

## 58th ISI World Statistics Congress 21-26 August 2011, Dublin, Ireland

# Sport Satellite Account for Poland

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### 1. Methodology of Sport Satellite Accounts

The Sport Satellite Account enables to determine the importance of the sports sector in the national economy. The Sport Satellite Account acts as an extension and a supplement to the System of National Accounts and allows identifying the sport related flows in the economy.

The Sport Satellite Account for Poland is one of the first initiatives to construct sport satellite accounts in Europe and therefore can play an important role in the international discussion on the methodology's improvement and standardization of satellite accounts. Until recently, there were only three countries that presented the Sport Satellite Accounts - Austria, Cyprus and the UK. Other EU countries – Germany, France, Hungary, Greece and the Netherlands are currently working on their calculations.

The calculation of Sport Satellite Account for Poland was based on the official statistics for the year 2006 obtained from the Central Statistical Office in Poland. The data came from many sources which include various questionnaires submitted by private and public sector economic entities, non-government organizations, the Household Budget Survey and its module "Participation of Poles in Sports and Physical Recreation," the Labour Force Survey, international trade databases INTRASTAT and EXTRASTAT, the Ministry of Finance data, and the statistical reports of local administration units.

The first stage of the Satellite Account compilation was the identification of sport's presence in a set of the SNA account tables, following the assumed definition of sport. The selection was conducted with respect to economic activities (according to NACE classification) and groups of products (according to Polish Classification of Products and Services), distinguishing products related to sport. The estimation of the aggregates was conducted for the NACE sections, including agriculture, manufacturing, trade, business activities, public administration, education, health and social work, as well as community and social service activities. Simultaneously, the calculation of consumption and accumulation of sports goods and services was performed for institutional sectors which comprise of the

corporate sector, general government, households, non-profit institutions and the rest of the world sector.

The analysis of structure, interrelations and flows between branches, types of activities and groups of products utilized the existing and newly built input-output matrices, as well as the supply and use tables. The Sport Satellite Account work was based mainly on the supply and use tables, differentiating between 58 types of activities and 465 product groups. From the latter, 43 product groups were significantly related to sport. The supply and use tables constituted a basis to estimate the share of Gross Domestic Product generated by sport. The accompanying calculations allow assessing the demand for sports related goods and services, as well as the sport's share in overall employment. The basic results of the Sport Satellite Account for Poland are presented in Table 1.

## 2. Results of Sport Satellite Account for Poland

The estimated size of the Polish sports economy amounts to 20.7 billion zlotys or Euro 5.3 billion which corresponds to nearly 2% of the total Polish GDP in 2006 (1 euro = 3,8951 zlotys in 2006). Employment in sport was shown to constitute 1.5% of total employment.

**Table 1. Sport Satellite Account for Poland main results (year 2006)**

	<b>Sport GDP (in PLN)</b>	<b>Sport (in Heads)</b>	<b>Employment</b>
<b>Absolute value</b>	20.7 bn	225 500	
<b>Share of total</b>	1.96%	1.54%	

Source: Sport Satellite Account for Poland, Report edited by Zofia Barbara Liberda, Institute of Official Statistics, Central Statistical Office, Warsaw, Poland, 2010.

The share of consumer expenditures on sports was estimated at 1.2% of total households spending and at 2.1% of the expenditures of the households together with expenditures of the non-profit institutions which include sport organizations (associations and foundations).

The sport related share of GDP is generated mainly by the households, the public sector, sports organizations and exports. The sections of activities that are most involved in generating sport's GDP include mainly sports and recreation services, education, trade, transport services, manufacturing and construction. The biggest contribution of the manufactured products relates to the metal industry, sports equipment, clothes, underwear and pharmaceuticals. The structure of employment in sports is characterized by a big share of the education sector, sports and recreation services followed by the wholesale and retail trade, transport and manufacturing.

The direct (primary) economic effects of demand for sports, e.g. the value added on sport in the total value added for the national economy, amounts to 1.25%. In order to account for the indirect (secondary) effects, the input-output methodology was applied with its Leontief's model as a main tool. The aggregate share of the sport-generated value added is equal to 1.64%. Augmenting value added effects by appropriate values of taxes on products we obtained the share of the sport-generated value added approximately equal to the share of sport-related GDP in total GDP.

**Table 2. Structure of sport-generated value added in Poland in 2006**

<b>NACE Sections</b>	<b>Structure of value added (%) Direct and indirect effects</b>
Agriculture, hunting and forestry	<b>0,6</b>
Industry	<b>16,9</b>
mining and quarrying	<b>1,0</b>
manufacturing	<b>14,0</b>
electric, gas and water supply	<b>1,9</b>
Construction	<b>4,7</b>
Trade and repair	<b>9,8</b>
Hotels and restaurants	<b>1,3</b>
Transport, storage and communication	<b>9,6</b>
Financial intermediation	<b>1,5</b>
Real estate, renting and business activities	<b>7,6</b>
Public administration	<b>0,6</b>
Education	<b>21,5</b>
Health and social work activities	<b>0,1</b>
Other community, social and personal service activities	<b>25,7</b>
<b>TOTAL</b>	<b>100,0</b>

Source: Sport Satellite Account for Poland. Direct and indirect economic effects of sport, Zofia Barbara Liberda, Łucja Tomaszewicz, Iwona Świeczewska, EU Conference on Sport Statistics, 22-23 March 2011, Brussels.

Other results obtained in the Sport Satellite Account project refer to the level of sports activity in Poland. Based on the Central Statistical Office survey "Participation of Poles in Sports and Physical Recreation," the percentage of Poles doing sports was estimated at 38%. The respondents indicated mainly cycling, swimming, football, walking and jogging from the list of selected 32 sports disciplines. The preliminary analysis showed significant differences in sports activity related to age, education, income and place of residence.

The results of Sport Satellite Account show that the sports sector is an important part of the Polish economy. Doing sports influences directly our physical, psychological and social well-being. Together with the accompanying production and services sport contributes to the well-being of the whole society through job creation and stimulation of demand.

### 3. References

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### Abstract

The aim of the paper is to analyze the methodology of satellite accounts at the example of sport satellite account for Poland. The sport satellite account acts as an extension and a supplement to the System of National Accounts and allows identifying the sport related flows in the economy. The Sport Satellite Account for Poland is one of the first initiatives to construct sport satellite accounts in Europe following the accounts done for Austria, Cyprus and the United Kingdom. It can play an important role in the discussion on the methodology improvement of satellite accounts.

The calculation of sport satellite account for Poland in the Institute of Official Statistics was based on the official statistics from the Central Statistical Office in Poland for the year 2006. The first stage of the sport satellite account compilation was distinguishing of products related to sport in a set of the SNA account tables, following the assumed definition of sport. The selection was conducted with respect to economic activities according to NACE classification and groups of products according to Polish Classification of Products and Services.

The estimation of the aggregates is conducted for the NACE sections, including agriculture, manufacturing, trade, business activities, public administration, education, health and social work, as well as community and social service activities. Simultaneously, the calculation of consumption and accumulation of sports goods and services is performed for institutional sectors which comprise of the corporate sector, general government, households, non-profit institutions and the rest of the world sector.

The analysis of interrelations and flows between branches, types of activities and groups of products utilizes the existing and newly built input-output matrices, as well as the supply and use tables. The Sport Satellite Account work differentiates between 58 types of activities and 465 product groups. The supply and use tables constitute a basis to estimate the share of Gross Domestic Product generated by sport. The accompanying calculations allow assessing the demand for sports

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related goods and services, as well as the sport's share in overall employment. The analysis of sport satellite accounts for Poland done in this paper can be used as a policy tool for evaluating the economic and social importance of sport activities.