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Sport and territorial development , a catalyst for attractiveness and local dynamics: Evidence from the Itzer trail, Moroccan middle atlas.

Auteur 1 : El FERDIOUI Ayoub.
Auteur 2 : ZOUKENI Ibrahim.
Auteur 3 : ACHAHBOUN Ilham.
Auteur 4 : SOSSI ALAOUI Fatima Zohra.

EL FERDIOUI Ayoub :
Laboratory of Economics Finance Management and Innovation ,Ibn Tofail University, Kenitra ,Morocco.
https://orcid.org/0009-0007-5560-5399

ZOUKENI Ibrahim :
Laboratory of Engineering in Chemistry and Physics of Matter, Faculty of Science and Technics , Sultan Moulay Ismail ,Beni Mellal , Morocco.
https://orcid.org/0000-0002-9877-3583

ACHAHBOUN Ilham:
Laboratory of Economics Finance Management and Innovation,Ibn Tofail University, ,Kenitra , Morocco.
https://orcid.org/0009-0007-1455-8127

SOSSI ALAOUI Fatima Zohra :
Laboratory of Economics Finance Management and Innovation,Ibn Tofail University, ,Kenitra , Morocco.
https://orcid.org/0000-0003-4373-5472

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Abstract:

Sporting events are increasingly recognized as potential drivers of multidimensional territorial development. However, stakeholders' perceptions of their contribution in peripheral mountain areas remain insufficiently explored. This study examines the perceived territorial impacts of the Itzer Trail, a trail running event held in the Moroccan Middle Atlas. A cross-sectional quantitative survey using a structured questionnaire was conducted among 103 stakeholders, including competitors, local residents and organizers. Perceptions were assessed across five dimensions: economic, social, organizational and governance, sports-cultural, and territorial and environmental impacts. Internal consistency was assessed using Cronbach's alpha. Exploratory factor analysis, Pearson correlations, independent-samples t-tests and one-way analysis of variance (ANOVA) were used to examine the dimensional structure, relationships among dimensions and differences across respondent groups. All five dimensions received positive evaluations. Sports-cultural impact had the highest mean score, followed by social impact and territorial and environmental impact. Infrastructure improvement was the only item rated below the scale midpoint. Exploratory factor analysis indicated that the five theoretical dimensions converged into three broader factors, suggesting an integrated perception of territorial development. Prior participation in sporting events showed the most consistent association with positive perceptions across the five dimensions, while gender and age differences were most pronounced for governance. These findings highlight the value of complementing economic assessments with attention to intangible, relational and community-oriented legacies. They suggest that trail running events in peripheral mountain areas can support territorial identity, social cohesion and integrated development when embedded in long-term participatory governance strategies.

Keywords: Trail running; Territorial development; Sporting events; Stakeholder perceptions; Governance.

Résumé:

Les événements sportifs sont de plus en plus reconnus comme des leviers de développement territorial multidimensionnel. Toutefois, la perception de leur contribution dans les zones de montagne périphériques demeure largement inexplorée. Cette étude examine la manière dont les parties prenantes perçoivent les retombées territoriales de l'« Itzer Trail », une épreuve de course en sentier (trail) organisée dans le Moyen Atlas marocain. À travers une approche quantitative transversale, un questionnaire structuré a été administré à 103 parties prenantes (concurrents, résidents locaux et organisateurs) afin d'évaluer leurs perceptions selon cinq dimensions : économique, sociale, organisationnelle et de gouvernance, sportive et culturelle, ainsi que territoriale et environnementale. La fiabilité a été mesurée par le coefficient alpha de Cronbach, tandis que des analyses factorielles exploratoires, des corrélations de Pearson, des tests t pour échantillons indépendants et des analyses de variance (ANOVA) à un facteur ont été réalisés pour examiner la structure dimensionnelle, les interdépendances et les variations de perception en fonction des caractéristiques démographiques. Les cinq dimensions ont été évaluées positivement. L'impact sportif et culturel a obtenu le score le plus élevé, suivi des impacts sociaux et territoriaux, tandis que l'amélioration des infrastructures est le seul élément dont la note se situe en dessous du point médian de l'échelle. L'analyse factorielle exploratoire révèle que ces cinq dimensions convergent empiriquement vers trois facteurs plus larges, suggérant que les parties prenantes perçoivent le développement territorial comme un processus intégré plutôt que compartimenté. La participation antérieure à des événements sportifs présente l'association la plus constante avec des perceptions positives dans les cinq dimensions ; les perceptions relatives à la gouvernance présentent, quant à elles, les écarts les plus marqués selon le genre et l'âge au sein de l'échantillon. Ces résultats soulignent l'intérêt de compléter les évaluations économiques par une attention portée aux héritages immatériels, relationnels et communautaires. Ils suggèrent que les épreuves de course en sentier dans les zones de montagne périphériques peuvent agir comme des catalyseurs de l'identité territoriale, de la cohésion sociale et d'un développement intégré, à condition qu'elles s'inscrivent dans des stratégies de gouvernance et de participation à long terme.

Mots-clés : Trail ; Développement territorial ; Événements sportifs ; Perceptions des parties prenantes ; Gouvernance.

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Introduction

Sport today occupies an increasingly important place in territorial public policies. Long perceived merely as a leisure or competitive activity, it is now recognized for its multiple effects on society and the economy. Indeed, beyond its recreational dimensions, sport plays a significant role in the structuring and attractiveness of territories (Coalter, 2007). Many local authorities now integrate sport into their development strategies, whether through urban planning, event organization, or support for local practices (Gratton & Preuß, 2008).

Sport is therefore a catalyst for territorial dynamism and can have several levels of impact. It creates jobs, brings in investments and promotes tourism. Socially, it enhances social cohesion, inclusion and a sense of belonging to the community. It symbolically helps to form the image and identity of a territory, especially if it is linked to events of national or international importance (Banos, 2014). In this context, Figure 1, showing local athletes in the ITZER region, is a major component of the territory, strengthening the feeling of belonging of its inhabitants and highlighting the territory thanks to its sporting successes.

Several public policies have been adopted in the Moroccan context that have taken these factors into account. The National Sports Strategy (MJCC,2022) and initiatives supported by the National Initiative for Human Development (*INDH Phase III : Dynamique 2019-2023 Gouvernance | Maroc*, 2023) illustrate that sport is now considered as a cross-cutting instrument that contributes to territorial attractiveness, social cohesion and territorial transformation. Against this background, the present study focuses on the perceived contribution of the Itzer Trail, a trail running event in the Moroccan Middle Atlas, to local territorial development. It addresses the following research question: How do stakeholders perceive the contribution of the Itzer Trail sporting event to local territorial development in the Moroccan Middle Atlas?

The objective is to examine these perceptions across five dimensions: economic, social, organizational and governance, sports-cultural, and territorial and environmental impacts. Drawing on a cross-sectional questionnaire survey of 103 competitors, local residents and organizers, the study describes perceived benefits, examines relationships among the five dimensions, and explores differences associated with gender, age, regular sports practice and prior sporting event participation. The analysis concerns perceived territorial impacts rather than a causal evaluation of measured territorial change.

The article is organized as follows. Section 1 introduces the literature review. Section 2 develops the theoretical and conceptual background, presents the Itzer Trail context, and specifies the research question. Section 3 describes the research design, questionnaire and analytical procedures. Section 4 presents the results. Section 5 discusses the findings, their theoretical and practical implications, and the study limitations. The conclusion summarizes the main lessons for sport-based territorial development.

Figure 1: Athletes from the ITZER region, a symbol of local identity and cohesion



Source: Official page of Itzer Trail

Literature review :

Sporting events attract visitors, bring communities together, increase territorial visibility and reveal the capacity of local institutions to coordinate collective action. This review considers these effects together rather than focusing solely on economic outcomes. It examines how previous studies have conceptualized the contribution of sporting events to territorial development and identifies the gaps relevant to the present study. The review leads to the research question: How do stakeholders perceive the contribution of the Itzer Trail to local territorial development in the Moroccan Middle Atlas?

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Theoretical Background :

From Economic measurement to multidimensional Territorial development :

For a long time, researchers who studied sporting events asked only one question: how much money does the event bring in ? This approach focused on visitor spending, hotel bookings, and employment effects dominated the field from the 1980s through the early 2000s (Gratton et al., 2005; Preuss, 2007). It produced useful numbers, but it missed something important, the most meaningful changes that sporting events produce in communities are often not measured .Today's studies have transcended this limited perspective. The multidimensional territorial development process, which is the improvement of a territory not only economically but also socially, culturally, environmentally and institutionally (Chalip, 2006; González-García et al., 2022, p. 2009; Smith, 2010), is recognized today as one of the effects of sporting events. This change of attitude is not merely conceptual. It shows the reality of local communities.People don't distinguish between the business value of a running race in their valley and the pride they feel when their valley is featured in the national media, or the social connections they form over the course of months of volunteer preparation.

This wider perspective is especially relevant for small and medium size events in rural areas. Community-embedded sporting events have been found to have more moderate and longer-lasting impacts, particularly in the social, cultural and governance sectors (Rossini et al., 2024; Taks, 2013; Taks et al., 2016), compared to mega-events like the Olympic Games, which create large but short-lived economic shocks. A good example of this pattern is trail running events, which are directly related to the landscape, heritage and social fabric of the territory where they are developed, and therefore have a multi-dimensional contribution to development. The Azores Trail Run is a case in point (Valente, 2020) reveals that the event simultaneously promotes the sustainability of the territory and local development, fostering positive perceptions of environmental stewardship, destination image and community engagement among both participants and local residents, a pattern that is directly comparable to the one observed in the Moroccan Middle Atlas in this study.

Sport event leverage Theory : Events as territorial platforms :

Sport is now a significant social, cultural and economic force, and has a wider influence than just on sporting performance. Socially, it has a key role in socialization, integration, and community cohesion. It fosters the acquisition of rules, respect for others and living together, especially among youth. In Morocco, the National Initiative for Human Development (INDH) has incorporated sports

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initiatives to enhance social cohesion in marginalized communities and mitigate social tensions (INDH, 2023).(Chalip, 2004, 2006) developed the most important theoretical framework for this study, which is called sport event leverage theory. The basic concept is that a sporting event is not a machine that will automatically generate benefits. It is a platform, an opportunity that local actors can use purposefully to mobilize resources, build partnerships, build identities, and further territorial goals.

This is important for the Itzer Trail because it moves the discussion from the question of whether or not the event generates economic returns, to how the event can be used as a lever for territorial development because the social, cultural and governance impacts of the Itzer Trail are likely to be more important to local stakeholders than its economic impacts, it is the dimensions of the impacts in which communities have the greatest agency and where the most lasting changes are likely to occur (Smith, 2012; Taks et al., 2016).Importantly, governance is also at the heart of event impact and not at the margins, as explained by the theory of leverage. The ability to make use of an event for territorial development is solely reliant on the quality of coordination among local actors, municipalities, associations, businesses, residents and visitors. If this coordination is successful, events create cascading territorial benefits. If it doesn't work, there is only a temporary animation, and no legacy (Benreghai, 2024; Chalip, 2006). This theoretical insight is directly predictive of one of the main findings of this study: the perceptions of governance are more demographically differentiated than any other dimension of impact.

Social Exchange Theory and territorial development :

Social Exchange Theory suggests that the costs and benefits of interactions within a territory are determined by how the residents, local governments, and sports organizations perceive the balance of costs and benefits . From a territorial development perspective, this approach emphasizes the need to engage local stakeholders and build their awareness of the project's long-term benefits for the community (Benreghai, 2024). The positive response of these expressions from local communities is frequently linked to the improvement of the image and identity of the territory (Schoeny, 2018). Therefore, the integration of sports events with the needs of the community reduces the risk of social exclusion and makes these events sustainable instruments for local integration (Said & Amine, 2022).Moreover, this view underlines the role of sustainable sports resource management in the creation of a resilient socio-economic environment , by turning local vocations into strategic assets. The territory becomes an active part of the social life and collective

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representation .This is a process of social exchange that allows the development of a collective identity and the development of sports events as a catalyst for territorial cohesion. This theoretical perspective highlights the importance of sport-related development projects being closely linked to local empowerment objectives and asset-based approaches, moving beyond top-down interventions to community-led processes (Misener & Schulenkorf, 2016).

Territorial development and Attractivness Theory :

A third conceptual lens is offered by territorial development theory. Territorial development is not just economic growth, it is the activation of local resources (economic, social, cultural, environmental, institutional) to enhance the overall development of a territory ((Camagni, 2002; Camagni & Capello, 2013). Development is relational and cumulative: it is not the result of any one intervention, but rather the quality of interactions between local actors.

In this context, territorial attractiveness is defined as the ability of a territory to attract visitors, investments and symbolic interest, both tangible (infrastructure, accommodation) and intangible (identity, landscape, reputation, social vitality (Kaplanidou & Vogt, 2007; Richelieu, 2018). A sporting event such as the Itzer Trail can enhance the attractiveness of a territory not only on the day of the event but also in the long term by creating the image, the reputation and the collective pride that makes a territory more visible and desirable over time (Kaplanidou et al., 2012; Swain et al., 2024).

This theory is directly applicable to the Moroccan Middle Atlas context. Itzer is a peripheral mountain area with weak economic diversification, high rural out-migration and high natural and cultural potential but low utilization. A running event in this type of territory does not compete with the existing tourism calendar, it is one of the few mechanisms of territorial animation and external visibility that are recurrent in this territory and that are at the service of the local communities. This structure position reinforces the social, cultural and territorial relevance of the event, as our results show.

Conceptual background :

The most important theoretical framework for this study is sport event leverage theory, developed by Chalip (2004, 2006). The core idea is simple but powerful,a sporting event is not a machine that automatically produces benefits. It is a platform , an opportunity that local actors can use intentionally to mobilize resources, create partnerships, strengthen identities, and advance broader territorial objectives.

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This matters for the Itzer Trail because it shifts the question from "does the event produce economic returns?" to "how can the event be used as a lever for territorial development?" Leverage theory explains why the social, cultural, and governance effects of the Itzer Trail may matter more to local stakeholders than its direct economic returns.These are the dimensions over which communities have the most agency and in which the most durable changes occur (Smith, 2012; Taks et al., 2016).Crucially, leverage theory also explains why governance is central, not peripheral, to event impact.

The capacity to leverage an event for territorial development depends entirely on the quality of coordination among local actors , municipalities, associations, businesses, residents, and visitors. When this coordination works well, events generate compounding territorial benefits. When it fails, the event produces only temporary animation with no lasting legacy(Benreghai, 2024; Chalip, 2006a). This theoretical insight directly anticipates one of the key findings of this study that governance perceptions are more demographically differentiated than any other impact dimension.

Table 1: The five dimensions of territorial impact

Dimension	Items	Key theoritical sources
Economic	Visitor attraction, local business activity, employment, and infrastructure improvement	Gratton et al. (2005); Preuss (2007); Taks et al. (2015)
Social	Local pride, sense of belonging, community mobilization, and resident visitor interaction	Misener & Mason (2006); González-García et al. (2022); Taks (2013)
Organisational & Governance	Coordination of actors, role clarity, monitoring, and institutional effectiveness	Benreghai (2024); Parent & Séguin (2008); Thompson et al. (2022)
Cultural	Development of local sports culture, territorial identity, and symbolic visibility	Chalip (2006); Benreghai (2024); Kaplanidou & Vogt (2007)
Territorial & Environement	Tourist attractiveness, sustainable development, and ecological awareness	González-García et al. (2022); Smith (2010); Rossini et al. (2024)

Source : Own elaboration

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Economic Impact :

Economic benefits are the most visible and most frequently discussed consequences of sporting events. Visitor expenditures, commercial exchanges, employment creation, and infrastructure investment constitute the core of this dimension (Gratton et al., 2005; Preuss, 2007). For territories like, where the local economy is delicate and tourism streams are small, even slight changes in the amount of money spent by visitors might make a difference.

On the other hand, literature indicates that economic benefits from festivals for small and locally embedded events tend to be limited (Rossini et al., 2024; Taks et al., 2016). All local entrepreneurs do not get equal advantages. Infrastructure development takes years to realize,what people see and feel at home (the pride ,the animation , the social energy) might be much more evident than any economic advantage. That explains why the economic dimension, although essential, is not enough to interpret how the stakeholders value the developmental contribution of the Itzer Trail.

The Social dimension Impact :

Sporting events become means through which social relations, otherwise not possible to establish, can take place. Through bringing together volunteers, locals, tourists, and competitors in one and the same time and space, sporting events generate social capital that includes trust, reciprocity, and cooperation networks that exist beyond the timeframe of the event (Misener & Mason, 2006; Putnam, 2000)

For a society like that of Itzer that suffers from rural migration, economic deprivation, and lack of institutions, social dimension can be the most immediate and visible value of the trail running event. It becomes a way of celebrating togetherness and community, as well as creating a feeling of pride and belonging. According to (Agha & Taks, 2015; Taks, 2013) social benefits of local events are more sustainable compared to those of mega events since the latter is based on passivity of spectators. Besides, (EL FERDIOUI et al., 2026) claim that sports activities can be very helpful in facilitating social inclusion if they are specifically targeted and intended at addressing local structural and cultural particularities.

Organizational and governance impact:

Governance is the least apparent but maybe the most important aspect of territorial development through events. Governance implies the tools of coordination, sharing the responsibilities, and collective management of the event as the common project by various actors at the local level, including municipalities, associations, firms, volunteers, and national actors (Henry & Lee, 2004;

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Parent & Seguin, 2008).Why is it so important? Coordination is necessary to achieve any other benefits. Economic gains depend on coordination of hospitality and communication, social benefits are possible only because of coordination of mobilization, culture promotion depends on decision-making on programming. Governance is an essential infrastructure which allows realizing and maintaining all the other impacts (Benreghai, 2024).

The relevance of Benreghai's position to the context of Morocco is obvious from the analysis of sporting events as tools of territorial development in this country. According to the author, the success of such projects depends on the creation of the "collective actor" , the network of local actors able to sustain the project after the event and to integrate it into a territorial strategy.The idea is relevant to the case of the Itzer Trail because the coordination of the governance at the municipality level, at the level of regional sport federations and other voluntary associations remains complicated and dynamic. Moreover, the chosen theoretical approach predicts the finding that perceptions of the governance differ the most by the demographic criteria among the five dimensions under consideration. The processes of governance are invisible compared to the social interaction and business activity. Therefore, only the actors having institutional access to the information about them can assess them positively and confidently. They are mostly male and aged respondents of the Middle Atlas region.

Sport cultural impact :

A trail running event is not culturally neutral. When competitors run through the valleys, riverbeds, and mountains of the Itzer region, they are not simply moving through a backdrop, they are activating the territory as a cultural and symbolic space. The event transforms the landscape into a stage, and local identity into a product of pride and visibility.(Chalip, 2006) argues that sporting events generate "social leverage" through this cultural mechanism. They create shared experiences that reinforce collective values, strengthen local identity, and produce a sense of territorial distinctiveness. In the Amazigh-speaking communities of the Middle Atlas ,whose cultural identity and territorial heritage are often marginalized in national narratives , this identity affirmation dimension of the Itzer Trail carries disproportionate symbolic value.

Destination-image research confirms that event meanings can transfer to place meanings ,repeated exposure to the event builds an association between the race and the territory that increases territorial visibility, attachment, and visitation intentions (Kaplanidou et al., 2012; Kaplanidou & Vogt, 2007; Ramos et al., 2025).Whether, (Benreghai, 2024) demonstrates that this process

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operates in the Moroccan context as well, arguing that sporting events can shape a distinctive territorial image that goes beyond economic promotion to encompass cultural identity and collective pride.

Territorial and environmental impact :Nature as resource and responsibility

The trail races are inevitably linked to nature. The environmental aspect, as shown by the presence of mountains, trails, and sustainability of the territory, is one of the important components of the product of the event. There appears a special relationship , on one hand, the event may play an instrument of ecological education and development of sustainable tourism, and poor organization may result in negative environmental consequences.

As regards the Itzer Trail Race, there exist two different levels of the above-mentioned dimension. The first one relates to the promotional role of the race, the participants of the race become the promoters of the Middle Atlas region due to their experience (González-García et al., 2022; Rossini et al., 2024). The second one is the role of responsibility, residents of the region evaluate whether the event is environmentally responsible in relation to waste generation, trail destruction, noise pollution, and other similar issues. (Collins et al., 2009) find out that people pay less attention to environmental advantages as the result of evaluation problems.

The Trail of Itzer : A Territory where sport can make a difference

The Itzer Trail is located in the Middle Atlas, an area of Morocco that is largely rural and mountainous, with high natural resource potential, a strong Amazigh cultural heritage and socioeconomic issues. Agriculture, livestock farming and some public sector activities are the mainstay of the local economy, with tourism and private sector investment relatively underdeveloped. This makes it particularly important to implement projects that can improve the attractiveness of the territory and boost local economic growth.

Over the past few years, Morocco has been increasingly taking the sport as a strategic tool for territorial development. Sport is seen as a tool for social inclusion, youth involvement, territorial equity and regional attractiveness by the New Development Model (CSMD, 2021) and sport tourism is considered as a tool for sustainable development in peripheral regions by the Economic, Social and Environmental Council (CESE, 2022). However, there is limited empirical research that explores the territorial effects of sporting events in rural settings in Morocco from a local perspective.The Itzer Trail is a suitable case study as it is a combination of sport tourism and promotion of local natural and cultural resources. In addition to its role in attracting visitors, the

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event highlights the landscapes and Amazigh identity of the Middle Atlas and serves as a catalyst for the mobilization of local institutions, associations, volunteers and residents. Trail running events, as seen in other peripheral mountain places, can reinforce territorial visibility and can be a tool for local development, linking sport, nature and territorial identity (Valente, 2020).

In this context, it is important to analyze the perception of the stakeholders about the Itzer Trail to gain insights into the multi-dimensional role of sporting events in territorial development in under-researched mountainous areas in Morocco.

Conceptual framework and research question :

All theoretical and conceptual aspects mentioned above are ultimately directed towards one coherent notion. The Itzer Trail should be seen not as an athletic event with some economic spill-over effects, but rather as a platform where the territory, its actors, landscape, culture, institutions, and identity are evaluated altogether. The value of such a platform according to the stakeholders' estimations of its multi-facetted impact is determined by three key aspects:

Firstly, the quality and accessibility of event experience itself is the main variable in terms of the ease with which the stakeholders can identify all of its multi-facetted effects. The previous involvement in the event is the primary means for the development of the evaluative skills of the stakeholders.

Secondly, the quality of the institutional and governance arrangements affects greatly whether the event will result in some long-term and widely recognized benefit of the territory or just disappear without leaving any effects. Governance results are especially vulnerable to the demographic disparities in terms of institutional access.

Thirdly, the territory and cultural context of Morocco Middle Atlas make social, cultural, and symbolic impacts more valuable just because of the lack of alternatives in the terms of economics and infrastructure.

These three factors are not hypotheses to be tested and confirmed or rejected. This study takes an exploratory quantitative approach, it does not begin with propositions to verify, but with a research question to investigate through systematic measurement and analysis. The findings will speak to the relative importance of these factors, the degree of demographic differentiation in perceptions, and the structure of interdependencies among the five dimensions without presuming in advance what the results will show.

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The research question guiding this study is:

How do stakeholders perceive the contribution of the Itzer Trail sporting event to local territorial development in the Moroccan Middle Atlas?

To investigate this question, the study examines perceptions across five dimensions economic, social, organizational and governance, sports-cultural, and territorial environmental and compares these perceptions across stakeholder groups defined by gender, age, regular sports practice, and prior sporting event participation.

Methodology:

Research design and data collection :

The study uses a quantitative cross-sectional design to examine stakeholders' perceptions of the contribution of sporting events to territorial development, using the Itzer Trail as a case study. This approach enables the systematic measurement and statistical comparison of perceptions across stakeholder groups, as well as the examination of relationships among perceived territorial impact dimensions (Creswell, 2014). The design also draws on previous research on sporting events and territorial development (Benreghai, 2024). A structured, self-administered questionnaire was used to collect data from three stakeholder categories: competitors, local residents and event organizers. These categories were selected because their experiences, interests and evaluations are directly related to the organization and perceived outcomes of the Itzer Trail.

The research is based on the ITZER Trail, a sporting event organized in the rural and mountainous region of Itzer, MIDELT, Morocco. The event is an emerging territorial development project, which brings together sports tourism, promotion of local culture and community mobilization. The choice of this case study is justified by the increasing importance of nature-based sports events for territorial attractiveness, the strategic role of sport in rural development policies and the few empirical studies that have focused on the impact of sporting events in North African rural setting. Questionnaires were administered on-site before and after the Itzer Trail event. A non-probability convenience sampling strategy was used, reflecting the event-specific accessible population and the exploratory nature of the study (Patton, 2002). An initial pool of 118 questionnaires was collected. After screening to remove incomplete, inconsistent or unusable responses, 103 valid questionnaires were retained for statistical analysis, representing 87.3% of the questionnaires collected. The sample consisted of respondents with different socio-professional and demographic characteristics, covering several age groups, both sexes and different levels of previous sporting

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event participation. This diversity allows a differentiated examination of perceived territorial impacts within the sample. All participants were informed of the academic purpose of the study and the anonymity and confidentiality of their responses.

Questionnaire development :

The questionnaire was developed through a review of previous empirical studies of the territorial impacts of sporting events, drawing on earlier frameworks and indicators (González-García et al., 2022) and (Benreghai, 2024). The instrument was pre-tested with a small number of respondents (n = 12) to check the clarity of the items, contextual relevance, and comprehension before large-scale administration. Minor revisions were made based on feedback from the pilots. The final instrument was organized around five key analytical dimensions that captured the multi-dimensionality of event-based territorial development. All items were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). This response format enables the quantitative description and comparison of subjective perceptions.

A post-hoc power analysis (Faul et al., 2007) showed that the sample size of N = 103 is adequate. All inferential tests used in this study had statistical power ($1 - \beta > 0.80$) except for Pearson correlations (detectable for $r \geq .25$), independent-samples t-tests (for $d \geq 0.50$), and one-way ANOVA (for $\eta^2 \geq .08$), at a significance threshold of $\alpha = .05$.

Data analysis :

The statistical analysis was conducted using R statistical software (Paul et al., 2023). The analytical procedure combined reliability assessment, descriptive statistics, correlation analysis and group comparisons. Cronbach's alpha was calculated for each of the five dimensions. Descriptive statistics included means (M), standard deviations (SD), minimum and maximum values, frequencies and percentages. Pearson correlations were calculated for each pair of dimensions to examine their interrelationships. Independent-samples t-tests and one-way analyses of variance (ANOVA) were used to examine differences by gender, age group, regular sports practice and prior sporting event participation. Significant ANOVA results ($p < .05$) were followed by Bonferroni-adjusted post-hoc comparisons.

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Table 2: Overview of the research methodology

Component	Study specification
Design and setting	Quantitative cross-sectional case study of the Itzer Trail in the Moroccan Middle Atlas.
Stakeholders and sampling	Competitors, local residents and organizers; non-probability convenience sampling.
Collection and screening	On-site questionnaires administered before and after the event; 118 collected and 103 retained (87.3%).
Instrument	Structured, self-administered questionnaire; pre-test with 12 respondents; five-point Likert scale.
Analytical dimensions	Economic; social; organizational and governance; sports-cultural; territorial and environmental impacts.
Analytical approach	R software; internal consistency, descriptive statistics, correlations and group comparisons.
Scope of inference	Stakeholders' perceptions within a single event context; objective territorial impacts and causal effects are not directly measured.

Source: Authors' synthesis of the methodology described above.

Results:

Reliability analysis :

The internal consistency of each measurement scale was examined before substantive analysis. Cronbach's alpha (α) was used. All five dimensions were above the minimum threshold as indicated in Table 3. The reliability of the measurement instrument was confirmed by the values of $\alpha \geq .70$ (Nunnally, 1978).

Table 3: Reliability coefficients by dimension

Dimension	No. Items	Cronbach's α
Economic Impact	3	.714
Social Impact	3	.826
Organizational and Governance Impact	3	.705
Sports-Cultural Impact	2	.811
Territorial and Environmental Impact	3	.832

Source: Own elaboration, 2024.

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The most consistent scores were for the Territorial and Environmental Impact scale (α = .832), Social Impact (α = .826), and Sports-Cultural Impact (α = .811) dimensions. The Economic Impact (α = .714) and Organizational and Governance Impact (α = .705) dimensions also met the .70 threshold, although their internal consistency was lower than that of the other three scales. Governance and institutional coordination remain relevant to the interpretation of event impacts (Parent & Séguin, 2008).

Descriptive statistics:

Table 4 presents the descriptive statistics for all 14 individual questionnaire items. Three missing responses were recorded for Q10, for which the descriptive statistics are based on 100 valid responses. The other items each have 103 valid responses.

Table 4: Descriptive statistics

Item	Label	N	M	SD	Min	Max
Q1	Visitor attraction	103	4.417	0.955	1	5
Q2	Commercial benefits	103	4.243	0.955	1	5
Q3	Employment opportunities	103	4.097	1.043	1	5
Q4	Infrastructure improvement	103	2.903	1.167	1	5
Q5	Sense of belonging and local pride	103	4.350	0.936	1	5
Q6	Stakeholder mobilization	103	4.000	0.907	2	5
Q7	Resident–visitor exchanges	103	4.330	0.912	2	5
Q8	Citizen involvement in organization	103	3.971	1.098	1	5
Q9	Clarity of roles and responsibilities	103	4.029	1.052	1	5
Q10	Monitoring and post-event evaluation	100	3.610	1.286	1	5
Q11	Sustainable development contribution	103	3.806	1.001	1	5
Q12	Tourist attractiveness of the region	103	4.252	0.915	1	5
Q13	Sports culture development	103	4.165	0.919	2	5
Q14	Territorial visibility	103	4.272	1.031	1	5

Source : Own elaboration .

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The findings show a generally positive trend in perceptions for the vast majority of items. The highest mean scores were recorded for visitor attraction (Q1: M = 4.417, SD = 0.955), sense of belonging and local pride (Q5: M = 4.350, SD = 0.936), and resident–visitor exchanges (Q7: M = 4.330, SD = 0.912). These results support existing literature on the social and economic potential of sporting events (Misener & Mason, 2006) and validate the Itzer Trail as being seen as a catalyst for territorial animation, external visitor attraction and community interaction.

One exception is infrastructure improvement (Q4: M = 2.903, SD = 1.167), the only item that is below the scale midpoint (3.0). The result indicates that the respondents do not see the tangible physical infrastructure development as a visible and direct benefit of the event. This is consistent with the arguments in the event legacy literature that the benefits of capital investments are not always apparent in a single event cycle, and that there is often a disconnect between the perceived relevance of infrastructure programs and community-level perceptions of the event (Preuß, 2007)

Dimension analysis :

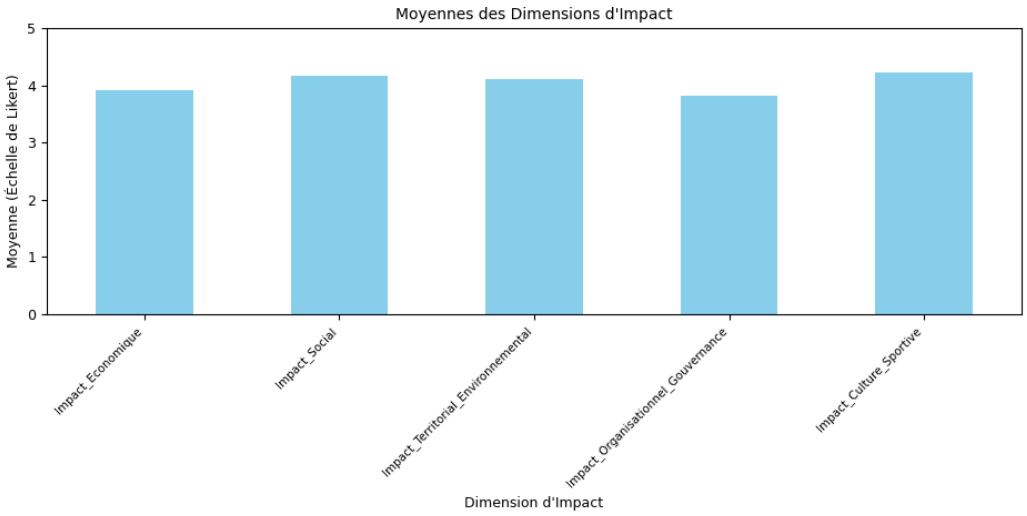
Table 5 and Figure 3 present the mean scores and standard deviations for each of the five theoretical dimensions. All dimensions had mean scores above the scale midpoint of 3.00 (M = 3.819–4.218), indicating an overall favorable perception of the territorial impacts related to the Itzer Trail.

Table 5: Descriptive statistics by impact dimension

Dimension	M	SD	Min	Max
Economic Impact	3.915	0.759	1.25	5.00
Social Impact	4.163	0.783	2.00	5.00
Organizational & Gouvernance Impact	3.819	0.883	1.33	5.00
Sports-Cultural Impact	4.218	0.896	1.50	5.00
Territorial & Environnemental Impact	4.110	0.851	1.67	5.00

Source: Own elaboration.

Figure 3: Mean Scores of Impact Dimensions.



Source: Own elaboration.

Sports Cultural impact obtained the highest mean score (M = 4.218, SD = 0.896), followed by Social Impact (M = 4.163, SD = 0.783) and Territorial and Environmental impact (M = 4.110, SD = 0.851). The results are in line with Chalip's (2006) integrative approach to sporting events, which suggests that sporting events serve as a catalyst for the reinforcement of community identity, territorial attractiveness and social cohesion . The high value of sports-cultural impact is a noteworthy result, given the ability of the Itzer Trail to create a unique territorial identity and to promote the regional sporting heritage, especially in rural and mountain areas where sport tourism is used as a development tool. Economic impact (M = 3.915, SD = 0.759) and Organizational Governance impact (M = 3.819, SD = 0.883) had the lowest mean scores, but both scores are still well above the neutral point. The low score for infrastructure improvement (Q4: M = 2.903) contributes to the more moderate economic evaluation. The relatively lower governance rating could be due to different perceptions of institutional coordination and organizational effectiveness across the three categories of respondents, as found in event governance studies (Collins et al., 2009; Parent & Seguin, 2008).

Pearson correlation analysis:

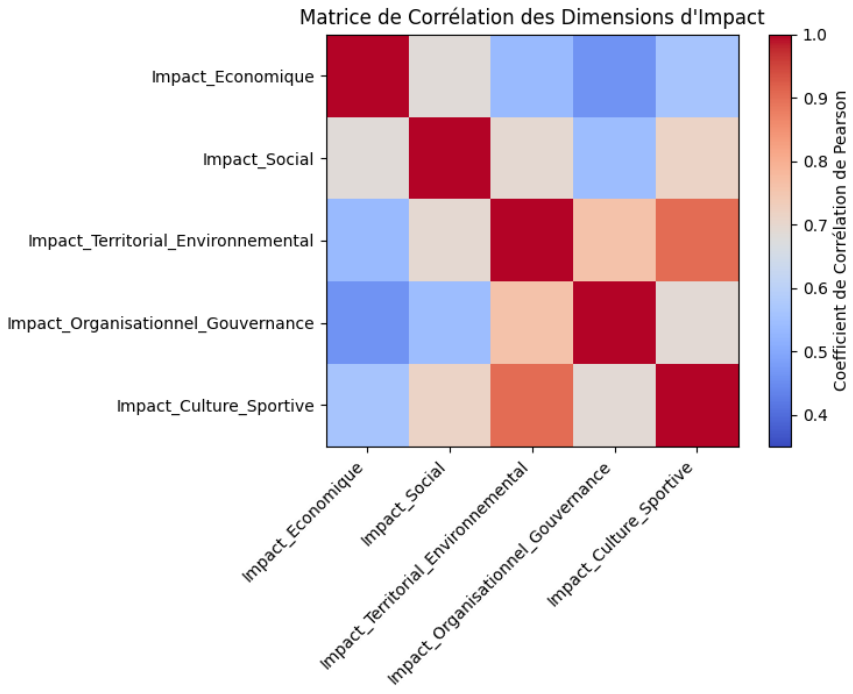
Pearson correlation analyses were conducted (Table 6) to explore the interdependencies among the five impact dimensions.

Table 6: Pearson correlations between impact dimensions

Dimension	Economic	Social	Org & Governance	Sport Cultural	Territorial & Environment
(1) Economic Impact	1				
(2) Social Impact	0.683***	1			
(3) Org. & Governance	.461***	.543***	1		
(4) Sport Cultural	.563***	.714***	.689***	1	
(5) Territorial & Envir.	.537***	.694***	.760***	.903***	1

Source: Own elaboration

Figure 4: Correlation Matrix of Impact Dimensions



Source : Own elaboration .

The five impact domains were statistically significantly correlated with each other (all $p < .001$), indicating that the five domains do not appear to be independent constructs, but are instead interrelated and positive. This omnipresent interdependency underpins a multi-dimensional

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conceptualization of sport-based territorial development, which aligns with Smith's (2009) notion that the economic, social and symbolic impacts of sports events are not mutually exclusive, but rather occur in conjunction, and with (Chalip, 2006) call for integrated approaches to event-based community leverage.

The highest correlation was between Sports Cultural impact and Territorial Environmental impact ($r = .903$, $p < .001$). This near unity association indicates that those who view the event as creating a lasting local sports culture also give much higher score for its territorial visibility, tourist attractiveness and sustainable development.

Although there is the potential for overlap in the items measuring the two constructs, this result does support the theoretical argument that cultural embedding of sport in a territory can be seen as having tangible territorial co-benefits (Zeemering, 2013).

The correlation between Social impact and Sports Cultural impact ($r = .714$, $p < .001$) validates that events which are perceived as strengthening the sense of community and increasing social interaction are also perceived as creating a lasting sports culture in the community. This corresponds to González-García et al. (2022) who show that the social value of sporting events depends on the extent to which they create common cultural and participatory experiences.

The correlation between Economic impact and Social impact ($r = .683$, $p < .001$) suggests that economic stimulation via visitor attraction and commercial activity is not seen as independent of its social impacts. The respondents who said that the event had more economic value also said that the event had more social cohesion outcomes, which has been found in urban sports regeneration research (Gratton & Preuß, 2008).Interestingly, Organizational and Governance impact has the lowest correlations with Economic impact ($r = .461$) and moderate to strong correlations with Social ($r = .543$), Sports Cultural ($r = .689$) and Territorial Environmental impact ($r = .760$). This differentiated pattern indicates that governance is more an enabling condition that sets the organizational context in which economic, social, cultural and territorial impacts can develop than a source of perceived benefits per se (Parent & Séguin, 2008).

Comparative analysis by demographic variables :

Differences by gender:

Independent samples t-tests were used to determine if there were differences between male ($n = 67$, 65.0%) and female ($n = 36$, 35.0%) respondents on the five impact dimensions. Table 7 and Figure 5 present results and effect sizes .

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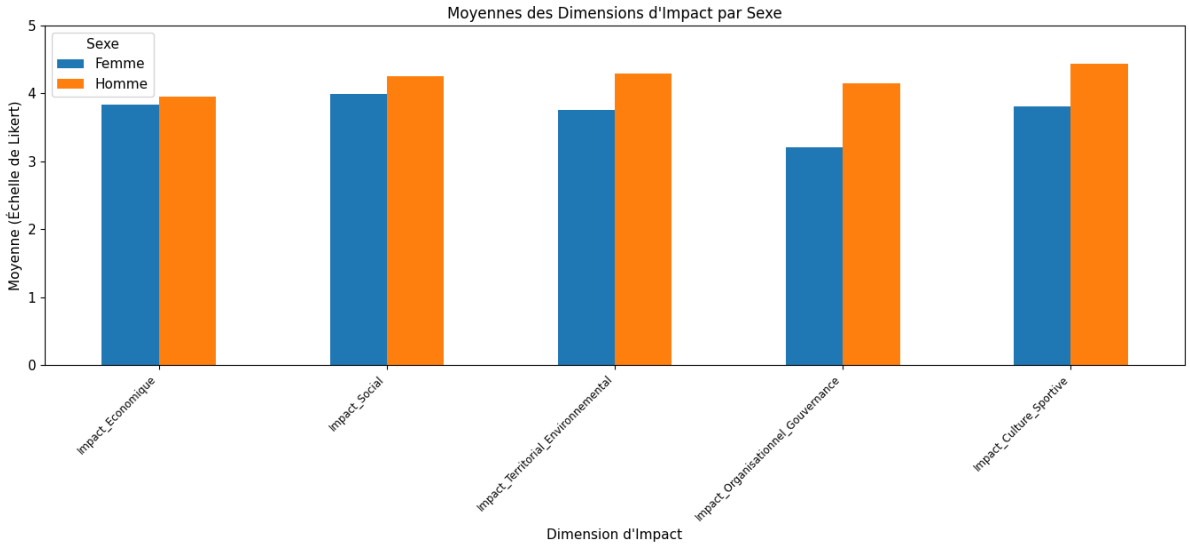
Table 7: Independent-samples t-test results by gender

Dimension	M (Male)	M (Female)	t	p	Cohen's d	Sig.
Economic Impact	3.959	3.833	0.800	.426	0.165	ns
Social Impact	4.254	3.993	1.623	.108	0.335	ns
Org. & Governance Impact	4.149	3.204	6.009	<.001	1.242	***
Sports-Cultural Impact	4.440	3.806	3.628	<.001	0.750	***
Territorial & Envir. Impact	4.299	3.759	3.203	.002	0.662	**

Source : Own elaboration .

The result show that no statistically significant difference between sexes was observed for economic impact (t = 0.800, p = 0.426, d = 0.165) or social impact (t = 1.623, p = 0.108, d = 0.335), indicating that perceptions of the economic contributions and social cohesion outcomes of the event are widely shared between gender groups.

FIGURE 5 : Mean Scores of Impact Dimensions by Gender:



Source : Own elaboration 2024

Statistically significant and practically meaningful differences were found for three dimensions. The greatest difference was found for organizational and governance impact (t = 6.009, p < .001, d = 1.242), with male respondents (m = 4.149) reporting significantly more positive perceptions

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than female respondents (m = 3.204). This is the largest gender effect reported in Table 7. Significant differences were also found for sports-cultural impact (t = 3.628, p < .001, d = 0.750; male m = 4.440, female m = 3.806) and territorial & environmental impact (t = 3.203, p = .002, d = 0.662; male m = 4.299, female m = 3.759), both representing medium-to-large effect sizes. The present analysis shows that all perceptions of governance, culture and territory are significantly different by gender, whereas economic and social perceptions are not. This indicates that communication strategies and stakeholder engagement approaches that are oriented towards equity are especially required in the areas of governance, sports-cultural promotion and territorial development (Pfister, 2010).

Difference By Age group:

A one-way ANOVA was conducted across four comparable age categories: 20–30 years (n = 30), 30–40 years (n = 21), 40–50 years (n = 22), and over 50 years (n = 29). The single respondent under 20 years was not included in inferential analyses because it was too small to be statistically compared to other groups. Results are presented in Table 8 .

Table 8: One-way ANOVA results by age group

Dimension	**20–30 M**	**30–40 M**	**40–50 M**	**>50 M**	**F(3,98)**	**p**	**η^2**	**Sig.**
Economic impact	3.942	3.762	3.886	4.034	0.536	.659	.016	ns
Social impact	3.883	4.155	4.273	4.362	2.092	.106	.060	ns
Organization and governance	3.211	3.889	4.182	4.149	9.147	<.001	.219	***
Sports culture	3.750	4.405	4.318	4.466	4.222	.008	.114	**
Territorial and environmental	3.644	4.190	4.318	4.391	5.058	.003	.134	**

Source : Own Elaboration .

There were no statistically significant age differences found for economic impact or social impact, suggesting that attitudes about economic contributions and social cohesion are fairly stable across generations. This cross generational convergence on the economic and social aspects is indicative of the fact that these benefits, which include visitor attraction, commercial activity and community

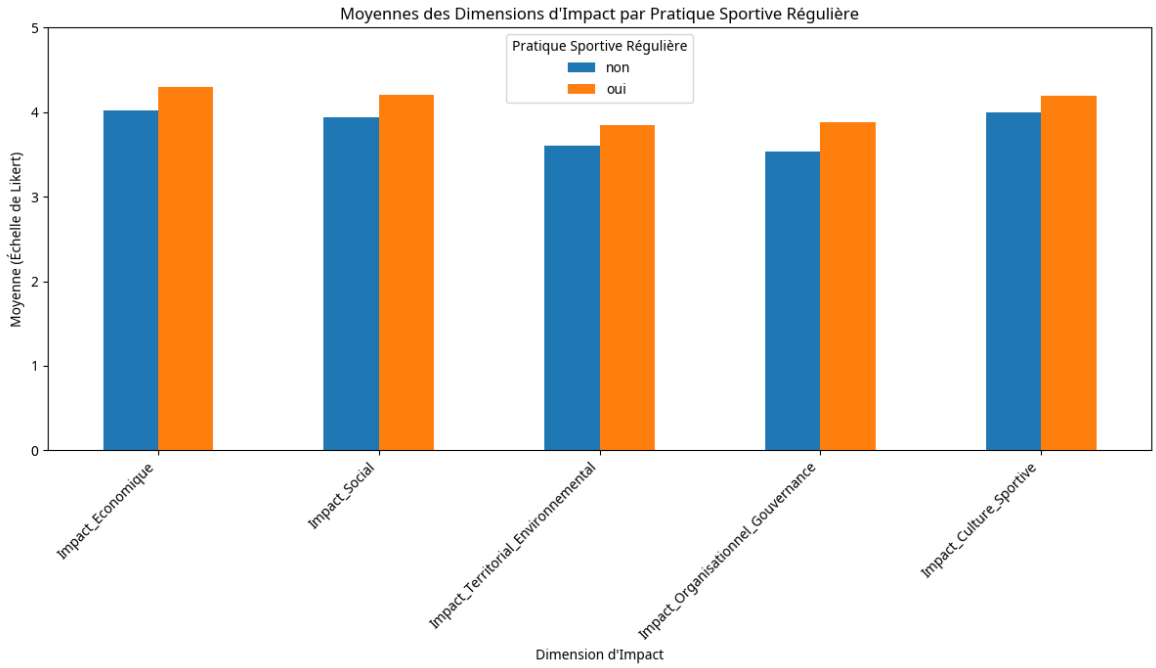
interaction, are tangible and are valued by all age groups, and are consistent with the wide accessibility of tangible sporting event outcomes reported by coalter (2007). Conversely, there were age effects for three dimensions. The most significant effect was found for organizational & governance impact ($F(3, 98) = 9.147$, $p < .001$, $\eta^2 = .219$). Respondents aged 20–30 ($m = 3.211$) reported substantially lower governance evaluations than those aged 40–50 ($m = 4.182$; post-hoc $p = .0004$) and over 50 ($m = 4.149$; post-hoc $p = .0001$). There were no significant differences between any of the three older age groups.

Older respondents are more sensitive to governance, which may be due to their greater experience in associative or institutional management, and to their greater involvement in local governance structures (Henry & Lee, 2004). There were also significant age effects for territorial & environmental impact ($F(3, 98) = 5.058$, $p = .003$, $\eta^2 = .134$; medium-large effect), with post-hoc analysis revealing a significant contrast between the 20–30 ($m = 3.644$) and over-50 ($m = 4.391$) age groups ($p = .011$), and for sports-cultural impact ($F(3, 98) = 4.222$, $p = .008$, $\eta^2 = .114$; medium effect), with a significant pairwise difference between 20–30 ($m = 3.750$) and over-50 ($m = 4.466$) respondents ($p = .025$). The overall findings suggest a systematic age gradient in perceptions of institutional, cultural, and territorial dimensions, with younger respondents consistently giving lower scores for governance, sports-cultural, and territorial outcomes, whereas older respondents gave more positive scores. This can be due to variations in civic engagement, territorial rootedness and accumulated experience of long-term territorial development processes .

Differences by Regular sport practice :

Independent-samples t-tests were used to compare perceptions of regular sport practitioners ($n = 86$, 83.5%) and non-practitioners ($n = 17$, 16.5%). The results are presented in Figure 7 .

Figure 7 : Mean Scores of Impact Dimensions by Regular Sports Practice



Source : Own Elaboration .

There were no statistically significant differences between regular sport practitioners and non-practitioners on any of the five dimensions (all $p > .05$). The mean scores for all five dimensions were slightly higher for regular practitioners, but effect sizes were all small ($d = 0.174–0.379$). The results indicate that there is no significant difference between stakeholders' perceptions of the territorial contribution of the Itzer Trail when they are engaged in physical activity on a regular basis. This could suggest that the perceived benefits of the event are widely available and visible to all stakeholder profiles, without regard to their own sporting habits, which is a positive result for inclusive territorial communication strategies (Misener & Mason, 2006).

Discussion:

This study explored stakeholders' perceptions of the impact of the Itzer Trail sporting event on territorial development in the Moroccan Middle Atlas region. The findings provide robust and multidimensional evidence that the event is perceived as having positive impacts well beyond economic results, social, cultural, territorial and governance aspects dimensions. In general, the findings confirm the conceptualization of sporting events as strategic instruments of territorial development, not only short-term economic stimuli (Benreghai, 2024; Chalip, 2006; Smith, 2012).

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These findings will be discussed in the light of the previous literature, interpret unexpected results, make theoretical contributions and state practical implications.

Sport event as driver of social cultural territorial development :

The first and most important finding of this study is that sports-cultural impact (m = 4.218) and social impact (m = 4.163) had higher mean ratings than economic impact (m = 3.915). This hierarchy directly challenges the dominant tradition in event-impact research that has long been followed. Tracked expenditure, tourism receipts and employment multipliers were the main metrics prioritized as measures of success (Gratton et al., 2005; Preuss, 2007).The present results indicate that local stakeholders appreciate intangible and relational forms of territorial development more highly than direct financial gains a finding that adds to the push for a paradigm shift in sporting event legacies, as conceptualized and measured. There are three overlapping mechanisms by which the why of this primacy works. First, a symbolic in the Moroccan Middle Atlas, a peripheral mountain territory, the substitution mechanism is: characterized by lack of economic diversification, high rural out-migration and restricted institutional visibility the Itzer trail provides one of the few recurrent occasions on which the territory is named, photographed, celebrated, made visible beyond its geographical boundaries. In situations in which other forms of territorial recognition are limited, sporting events that perceived value of generate external attention and community pride is disproportionate (Hinch & Higham, 2001; Smith, 2012). The event's sports-cultural effect is enhanced just because of the economic and there are few structural alternatives.

Second, a co-presence mechanism, trail running events generate extreme and short-term situations of co-presence. The physical co-presence of local people, competitors, volunteers and visitors in the natural environment, the topography of the Itzer valley. These moments create direct social exchange, mutual recognition and shared emotional experience that are immediately visible and cognitively salient much more than the indirect and indirect economic impacts of tourist spending. In line with (Collins et al., 2009) theory co-present gatherings create emotional energy and solidarity that endure through interaction ritual chains. Well beyond the event itself, making the event a social event and not just as an economic phenomenon.

Third, a mechanism for identity affirmation that is unique to the Amazigh cultural context of the Middle Atlas: the Itzer Trail is an activation and celebration of a territorial identity based on the mountain, the landscape, and the traditional culture of the area. The event's sports aspect was a major draw for local stakeholders. Cultural impact is not just about creating “local sports culture”

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in general but rather about the affirmation and the visibility of a particular territorial identity that is often marginalized in national narratives. This dimension is not included in the standardized survey items and is likely to magnify the perceived cultural value of the event, which cannot be captured by quantitative scores. By contrast, infrastructure improvement received a relatively low mean score (Q4: M = 2.903), the only item below the scale midpoint of 3.00. This contrast concerns perceived infrastructure improvement rather than a measured change in physical infrastructure. Physical changes in the land are structural, slow, and frequently politically ambiguous; residents of the Middle Atlas are not easily able to pinpoint the source of road improvements or public space renovation to a single trail running event. The distance between institutional event narratives that evoke infrastructure legacy and residents' sense of the tangible territorial change is a legitimation deficit that goes beyond Itzer.It is a structural feature of medium-sized sporting events in remote regions with a long history of infrastructure problems and cannot be solved in one event cycle (Preuss, 2007).

Territorial development as an integrated and systemic process:

The second key finding is that the five impact points are structurally interconnected dimensions. Each of the Pearson correlations was positive and significant ($r = .461$ to $.903$, all $p < .001$), and the exploratory factor analysis showed that the five theoretical dimensions empirically converge into three wider factors, which are social, sports-cultural and territorial items coming together into one. The dominant factor accounted for 48.4% of total variance. This empirical integration is not a methodological drawback. It is a meaningful in substance theoretical finding. Stakeholders in a peripheral mountain territory do not differentiate between social and economic cohesion, sports culture and territorial attractiveness as three areas of development. They experience them as co-constituted parts of a single process, what we propose to call "integrated territorial development". In the Itzer Valley, a trail running event does not generate social capital and then, separately, territorial visibility: it produces both at the same time. Through the same act of bringing together participants and spectators around the territory's natural and cultural resources. The process is circular and self-reinforcing: more social animation leads to more territorial animation, which leads to more social animation, and so on. This builds pride in local identity, which increases community engagement, which enriches sports-cultural identity. This discovery validates and builds on (Chalip, 2006) social leverage framework and smith's (2012) concept of "place as product". It does introduce a contextual specification, however, in peripheral mountain territories in the global south,

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the integration of social, cultural and territorial impacts is stronger, more immediate than in urban or well-developed sport tourism destinations. This is because peripheral institutional structures are lacking to segment development areas in communities . There is no separate "culture department", "tourism office" or "sports commission" with distinct mandates and budgets. Development is holistic because it is organized holistically. The highest single correlation was found between the variables of territorial & environmental impact and sports-cultural impact (r = .903). The establishment of local sports culture and the increase in territorial attractiveness is not only correlated, but co-produced ; they are perceived as such by stakeholders and they operate using the same event mechanism. This outcome is in line with benreghai's (2024) five-dimensional framework by showing that its dimensions, although distinct in theory, are not necessarily distinct in practice. They are empirically integrated at the perceptual level in peripheral territorial contexts ,a finding that should pass on information to the next generation of sport event territorial development models.

Governance the most demographically differential dimension :

The third key result is that the perceptions of governance show the greatest demographic differences in the entire dataset by a substantial margin. The gender governance gap was d = 1.242, and the age governance effect was $\eta^2 = .219$. These governance effects are larger in magnitude than the corresponding economic and social effects reported in Tables 7 and 8 (Lachenbruch & Cohen, 1989) . The key interpretive query is: why governance and not economic or political? Social impacts? The key is in the different visibility of impact types. Economic impacts (visitor arrival, commercial activity, local animation) are directly observable during the event by virtually all stakeholders. Social impacts (community gathering, collective pride, resident-visitor interaction) are lived and felt in the moment of co-presence. By contrast, however, governance mechanisms (budget) allocations, meetings with stakeholders, institutional partnerships, monitoring frameworks, those outside the organization cannot see the post-event evaluation protocol networks. They need institutional access, informational proximity and participation in decision making. Use making processes to be assessed in meaningful ways. This explains why perceptions of governance vary far were more polarized by demographic groups than perceptions of more visible impact types. The gender governance gap is due to three mechanisms. First, differential institutional exposure, middle atlas event governance networks are male (dominated) municipal officials, regional federation representatives, voluntary association leaders, and corporate sponsors are this is a very

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male-dominated culture. The male respondents' more positive attitude towards governance evaluations are likely to be more reflective of the increased availability of organizational information and decision-making processes. Not because of objective improvements in the quality of governance (Shaw & Frisby, 2006). Second, information asymmetry, if governance(budgets, responsibilities, monitoring results) flow primarily in male dominated institutional networks, female stakeholders assess governance with systematically less information, which generates more critical assessments not because of hostility but because of the lack of information. From exclusion. Third, increased governance expectations from women: research on sport governance. Continually discovers that women have higher expectations for transparency, participation and accountability. The lack of standards in current arrangements at itzer (Henry & Lee, 2004; Pfister, 2010).

The age governance gradient (20–30: M = 3.211 vs over 50: M = 4.149; overall age effect: $F(3, 98) = 9.147$, $p < .001$) reflects a civic learning trajectory. First older respondents have first-hand experiences in event governance across multiple editions of the Itzer Trail, developed personal relationships with organizers, and over time, witnessing the gradual institutionalization of coordination mechanisms. Younger respondents assess governance from a perspective of greater expectation of immediate results and without a longitudinal reference frame that makes institutional processes meaningful and acceptable. This is in line with Putnam's (2000) social capital theory, trust in institutions accumulates through sustained civic engagement throughout the experience, not just over time. This is a governance risk which event organizers should not ignore. The Organizational & Governance dimension also displayed relatively high dispersion (SD = 0.883), although Sports-Cultural impact had the highest standard deviation (SD = 0.896). This indicates variability in perceptions of governance quality within the stakeholder community. Events that do not create cross-group institutional legitimacy are at risk of Future editions will include support for erosion and legitimacy crises (Parent & Séguin, 2008).

Event experience and territorial impact perception :

The fourth finding concerns the association between prior sporting event participation and territorial impact perceptions across all five dimensions. Effect sizes ranged from $d = 0.577$ (Territorial & Environmental) to $d = 0.972$ (Governance), with effects of $d = 0.950$ for Social, $d = 0.871$ for Economic, and $d = 0.660$ for Sports-Cultural impact. Every single dimension was significant (all $p \leq .020$).

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This finding calls for a reframing of the central research question. The question is not merely whether the Itzer Trail generates positive territorial impacts , it clearly does, across all dimensions and all stakeholder profiles. The more fundamental question is: what determines a stakeholder's capacity to perceive, interpret, and value those contributions? Experiential engagement with the event ecosystem offers one possible explanation, alongside the gender and age differences reported in Tables 7 and 8. Repeated engagement with a sporting event generates a progressively richer evaluative framework through which stakeholders interpret territorial outcomes. This mechanism operates through three pathways: first, a comparative reference frame, prior participants can compare current organizational quality, territorial animation, and community mobilization against previous editions , giving them calibrated benchmarks that first-time observers lack. Second, relational capital accumulation, repeated participation builds personal networks with organizers, local businesses, and community actors that amplify information flows about event impacts, making diffuse benefits visible and attributable(Putnam, 2000). Third, "event literacy" a learned capacity to decode the multidimensional contributions of sporting events that develops through accumulated experience and goes beyond what is immediately perceptible in a single event encounter (Chalip, 2006).This hypothesis extends Social Exchange Theory (Deery et al., 2011) into the domain of sport event legacy research. Individuals who have previously experienced the exchange between personal or collective investment and territorial benefit develop more positive and differentiated evaluative frameworks.

Critically, this mechanism accumulates over time, which suggests that the Itzer Trail's perceived territorial value is likely to grow with each successive edition as more stakeholders transition from first-time to experienced participants. This has an important corollary, the most effective intervention for improving perceived territorial impact is not improving the event itself, but expanding the population of experienced participants. Converting first-time attendees into returning stakeholders is the highest-leverage strategy available to organizers .Notably, regular sports practice produced no significant differences across any dimension (all $p > .05$). This means the Itzer Trail's perceived territorial benefits are not confined to an athletic community; they extend to the broader population regardless of personal sporting habits. In the Moroccan Middle Atlas, where rates of regular sport practice are lower than in Western European contexts, this finding demonstrates that the event has achieved genuine social permeability: it generates territorial value

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that is visible and meaningful to non-practitioners, volunteers, residents, and passive observers alike, a marker of successful community embedding that many sporting events fail to achieve.

Theoretical and practical implications:

This study contributes to the literature on sport event territorial development in four ways. First, the experiential mediation hypothesis, we propose this hypothesis as a possible theoretical mechanism between prior event engagement and increased capacity to see multidimensional territorial effects. The reported effect sizes (d = 0.577–0.972) concern prior-participation comparisons across the five dimensions; they do not establish that event experience has larger effects than gender or age. It builds on social exchange theory within the event legacy domain. It offers a theoretically based justification for event investment strategies that focus on accumulation of participation, not optimization of single editions.

Second, the integrated territorial development construct. The EFA result three empirical factors versus five theoretical dimensions, is not a measurement limitation but it is a theoretically meaningful finding. We propose the concept of "integrated territorial development" to capture the perceptual holism, the way stakeholders in peripheral mountain territories experience social cohesion, sport culture and territorial attractiveness as one, co-constituted development process. This is an extension of Benreghai's (2024) framework in that it recognizes a meta-level dimension. That the five-dimensional model does not explicitly capture, and gives a theoretical basis for event-impact assessment models for systems.

Third, contextual validation in a non-western mountain territory. This study gives the first empirical evidence of a five-dimensional territorial development framework for sporting events in a Moroccan mountain context. The fact that all five dimensions are measurably positive, internally consistent, and systematically interrelated contributes to the generalizability of event-impact models that are not just from Western Europe and Anglo-Saxon countries. At the same time, the identity affirmation of Amazigh identity, the infrastructure legitimation deficit and the male identity were the identified dynamics. In contrast, the governance networks were dominated by the dons and context was introduced as a theoretically productive variable, rather than merely a background condition.

Fourth, demographic governance asymmetries as a theoretical object. The identification of specifically, the large gender effect (d = 1.242) and age effect (η^2 = .219) is an original empirical study on equity, inclusion and institutional legitimacy in sport governance. These imbalances show

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that governance is a conflicted space of unequal access. Rather than being a neutral background variable and that knowledge of event-based territorial development, and who is excluded to attend systematically to who is included in development and who is excluded, and who has institutional access. The event's institutionalization is shaped by the perceptions of governance quality held by the organizational narratives, and by the perceptions of governance quality held by the people who are part of the organization legitimacy .

For event organizers, the experiential mediation hypothesis implies that the most effective strategy for building perceived territorial value is expanding the population of experienced participants. Concretely, create free or subsidized first-participation mechanisms for local residents, develop school and youth outreach programs that introduce younger community members to the event ecosystem across multiple years, implement community ambassador networks that recruit first-time participants from underrepresented groups and organize systematic post-event participatory sessions that transform single-event attendees into multi-edition stakeholders.

For local authorities, communicate the infrastructure connection. Infrastructural gap (m = 2.903) represents another possible missed opportunity for justified legitimacy. Communication efforts by municipal officials need to incorporate visualizing and communicating the connection between event organization and territorial investments. It is necessary to chart out road construction and improvement, trail construction and maintenance, public spaces' upgrading, and sanitation works on the schedule of events in order to make the connection between event organizing and territorial investments visible and trackable to all residents. This requires more than just communicating; it involves developing participatory systems of accountability through which residents can watch, confirm, and participate in infrastructural investment process.

In terms of governance actors, there is a need for redesigning towards inclusion and transparency; establishing multi-stakeholder governance committee with mandatory equal representation of both genders and youth; publishing yearly post-event evaluation report which is easily accessible; creating participatory spaces in form of community meetings and online platform and feedback surveys where non-expert residents can evaluate organizational quality, participate in decision making and help in creating gender-sensitive programming.

For regional development planners in the Moroccan Middle Atlas, embed sport in territorial strategy. The Itzer Trail demonstrates that trail running events in peripheral mountain territories can serve as low-cost, high-visibility instruments of territorial branding, social cohesion, and

identity affirmation, particularly where alternative development mechanisms are limited. Regional planning bodies should integrate trail running events into broader endogenous development strategies combining natural heritage valorization (Amazigh culture, mountain landscape, biodiversity), hospitality capacity building, governance strengthening, and digital territorial promotion. The Itzer Trail has already begun to function as a community institution and a recurrent moment of territorial celebration. Strategic long-term investment in this institutional dimension, rather than treating the event as an annual standalone operation, would multiply its developmental impact across generations.

Table 9 summarizes the practical recommendations discussed above. These are proposed actions, not interventions evaluated in this study.

Table 9: Summary of practical implications

Stakeholder	Priority	Proposed actions
Event organizers	Widen access to participation and encourage sustained engagement.	Subsidized first participation, school and youth outreach, community ambassadors, and post-event participatory sessions.
Local authorities	Make the connection between events and territorial investments visible and accountable.	Communicate infrastructure initiatives and provide participatory monitoring of their implementation.
Governance actors	Strengthen inclusion, transparency and stakeholder voice.	Representation of women and young people, accessible evaluation reports, community meetings and feedback channels.
Regional planners	Embed the event in a long-term territorial strategy.	Link natural and cultural heritage promotion with hospitality development, governance and digital territorial promotion.

Source: Authors' synthesis of the practical implications discussed above.

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Limitations and Success Factors

The findings are limited in generalizability beyond the context of the Itzer Trail because of the convenience sample (N = 103), although the sample was statistically powerful for the analyses performed, it was not large enough to ensure generalizability. Stratified sampling methods with proportional representation of women, younger residents and non-practitioners should be used in future studies as these groups showed the most differentiated perceptions of governance and territorial impacts.

Secondly, the cross-sectional design does not allow for the examination of changes in stakeholder perceptions over time, across successive editions of the event. Longitudinal studies following the same stakeholders over several editions of the Itzer Trail would be useful in understanding the temporal nature of the experiential engagement and how this affects perceptions, and how the integrated territorial development dynamic develops throughout the event lifecycle.

Third, the study is based on perceived impacts rather than actual impacts. Future studies should thus combine perception-based information with objective measures such as visitor spending, local business revenues, environmental evaluations, and spatial analysis of infrastructure investments. This would allow for a comparison of stakeholders' perceptions and measurable territorial outcomes.

Fourth, the governance dimension had the lowest internal consistency among the five dimensions (α = .705), while remaining above the .70 threshold used in the study. Future questionnaire development should broaden the analysis of governance to incorporate aspects of institutional transparency, stakeholder involvement, gender equality, inter-organizational coordination, and community accountability mechanisms. This dimension of governance perception is especially warranted, given the significant differences in the demography of the respondents.

Finally, comparative studies of trail running events in various rural, mountain and territorial settings would allow for an assessment of whether the patterns observed in the case of the Itzer Trail are typical of sport-led territorial development or specific to the socio-cultural and geographical context of the Moroccan Middle Atlas.

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Conclusions

This quantitative analysis has documented positive stakeholder perceptions of the contribution of the Itzer Trail to territorial development, based on the conceptual frameworks established in the reference literature. The results highlight the multidimensional and interdependent nature of these impacts, although the low rating of perceived infrastructure improvement suggests that further attention may be required in this domain.

In conclusion, modern sport can be considered as an important tool for territorial development in terms of its ability to develop, at once, territorial attractiveness, social cohesiveness, and local economic vitality. Using a multi-dimensional approach, the current study has shown that coherent and coordinated sports strategies enable building a strong territorial identity, promoting heritage values and developing inclusive and sustainable areas. The image of the local athletes such as athletes from the Itzer area represents one of the examples of using sport as an instrument for mobilizing people and reinforcing social connections. In order for sport to be truly a driving force for territorial development, it is necessary to encourage participatory governance and diversity in sports activities.

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