finally, the Algarve, Beira Baixa, High Tâmega, Ave, Porto Metropolitan Area (AMP), High Minho, Coast of Alentejo, Viseu Dão-Lafões, Aveiro Region, Douro, Tâmega and Sousa, and Cávado were classified according to IAT as “weak”. Considering ISDR level we find the three levels. Thus, with regard to regional development, the AMP, Aveiro and Cávado regions are “above average”, the Ave and High Minho regions are “within the average” and the Algarve, Beira Baixa regions, High Tâmega, Coast of Alentejo, Viseu Dão-Lafões, Douro, and Tâmega and Sousa are “below average”.

Summing up, we can infer, with data obtained, that there is no correlation link for the NUTS III regions of continental Portugal between regional development and the presence of bullfighting.

5 CONCLUSION

The main objective of this paper was to look for the possible relationship between regional development and bullfighting.

Bullfighting, despite a controversial activity, is widespread in all the NUTS III regions of continental Portugal, and for its analysis, the IAT was created mapping the bullfighting density in the country and its 23 NUTS III regions. It seems that the highest concentration of bullfighting density occurs in the central-south regions, with the Lisbon Metropolitan Area (AML) and Lezíria do Tejo regions having a maximum value of the IAT index.

Conversely, the northern region is the one with the lowest bullfighting intensity, with the NUTS III Douro, Tâmega and Sousa, and Cávado regions having the lowest IAT value.

At the level of regional development, considering the ISDR that considers the dimensions of competitiveness, cohesion and environmental quality, the AML regions, Porto Metropolitan Area (AMP), Aveiro Region and Cávado, present an above average rating. Conversely, 13 NUTS III regions have lower than average ISDR values, with the regions of Tâmega and Sousa, High Tâmega, and Douro presenting the lowest values.

Finally, the departure hypothesis was validated, in which we identified that bullfighting contributed to regional development.

Anyhow, and taking into account the general objective of this paper, which was to understand the relationship between regional development and bullfighting, as a cultural and economic activity in continental Portugal, we attest that for the analyzed data this does not happen.

However, findings in the studied data does not invalidate that bullfighting represents an important source of development in the regions where it predominates. This fact can be justified, in the economic aspect, through the influx of tourists to fairs and other bullfighting events, as well as other activities, such as food and beverage, overnight stays, transports and advertising, in addition to the direct work resulting from the cattle breeding, among others.

Given the multidimensionality of the phenomenon, in addition to the question of competitiveness that we verified above for economic issues, we can say that bullfighting also contributes to the level of cohesion, through the number of live shows held in the region and at the environmental level, by preserving species and habitats.

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