

Towards the Establishment of the Sport Satellite Accounts (SSAs) to Measure the Economic Impact of Sport in Algeria.

Bensalem Salah eddine

University of Algiers-3-, Laboratory of science and techniques of physical activities and sports ,Algeria, Bensalem.salahists@gmail.com.

ARTICLE INFORMATION	ABSTRACT
ORIGINAL RESEARCH PAPER RECEIVED : 05/01/2022 ACCEPTED : 14/03/2022 PUBLISHED : 01/06/2022 KEYWORDS: SPORT SATELLITE ACCOUNTS (SSAS), NATIONAL ECONOMY, NATIONAL ACCOUNTING SYSTEM, SPORTS SECTOR, ALGERIAN ECONOMIC ENVIRONMENT.	THIS RESEARCH AIMS TO REVEAL THE IMPORTANT ROLE OF SPORT SATELLITE ACCOUNTS (SSAS) IN ACCURATELY ASSESSING THE IMPACT OF SPORTS SECTOR ON THE NATIONAL ECONOMY. THEREFORE, THIS RESEARCH DEPENDS ON THE DESCRIPTIVE METHOD, THE SAMPLE COMPOSED OF 70 EXPERTS FROM DIFFERENT SPORT ESTABLISHMENTS; WHO WERE SELECTED IN A STRATIFIED RANDOM MANNER, AND THE DATA COLLECTION TOOL IS THE QUESTIONNAIRE. THIS RESEARCH CONCLUDE TO THE NECESSITY OF THE INTEGRATION OF A SPORT SATELLITE ACCOUNT IN THE NATIONAL ACCOUNTING SYSTEM, TO RELY ON THEIR OUTPUTS IN MAKING ALL DECISIONS RELATED TO THE ECONOMIC AND FINANCIAL ASPECT OF SPORTS. CONSEQUENTLY, THE RESEARCH SUGGESTS THE NECESSITY OF FORMING A SPECIALIZED COMMITTEE TO SUPERVISE THE PREPARATION OF AN ACCOUNTING SYSTEM FOR THE SPORTS SECTOR, FROM WHICH ALL SPECIALIZED AND PROFESSIONAL SPORTS ORGANIZATIONS CAN BENEFIT ACCORDING TO SPECIFICITY OF THE ALGERIAN ECONOMIC ENVIRONMENT.
Corresponding author: Bensalem Salah eddine. e-mail: bensalem.salahists@gmail.com doi.org/10.5281/zenodo.15278030	

1. Introduction :

A satellite account system is specifically aimed at representing the economy along functional (that is, by topic) or divisional (that is, by sectors) criteria which are not otherwise addressed by the traditional system of national accounts because they do not correspond to a specific, statistically delineated economic activity. (Communities, 2010)

The strong growth of the events industry is part of a general economic trend, away from an industrial product base, to a more service-based economy. Traditionally, communities and governments have staged events for their perceived social, cultural and/or sporting benefits and value. This situation began to change dramatically in the early 1980s when major events in many parts of the world began to be regarded as desirable commodities for their perceived ability to deliver economic benefits through the promotion of tourism, increased visitor expenditure and job creation. (Glenn A. J. Bowdin, 2006), there has been wide recognition of the highly desirable economic impacts that major sports events can generate in attracting visitors to a region to participate or observe a sporting event. The spending of these visitors flows through the local community generating economic benefits for the host destination (ShiNa Li, 2012); this lead to increase complexities of the business world (including sport) meant that there was a requirement to develop accounting standards to prevent the misrepresentation of profits and to narrow the areas of difference and variety of accounting practice (WILSON & JOYCE, 2008); based on this complicity, the experts set up the first satellite account for the sports economy in France for the year 1971. Another was published more recently in Germany for the year 1995. A satellite account utilises the techniques of national accounting to cover a specific area (health, education. etc) in the economy with some adapted concepts and classifications that cannot be found in the normalised central UN system of national accounts. Thus, a sport satellite account (**SSA**) can gather when other data are missing, all available information about costs, expenditures, financing, the factors of production, and about who exactly uses sports goods and services. All gathered data are classified within the national account framework, although some magnitudes are registered in nonmonetary units. This is the case where the market price for an item is unknown and when there is simply no price that can be put on a non-tradable good or factor of production (for example, voluntary work in sport). Socio-demographic data are often included in a satellite account. (Andreff & Szymanski, 2006)

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Since the sports economy is globalizing; what is required now is an international (global) sport accounting; it does not exist so far, but a few steps forward toward such an objective have been reached in Europe. Following the initiative of the Committee for the Development of Sport (CDS) of the Council of Europe launched in 1984, a first report has collected available – but non-comparable – data about the sports economy in some European countries. (Andreff, Contemporary Issues in Sports Economics, 2011).

The measurement of economic impact of sport is the core point of this study, however, Multiplier analysis is commonly used in order to assess costs versus benefits both in feasibility studies and post-event impact analysis, beginning by a study conducted by (ATAIB, 2017-2018), which was entitled “the impact of hosting sport events on the local economy-case of Algeria-”; where he illustrate that sporting events organized with a planning and vision; showing the economic feasibility of the amount of gains that can be achieved, are expected to lead to stimulating the economic activity of the host country. Other study conducted by (Rolfe, 2019) identifies a number of potential issues with the economic impact assessment approach to evaluate sports expenditure; many of these issues identified, includes the need to estimate costs and assign benefits accurately and the challenges in developing and applying multipliers. One example of a misapplication is that most economic impact studies focus on assessments in a particular region and ignore the substitution effects in local or domestic markets, where attendance or support is transferred from within the region, There are three methodological tools of national economic accounting that have been used to measure the economic significance of sport: national income and expenditure accounts, input-output table, and the satellite account technique. another study by (Houhou & Rahal, 2020) on the Pre-Event Assessment of the Economic and Social Impacts of the Mediterranean Games Oran 2022 and Their Role in Promoting Sport Tourism, has shown that Both economic and social positive impacts had shown approximate high rates indicating that the two types of impacts are assessed to be important and both constitute the wished material and moral legacy of the games. The negative impacts for both types of the items recorded lower rates indicating a considerable optimism towards hosting the games, other

We seek through this study, to demonstrate the importance of a sport satellite account for Algeria, by illustrating the role of the satellite account in measuring the dynamics of the sport sector over time; and to determine a

number of important sport economic indicators, such as sport gross domestic production (GDP), sport final expenditure, sport import, sport export, and sport labour indicators such as number of jobs, number of employed persons and full-time equivalent jobs, with a reliable data as a basis for future decision-making. This is what led us to ask the following question:

•Does the Algerian government need to establish a sport satellite accounts to measure the economic impact of sport?

To answer the previous question, we divided it into three main hypotheses as follows:

- 1- Sport community is aware of the economic impact of sport existence.
- 2- The Algerian financial accounting system (FAS) doesn't show the same detailed data as the SSAs.
- 3- The Algerian government is able to establish SSAs.

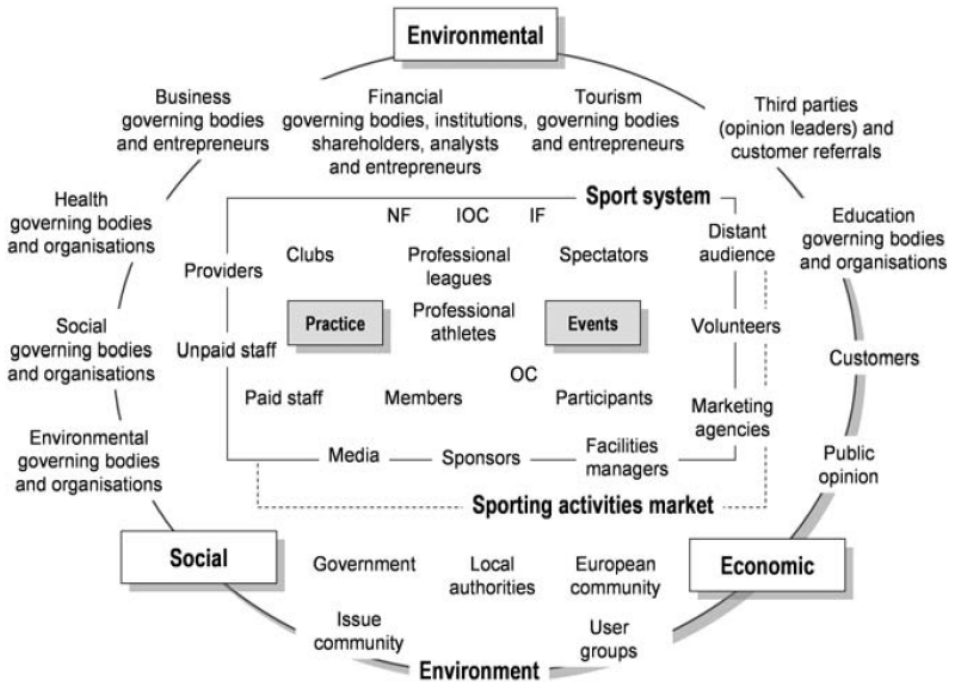
2. Literature Review

2.1. Sport satellite Account:

Satellite account of sports can gather – when other data are missing – all available information about costs, expenditures, financing, the factors of production, and about who exactly uses sports goods and services. All gathered data are classified within the national account framework, although some magnitudes are registered in nonmonetary units. This is the case where the market price for an item is unknown and when there is simply no price that can be put on a non-tradable good or factor of production (for example, voluntary work in sport). Socio-demographic data are often included in a satellite account (Stefan Szymanski, 2006), and TV channels broadcasting sports are not confined to this area, the local communities which provide subsidies to sports clubs and also to other activities (extra-sport). the satellite account seeks to isolate all the costs corresponding to its domain, some being formed by the purchase of market products, others by non-market activities. It brings together indications on costs, expenditures and their financing, on the factors of production involved (employees, equipment) and on the beneficiaries or users of the production sports goods and services. It estimates the sum of these costs (expenses) of production or promotes them according to a specific methodology, for example for sports volunteering. (WladimirAndreff, 2012)

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Figure 1: The sport activity system includes in the SSAs.



Source: (Ferrand & McCarthy, 2009)

The SSAs includes all the sporting activities market which is open and in constant interaction and interrelation with its environment as shown in figure 1.

2.2. Economic impact of sport:

Economic impact is the net economic change in a host community resulting from spending attributed to an event or facility. An economic impact analysis is a type of cost-benefit analysis (an analysis or study of the cost of a project in relation to its potential benefits). It is based on the theory that a dollar flowing into a local economy from outside is a benefit to the locality. An economic impact analysis may be part of a feasibility study, or it may be a stand-alone source of information. Often, an economic impact analysis provides the public with important information regarding the return on an investment in a development project. Such an analysis makes it

possible to compare a project to other possible public investment projects. An economic impact analysis may be performed for proposed events or projects (such as facility construction) or for events that have already occurred. (Matthew T. Brown, 2015)

Economic impact studies are often used by organisers of the event as a basis for its promotion. In some cases they are even used to convince, for example, local government authorities, lobby groups and similar organisations to get behind the event in question. However, when representing the estimated economic impact of an event it is vital that such results are accurate. A number of methods of estimating economic impact are available but where possible any estimations should be undertaken by an independent body to avoid the potential for perceived or real conflicts of interest. (Beech & Chadwick, 2004)

The economic impact of major sports events is of critical importance when it comes to justifying the investments made. The impact can consist of three different effects. First, direct effects that are the wages and profits to local residents and businesses as a result of event visitor expenditure. Secondly, indirect effects that represent the rippled effect of this expenditure through to other businesses and workers who supply those who first receive the spending. Thirdly, induced effects where the income received is re-spent locally. (Masterman, 2009)

The occurrence of the positive impact of hosting sports events depends on the availability of the appropriate conditions for collecting the proceeds of organizing a “suitable business environment”, knowing that the mere presentation of a distinguished hosting offer can be a reason for creating a positive economic impact. (ATAIB, 2017-2018)

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Table 2: Some sport-related activities and products with economic impact.

Goods and Services Conditional on Doing Sport		
Veterinarian Health Services	Dietary Supplements Hotels, Restaurants (sport tourism)	Sport Bets TV Broadcasts

Source: (European Commission, 2012).

Doing Sport (According to the Statistical Definition)		
Stadiums	Swimming Pools	Professional sports
Goods and Services Necessary to Do Sport		
- Racing Horses - School Education - Watches, Clocks	- Sport Shoes and Clothes - Sport Cars, Motorbikes - Sailing Equipment	- Sport Weapons - Fitness Centres - Dancing Schools

From an economic point of view, sport is an activity which has repercussions in many different areas of the economy. In Table 2 some important categories are listed as examples.

3. Method and Materials:

3.1. Research Methodology:

We used the descriptive analytical approach to its relevance to the nature of the problem presented, as it is one of the most widely used research methods especially in the field of educational, psychological, social and sports research.

It is one of the forms of organized scientific analysis and interpretation to describe a specific phenomenon or problem and portray it quantitatively by collecting standardized data and information about the phenomenon or problem, classifying it, analyzing it and subjecting it to careful study (Atoui, 2009)

2.1 Community and sample research:

The research community consists of a group of managers working in different sport establishments in Algeria; including associations, federations ,Olympic committee, Ministry of youth and sports, university, high school of science and technology of sport, and the sample of the research were selected in a stratified random manner. as many as (70) experts representing the sport community derived from a population consisted of (523) experts.

3.2. Research areas:

The following table shows the number of samples and their affiliation:

Table 3: Represents the sample according to their affiliation.

Occupation	Number of sampel
Ministry of youth and sports	05
The olympique committee	05
Federations	40
University	15
High school of science and technology of sport	05
Total	70

Time domain: The time required to complete this research has lasted from 17/04/2021 to 07/11/2021

3.3. Data collection tools:

The researcher used the expertise of a number of faculty professors specialized in this field from the Institute of physical education and sports at the University of Algiers-3-, to determine the suitability of applying the questionnaire.

The questionnaire consisted of (15) questions, divided into the following axes:

- **The first axis:** Introduction to the SSAs.
- **The second axis:** the difference between the FAS and the SSAs.
- **The third axis:** the need to establish the SSAs in Algeria.

3.4. Sociometric characteristics and modifications to the questionnaire:

- **Honesty:** The sincerity of the questionnaire has been achieved through the expertise of the arbitrators on the items of the questionnaire and represented in a group of professors specialized in the field of sports, where the arbitrators agreed on the safety of the majority of the items, but some suggested, amended and clarified some of the items until they became more procedural.
- **Stability coefficient:** Stability means that the tests had a large degree of accuracy, and stability in the questionnaire results means that they will not change significantly if they are redistributed to the sample members several times during certain periods of time, and to verify the stability of the questionnaire, the researcher used the method of applying and re-applying the questionnaire, On a partial sample of 30 experts amongst the original sample composed of (70) experts; with a 15 day interval between the two

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applications, the study tool was verified by using Cronbach's Alpha coefficient as shown in the following table:

Table 4: represents Cronbach's Alpha
Using SPSS program, at the significance level 0.05.

The questionnaire's axes			Cronbach's Alpha	
			items	Value
The axes	01	The first axis	05	0.685
	02	The second axis	05	0.711
	03	The Third Axis	05	0.747

According to the data in the above table, the values of the Cronbach's Alpha coefficient for the stability of the study instrument indicating that the study instrument has a high degree of stability.

When the questionnaire forms were finalized, we started to distribute the questionnaire on 02 May 2021, and it was retrieved on 02 July 2021. After that, we carried out the process of uploading and subjecting the data obtained from the questionnaire forms distributed to the statistical processing.

3.5. Statistical Analysis:

In order for us to comment and analyze the results of the observation network in a clear and easy manner, and since the research was brief on the data contained in the questionnaire, the best statistical way to treat the results obtained is to use the percentage.

4. Results :

4.1. Presentation and analysis of the results of the first axis (Introduction to the SSAs.):

Table 5: provides data on the first axis.

No	Questions	The interrogators					
		Yes		No		I don't know	
		Repetition	Percentage	Repetition	Percentage	Repetition	Percentage
01	Did you know that sport has economic impacts?	62	88.57	04	05.71	01	05.71
02	Did you know what sport satellite accounts are?	44	62.85	25	35.71	04	01.42
03	Do the sport decision makers in Algeria depend on economic indicators in their strategies? If not; what are the basis of their decisions?	08	11.42	54	77.14	08	11.42
04	Are there accurate data related to the economic impact of sport nationally?	17	24.28	52	74.28	01	01.42
05	Do you know that all developing countries depend on SSAs on their sport related decisions?	54	77.14	13	18.57	03	04.28

Source: Prepared by the researcher based on the questionnaire.

According to the results shown in Table (05), which displays the results of the questionnaire; it was found that 88.57 % admits that there is an economic impact of sport; while, 62.85 % of the respondents aware about the existence of a sport satellite accounts, and for the third question; most of the respondents believed that sport decision makers decide randomly; without depending on statistical data but the political strategy towards sport; As for the other sources of sport related data, 74.28 % believe that the accurate source of data related to economic impact of sport doesn't exist in Algeria; and finally; the majority of the respondents admit indirectly that SSAs are very important during decision making.

4.2. Presentation and analysis of the results of the second axis (the relation between the FAS and the SSAs):

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Table 6: provides data on the second axis.

No	Questions	The interrogators					
		Yes		No		I don't know	
		Repetition	Percentage	Repetition	Percentage	Repetition	Percentage
01	Do we need a sport satellite account in Algeria?	53	75.71	12	17.14	05	07.14
02	Does The FAS provide a detailed sport related economic indicators as the SSAs?	06	08.57	61	87.14	03	04.28
03	Don't you see that sport Managers should depend on accurate and detailed quantitative data in their decisions?	61	87.14	06	08.57	03	04.28
04	If the FAS can replace the SSAs; do you think that developed countries that adopt the SSA waist their money?	01	01.42	67	95.71	02	02.85
05	Do we need to refresh our FAS to keep pace with the economic demanding?	52	74.28	07	10	11	15.71

Source: Prepared by the researcher based on the questionnaire.

According to the results shown in Table (06); most of the respondents confirm that it is necessary to have a SSAs in Algeria, because the FAS doesn't provide decision makers with detailed sport related economic indicators; In addition, 87.14 % of the respondents admitted that sport Managers should depend on accurate and detailed quantitative data in their decisions to avoid randomness; As for the fourth question, most of the respondents believe that the FAS is not a substitute for the SSAs, but rather a complement to it; and developed countries wouldn't invest in a useless statistical tool; This axis concluded with the need to update the FAS, by including the satellite accounts for each sector, in order to reach the accuracy of the data.

4.3. Presentation and analysis of the results of the third axis (the need to establish the SSAs in Algeria):

Table 7: provides data on the third axis.

No	Questions	The interrogators					
		Yes		No		I don't know	
		Repetition	Percentage	Repetition	Percentage	Repetition	Percentage
01	Is the SSAs useful for the Algerian government?	12	17.14	54	77.14	13	18.57
02	Are there technical obstacles that prevent the establishment of a SSAs?	49	70	15	21.42	06	08.57
03	Are there legislative obstacles that prevent the establishment of a SSAs?	52	74.28	11	15.71	07	10
04	Are there financial obstacles that prevent the establishment of a SSAs?	10	01.42	48	68.67	12	17.14
05	Are there political intention obstacles that prevent the establishment of a SSAs?	58	82.85	04	05.71	08	11.42

Source: Prepared by the researcher based on the questionnaire.

It is obvious from Table (07), that 77.14 % of the respondents admit that the sport satellite account doesn't serve the Algerian government in general; because there are obstacles preventing the SSAs to be created; especially the technical issues, where it demands expertise that we don't have; in addition to legislative obstacles especially in a country where the economy is oriented; and the procedures of creating something new and expensive is not a priority; this caused by the short view of the political intention towards sport and entertainment in Algeria; considering sport as amateur pastime; not a significant industry.

5. Discussion:

In light of the previous results of the first axis" Introduction to the SSAs " in the Table (05), we can accept the first hypothesis, which confirms that Sport community is aware of the economic impact of sport existence, this is what was found by the study of (ATAIB, 2017-2018), which was entitled "the impact of hosting sport events on the local economy-case of Algeria-", and concluded that the expected economic impact is to achieve economic development in a sustainable manner by creating an additional economic benefit for the host country, and the sporting events organized with planning and vision stimulate an active economic activity for the host country, but the

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Algerian government doesn't focus on the economic impact more than the social and cultural impacts.

The results of the second axis "the relation between the FAS and the SSA" presented in Table (06) shows that The Algerian FAS doesn't show the same detailed data as the SSAs; and this is the same result reached by (WladimirAndreff, 2012) where he confirmed that a sport satellite account is intended to apply the techniques of national accounts to set information relating to a sport, in an appropriate form to the study, using concepts and classifications that could not, or not easily, be introduced into the central frame; and according to the previous statements; we may say that the SSAs are extensions to the FAS.

The results of the third axis "the need to establish the SSAs in Algeria" presented in Table (07) concluded to the ability of The Algerian government to establish SSAs, but there are numerous obstacles preventing the establishment of the SSAs; some of them related to a technical and legislative issues; but the main reason is there is no need to have one; according to the Algerian strategy towards sports, which considers it a tool to achieve social peace in addition to considering it a amateur pastime that has nothing to do with the economic sector; which enables us to say that the third hypothesis is confirmed.

6. Conclusion :

In the light of the discussion and interpretation of the results of the three partial hypotheses, the general hypothesis of the research has been achieved, and the following results have been reached:

The aim of constructing SSA's is to provide high-quality macroeconomic statistics about the sport economy, in accordance with the financial accounting system (FAS) in Algeria; in order to harmonise the conceptual framework of the SSA with that of the financial accounting system(FAS). This ensures that sport economic indicators derived from the SSAs, such as sport value added or sport expenditure, can be compared to their equivalents for the economy as a whole.in such a way that high-quality macro-economic statistics can be derived from it. Therefore it is advisable for the Algerian government to construct the SSA from the most detailed level possible, using the most detailed data available; in order to set a platform for future generation to engage in sport projects; that give additional value to the Algerian economy; and to provide accurate data for professionals and academics.

In absence of the Algerian SSAs to evaluate the sports economy, we cannot avoid resorting to guesstimates usually published in the press when assessing the magnitude of global sport markets for more researches.

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