

Methodological Manual for a Sport Satellite Account

12



Explanation of symbols

.	data not available
*	provisional figure
**	revised provisional figure (but not definite)
x	publication prohibited (confidential figure)
–	nil
–	(between two figures) inclusive
0 (0.0)	less than half of unit concerned
empty cell	not applicable
2011–2012	2011 to 2012 inclusive
2011/2012	average for 2011 up to and including 2012
2011/'12	crop year, financial year, school year etc. beginning in 2011 and ending in 2012
2009/'10– 2011/'12	crop year, financial year, etc. 2009/'10 to 2011/'12 inclusive

Due to rounding, some totals may not correspond with the sum of the separate figures.

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Summary

Within the European Union (EU) there is a growing demand for sound and internationally comparable economic statistics on sport. The European Commission set up an EU Working Group on Sport and Economics (EU WG) in 2006 to develop a common European approach for measuring the economic importance of sport. An important step of the EU WG toward the development of a harmonised framework for sport satellite accounts (SSA) is the agreement on the 'Vilnius definition of sport'. Currently Austria, Cyprus, Poland and the United Kingdom have published national SSA's in accordance with the recommendations of the EU WG. The Netherlands is next to do so. This manual provides a detailed account of the steps taken and considerations made in the process of constructing the first Dutch SSA. It aims to contribute to the harmonisation and coordination of a European methodology for the construction of SSA.

This manual starts with a discussion of the conceptual framework behind SSA. The Vilnius definition is shown to be more or less a classification of sport-related industries and products rather than a true definition. Some general guidelines are proposed to demarcate the sport element for the relevant product groups for the Vilnius definition. The aim of constructing SSA's is to provide high-quality macro-economic statistics about the sport economy. In this manual the conceptual definitions of the most important macro-economic indicators are presented and an explanation of how these indicators can be derived from the SSA is given.

A further matter discussed in the manual concerns whether SSA should be built from a functional perspective of the sport economy – that is to say taking into account the use of goods and services that are relevant to sport, rather than the characteristics of the industries that provide these goods and services. Supply and use tables (SUT) are presented, thereby allowing the sport economy to be described coherently within the context of national accounts and at a sufficiently high level of detail. The necessary steps to determine the sport fractions of the relevant product groups, a crucial part in the construction of the sport-SUT, are explained. Ultimately all these steps led to the first statistical and economically consistent outcomes on the Dutch sport economy. A brief overview of the results of the most important macro-economic indicators is presented in this manual. An extensive account of the results is available in Dutch (*De economische bijdrage van sport aan de Nederlandse economie, CBS/HAN 2012*).

The constructing of the Dutch SSA, computing the outcomes and comparing them to other (international) studies resulted in a number of conclusions concerning several methodological issues (e.g. gaps in data collection and definition, classification and framework issues). The manual ends with a discussion of these issues and some recommendations on how these can be addressed in future research.

This manual is the result of research carried out between November 2010 and July 2012 by Statistics Netherlands and the HAN University of Applied Sciences, and was commissioned by the Dutch Ministry of Health, Welfare and Sport.

Introduction: Towards a Sport Satellite Account

Within the European Union (EU) there is a growing demand for sound and internationally comparable economic statistics on sport. During the past decades several attempts were made to set up sport satellite accounts (SSA) on national as well as European levels. Andreff (2006) recalls that the first SSA was constructed in France for the year 1971 (see Melenfant-Dauriac, 1977). Another early example of a SSA was published in Germany (Weber et al., 1995). The first estimations of the economic importance of sport on a European level were carried out by the Council of Europe in 1989 (Jones 1989). However, the definition of sport and the methodology used in these studies to estimate its economic impact varied from country to country. This meant that the outcomes were not suitable for meaningful international comparison (SIRC, 2010)¹.

In order to address this situation, the European Commission set up an EU Working Group on Sport and Economics (EU WG) in 2006. The general assignment of this EU WG is to develop a common European approach for measuring the economic importance of sport. In the future these efforts may mature into a European satellite account for sport (European Commission, 2007). Since 2006 the first steps toward development of a harmonised framework for the SSA were made. One of the EU WG's most important results so far is the agreement on the 'Vilnius definition of sport', which is currently used by all members of the EU WG. At the moment Austria (Helmenstein et al., 2009), Cyprus, Poland and the United Kingdom published their own national SSA's following the recommendations of the EU WG.

Within this context, the aim of constructing SSA's is to provide high-quality macro-economic statistics about the sport economy, in accordance with the national accounts on the one hand, and in accordance with the recommendations of the EU WG on the other. Following this overall goal, a first objective is to harmonise the conceptual framework of the SSA with that of the national accounts. This ensures that sport economic indicators derived from the SSA, such as sport value added or sport expenditure, can be compared to their equivalents for the economy as a whole.

A second objective is to maximise statistical coordination with the recommendations and definitions used by the EU WG. Most importantly, the definition of sport should be coordinated with that of the EU WG.

A third objective is to construct the SSA in such a way that high-quality macro-economic statistics can be derived from it. Therefore it is advisable to construct the SSA from the most detailed level possible, using the most detailed data available. A strict condition is that the (sub-) totals of the SSA are consistent with those of the national accounts. Of course a SSA may use alternative classifications or go into a greater level of detail. After all, such a satellite is an extension of the data provided by national accounts.

The manual presented here aims to contribute to the harmonisation and coordination of a European methodology for the construction of a SSA. It provides a detailed account of the steps taken and considerations made in the process of constructing the first Dutch SSA. As such it aims to fuel the discussion internationally on the methodology behind SSA. The manual is the result of research carried out between November 2010 and July 2012 by Statistics Netherlands and the HAN University of Applied Sciences, and was commissioned by the Dutch Ministry of Health, Welfare and Sport.

¹ From 2011 onwards the Expert Group on Sport Statistics has taken over the coordinating role of the EU WG. In its work schedule for the forthcoming years the expert group has indicated to continue promoting data collection to measure the economic impact of the EU sport sector in accordance with the Vilnius definition. (See the minutes of the first meeting of the Expert Group on Sport Statistics: <http://ec.europa.eu/sport/library/documents/b24/xg-stat-201110-final-rpt.pdf>.)

Lay out of the manual

This manual is divided in three parts. Part I presents the conceptual framework behind the SSA. Chapter 1 begins with a discussion of the Vilnius definition – one of the most important outcomes of the efforts of the EU WG. During this discussion the Vilnius definition is shown to be more or less a classification of sport related industries and products rather than a true definition. While the EU WG made clear decisions about which product categories are relevant to sport and which are not, no decisions were made about what constitutes the ‘sport element’ of such product categories. In section 1.2 some general guidelines are proposed to demarcate the sport element for the relevant product groups. Subsection 1.2.2 proposes a ‘family resemblance test’ that can help to determine whether an activity has any relationship to sport.

As stated above, the aim of constructing SSA’s is to provide high-quality macro-economic statistics on the sport economy. In section 1.3 the conceptual definitions of the most important macro-economic indicators that can be derived from the SSA are presented.

In part II the methodological framework behind SSA’s is discussed. Chapter 2 starts with a general introduction of satellite accounts and their relationship to national accounts. Following the guidelines and recommendations of the Vilnius definition, it is clear that a SSA should be built from a functional perspective – that is to say that the sport economy is defined by the use of goods and services that are relevant to sport, rather than by the characteristics of the industries that provide these goods and services. Supply and use tables (SUT) are presented, thereby allowing the sport economy to be described coherently within the context of national accounts and at a sufficiently high level of detail. An overview of the characteristics of the sport SUT is given in sections 2.2 and 2.3. In order to construct the sport SUT for each product group following the Vilnius definition, the relevant sport related share should be determined. How this was done is discussed in section 2.4. Since it is not always possible to find all necessary data to fill in each cell of the sport SUT a number of assumptions was made in order to fill-in the blanks of the sport SUT. This is explained in section 2.5.

In part III the data from the first Dutch SSA are used to indicate how the main important macro-economic indicators can be derived from the sport SUT, such as sport gross domestic product, sport value added, final sport expenditure and a number of labour statistics. We conclude this manual in part IV with some conclusions and recommendations for future research. The complete set of tables of the Dutch SSA for 2006 is included in appendix I. More information about the classifications, operationalisation, data sources, and abbreviations used for the Dutch SSA can be found in appendices II to VI.

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PART I: CONCEPTUAL FRAMEWORK

1. Definition of sport

1.1 International starting point: The Vilnius definition of sport

In July 2007 the European Commission adopted the White Paper on Sport (CEC 2007), in which it announced:

The Commission, in close cooperation with the Member States, will seek to develop a European statistical method for measuring the economic impact of sport as a basis for national statistical accounts for sport, which could lead in time to a European satellite account for sport.

This announcement was preceded by an initiative of the Austrian presidency to develop a framework for a SSA and to establish an EU WG. At its meeting in October 2007 the EU WG reached consensus about the economic definition of sport, referred to as the 'Vilnius definition of sport'. The definition is an important building block for the construction of European SSA's, as it provides the basis for the international comparability of sports statistics.

The Vilnius definition discerns three layers: sport in the statistical sense, sport in the narrow sense (i.e. sport in the statistical sense plus the products which are necessary as inputs for (doing) sport) and sport in the broad sense (i.e. sport in the narrow sense plus all products that draw upon sport as an input). The three levels correspond to three lists of specific product groups (CPA categories) and industries (NACE categories) which should be included in the SSA, given their relationship with sport.

The statistical definition of sport is restricted to NACE 92.6 (hereafter: 'sport industry'). Within this category all enterprises and organisations whose principal activity it is to facilitate sport activities are included. The statistical definition of sport therefore refers to the products offered by the enterprises and organisations that constitute what might be called the formal 'sports infrastructure'. Next to the sport federations and the relevant advisory and cooperative bodies, this infrastructure comprises indoor and outdoor facilities, sports clubs, sport academies, instructors and sport events.

Box 1. NACE 92.6 – sport industry

The NACE framework (that classifies existing enterprises and organizations according to the type of goods and services they produce) is interpreted and transformed by Statistics Netherlands in a SBI framework (Standaard Bedrijfs Indeling) which corresponds with the NACE on the four digit level. Within this SBI framework NACE 92.6 comprises 29 five digit groups which are used for national purposes. They belong to 5 four digit groups. For reasons of conciseness only these 5 four digit groups are described below.

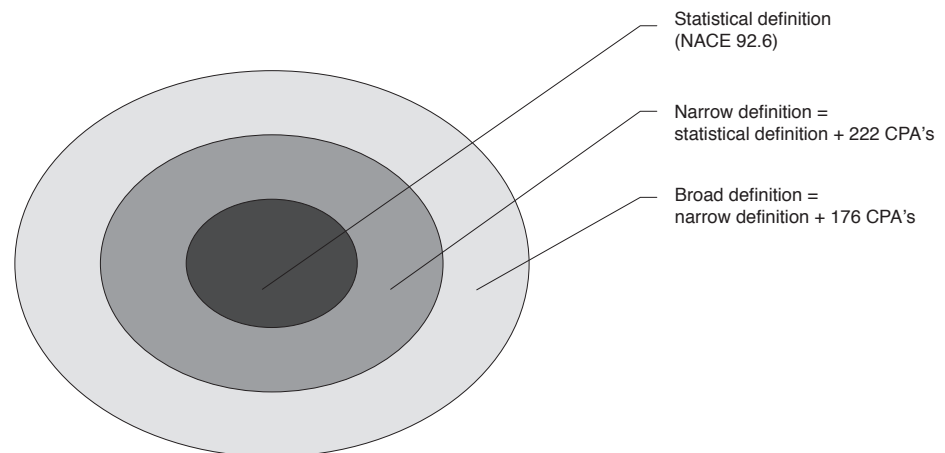
- *SBI 92.61 Sports facilities*. This group comprises all enterprises and organizations, except sports clubs and academies, which operate one or more indoor, outdoor or natural swimming pools; operate one or more indoor sports facilities for indoor sports (including bowling alleys, billiards and snooker centres etc.); operate one or more outdoor sports facilities for outdoor sports (including artificial ski slopes, climbing walls etc.).
- *SBI 92.62 Outdoor sports*. This group comprises all organizations which provide and organize the opportunities for practising those sports that are (usually) practised outdoors (football, hockey, baseball, golf, athletics etc.), including riding academies.

- *SBI 92.63 Indoor sports.* This group comprises all organizations which provide and organize the opportunities for practising those sports that are (usually) practised indoors (basketball, volleyball, martial arts, chess etc.).
- *SBI 92.64 Swimming and other water sports.* This group comprises all organizations which provide and organize the opportunities for practising swimming (including diving) or for practising other water sports (sailing, rowing etc.); all enterprises and organizations that offer instruction in water sports; all enterprises and organizations which operate one or more marinas.
- *SBI 92.65 Other sport activities.* This group comprises professional sportsmen; sports instructors; sports schools and academies; supporters' associations; enterprises and organizations which organize one or more sports events; sports federations; advisory and cooperative bodies in the sports field.

The *narrow definition of sport* stipulates that 'all products and services which are necessary as inputs for (doing) sport ('to produce sport as an output')² need to be taken into account as well. Next to the sport industry the narrow definition includes 222 additional CPA categories. While (final) consumption of products from the sport industry is by definition considered to be 100 percent sport-relevant, the additional products listed in the narrow definition are not necessarily so. Often only a (small) part of the products produced within a particular CPA category is considered to be sport-relevant. For example, while cars (e.g. CPA 34.10.220) fall within the narrow definition, only race cars are considered sport-relevant.

The *broad definition of sport* is defined as the statistical definition plus the narrow definition including all products which have a (direct or indirect) relationship to any sport activity, but without being necessary to do sport ('which draw upon sport as an input'). One can think of sport programs on television, sport supplements in newspapers, treatment of sport injuries, or transportation services to a sport event. The broad definition contains 176 more sport related CPA categories than the narrow definition.

Figure 1.1.1 Vilnius: the statistical, narrow and broad definition of sport.



² See: Vilnius definition of sport, version 1.1. Retrieved from: <http://www.esce.at/vilnius/0710%20ESSA%20Vilnius%20Definition%20Sport.xls>.

With regard to applying the Vilnius definition of sport in compiling a SSA a set of five rules must be adhered to. These rules are:

1. Goods and services which are part of the statistical and narrow definitions of sport are also part of the broader definition of sport. The primary focus is on the broader definition of sport.
2. Multipurpose infrastructure and multipurpose durable goods that are not part of the statistical definition of sport (NACE 92.6) are to be excluded, e.g. roads, cars, TV sets, play stations. Dedicated infrastructure is included.
3. The manufacturing and trade/retail sections of the table (CPA categories 51-52) overlap to a certain degree. In order to avoid double counting and ensure that the table remains comprehensive, this overlap must be taken into account. Sections 51 and 52 are only relevant in terms of their trade margins.
4. Data will be collected on the basis of a common agreement on which NACE and CPA categories to include. However, to take account of the country-specific sport landscape, additional CPA categories may on exception be included over and above the basic list agreed upon in the EU WG Sport and Economics.
5. In general, only final expenditure (incl. capital expenditure) will be taken into account, and not intermediate expenditure. Reference will be made to intermediate demand only if it constitutes a sizeable input for professional sport. Similarly industrial services, where they are not sport-specific, will not be considered.

Following the EU WG recommendations, the broad definition is the starting point for the SSA. The primary focus in the SSA is on final expenditure. In principle, all sport related products (i.e. goods and services) fall into the CPA categories included in the Vilnius definition.

1.2 Application of the Vilnius definition

1.2.1 Sport fractions

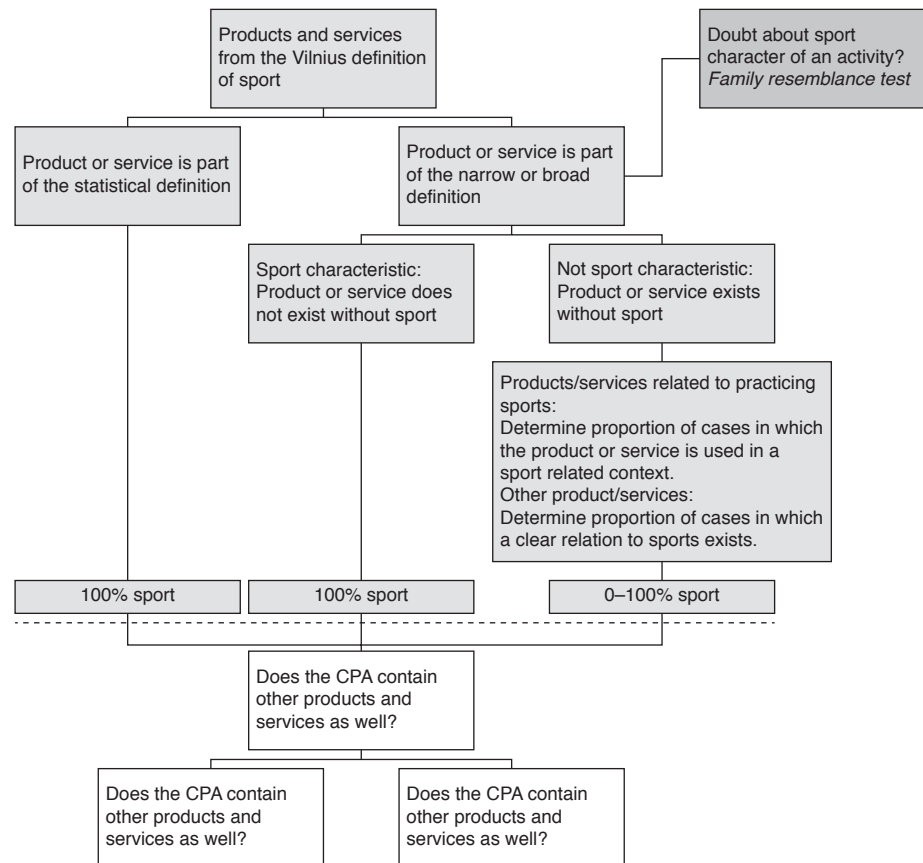
Most CPA's contain both sport and non-sport related products. Therefore the size of the sport related part of each CPA category included in the Vilnius definition needs to be determined. For example, the CPA of bicycles contains all types of bicycles, although not all are suitable for sport purposes. Only a proportion of the products in the CPA of bicycles should be included in the SSA. In this context, it may be helpful to make a further distinction between sport and non-sport characteristic products and services.

First, there is a class of sport characteristic products. A product is called 'sport characteristic' when one can assume that it would cease to be consumed or produced at a reasonable amount, if sport would cease to exist. This class is composed of products both from the narrow and broad definition of sport. For example, one can think of football boots or golf clubs (narrow definition) or betting on sporting events, or live broadcasts of sporting events on radio or television (broad definition). All of the sport characteristic products and services within a sport related CPA must be fully included in the SSA (middle branch in figure 1.2.1.1).

Second, there is a class of non-sport characteristic products. It consists of products that are in some cases used within the context of sport, but not in others. This class contains both products from the narrow as well as the broad definition of sport. For example, ordinary T-shirts that are used in a sport context (e.g. running) may be seen as a 'necessary input' for sport (narrow definition). Or a transportation service to a sporting event 'draws on sport as an input' (broad definition). But in both contexts the product at hand exists separately from sport. Of these non-sport characteristic products only a fraction should be included: the fraction that is related to its use in a sport context (right-hand branch of figure 1.2.1.1).

Finally, there is the class of products that are produced in the sport industry. By definition all final expenditure on production from the sport industry must be included in the SSA (left-hand branch of figure 1.2.1.1).

Figure 1.2.1.1 Deciding about products and services within sport related CPA's



Box 2. The distinction between sport and non-sport characteristic: an example

Suppose one needs to determine the sport fraction of the CPA's for clothing. These CPA's contain all kinds of clothing. Obviously tennis T-shirts, running shorts and judo suits are sport-related. Without sport, these types of clothing would probably cease to exist: they are typically sport characteristic. All of them should be included in the SSA (central branch of figure 1.2.1.1).

What if those relevant CPA's do not contain sport characteristic clothing only, but other types of clothing as well, such as T-shirts, dinner suits and dresses? Clearly the last two types of clothing are not related to sport at all. T-shirts, in contrast, may be used for practicing sport, even though they are not necessarily designed specifically for this purpose. They are non-sport characteristic. Ideally, one would still want to include them in the SSA in so far as they are used in a sport context, just like petrol for race cars or meals for visitors of a sport event are included in the Vilnius definition. Therefore, one needs to examine in what contexts ordinary T-shirts are used and how frequently (or intensely) they are used in a sport context (right-hand branch of figure 1.2.1.1).

1.2.2 Definition of sport: a Dutch application

A question not touched upon so far is what is understood by 'sport'. Although there is no question concerning the usefulness of the Vilnius definition, it is in fact not a definition of the concept of sport itself. Rather, it is a set of rules that helps to decide whether or not to include a specific group of products in the SSA, given the fact that there already exists a consensus about the concept of 'sport'. A clear-cut definition of sport is hard to find, due to the many 'grey areas' that encompass the field of sport and due to various cultural differences.

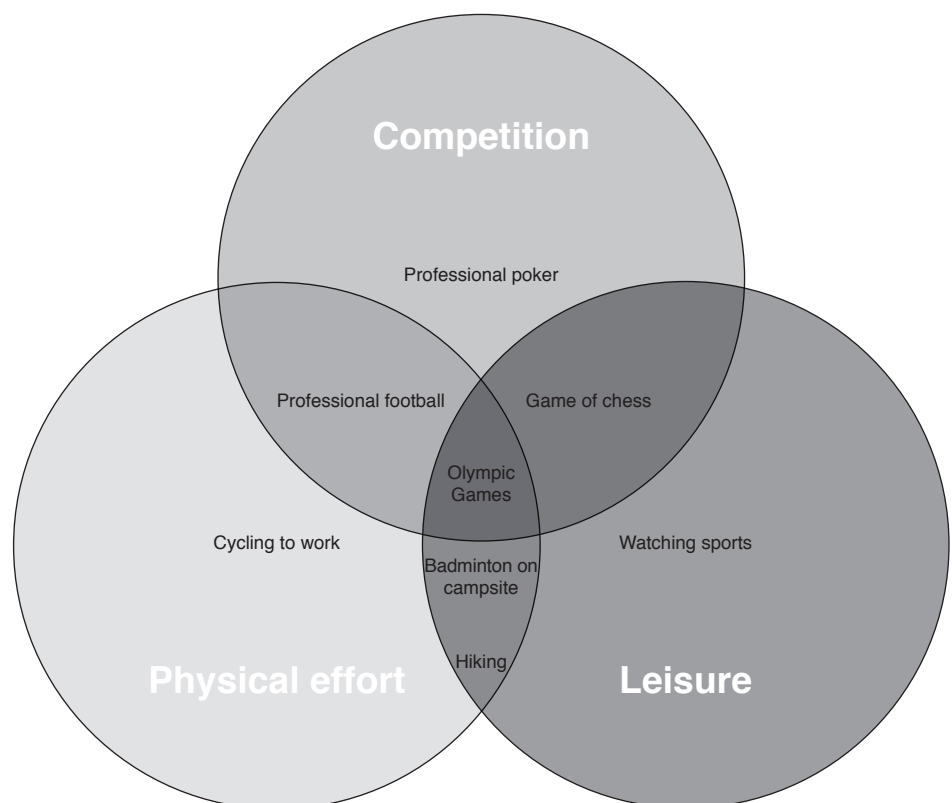
Some of the grey areas are described by Breedveld (2003). For instance new forms of physical activity, such as 'free running', are not always immediately recognised as being a sport. Some may consider activities without a major physical effort (e.g. darts) or for which physical ability is not important (e.g. mind sports), to be a sport, while others may not. Furthermore, physical or outdoor activities which are not practiced within an organised context but more leisure-oriented, such as hiking, recreational cycling, swimming in the sea, or boating trips, are not always indisputably seen as sport activities.

Furthermore, there may be cultural differences in opinion that can complicate reaching consensus about the definition of sport. The existence of such cultural differences in thinking about sport is recognised by the EU WG. In the report of the first meeting of the EU WG is stated:

*A common statistical definition of sport does not require EU Member States to agree upon a definition of sport as such. Different countries can have a different understanding of which activities constitute sport. This is a cultural issue and there is no reason for trying to harmonise it.*³

For this reason the Vilnius definition explicitly allows for a country-specific interpretation (see the second part of rule 4 of the Vilnius definition). Country-specific interpretations of sport are probably unavoidable, but at the same time they may endanger international comparability. To avoid misinterpretation a clear explication of one's understanding of 'sport' is therefore recommended.

Figure 1.2.2.1 Family resemblances between sport relevant activities



³ Report of the first meeting of EU WG in Helsinki, 23 February 2007. All the reports of the EU WG meetings are to be found online at: http://ec.europa.eu/sport/library/consultation-and-co-operation_en.htm#B2_Cooperation.

Defining sport in the Netherlands – application of the ‘family resemblance test’

In the Dutch SSA the so-called ‘family resemblance test’ is used when it is unclear whether or not a certain activity should be considered as a sport. The test is a tool to determine the distance of an activity to the ‘core’ Olympic sports. It can help to decide whether an activity should be seen as a sport or not. ‘Physical intensity’, ‘competition’ and ‘leisure’ (or ‘playfulness’) are the key criteria used in this test (see figure 1.2.2.1). If an activity satisfies at least two of these three criteria, the activity is considered to be a sport.

For example for cabin boating we might conclude that there is little or no physical effort involved. There is no organised (inter-)national competition in cabin boating. As of yet there is no federation for the advancement of this type of activity in the direction of an internationally recognised sport activity. Therefore the relationship between cabin boating and sport is too vague to include it in the SSA.

Playing badminton on a campsite on the other hand can be regarded as a sport activity. There is a clear element of playfulness or leisure in the activity and it takes physical effort. Furthermore, badminton can be practiced as an Olympic sport. Therefore, according to the ‘family resemblance test’, playing badminton on a campsite is considered to be a sport activity. As a consequence the expenditure related to this type of activity should be included in the SSA. Note that many recreational activities satisfy the requirements of the ‘family resemblance test’.

1.2.3 Defining sport – rules of thumb used for the Dutch SSA

With the help of the Vilnius definition, the concept of (non-) sport characteristic products and services, and the ‘family resemblance test’, the following guidelines are used in the Dutch SSA for determining the sport fraction within a CPA category:

1. As far as the sport characteristic products and services are concerned, the motive of consumers for buying the product is not relevant, neither is the fact whether or not the product is actually used (for sport). All sport characteristic products are included in the SSA. It is irrelevant whether a football is used every day or is just lying around in a shed.
2. As far as the non-sport characteristic products and services are concerned, the context in which the product is used is relevant. For example, only those T-shirts will be included, which are used for practicing sport, and only in so far as they are used to practice sport.
3. When there is doubt about the sport characteristic of an activity and the products associated with it, the ‘family resemblance test’ may provide a solution. If the activity meets the requirements of the test, the activity is considered a sport. If it does not, it must be excluded from the SSA.⁴
4. Products related to indoor or outdoor physical leisure activities are often included, even if the activities associated with them are practiced outside the setting of organised competition and are not generally regarded as ‘doing sport’. This rule refers to the products related to leisure activities such as carting, play tenpins, hiking and rambling, bicycle rides or tours, ice skating tours, recreational swimming and sailing boat trips. Following the ‘family resemblance test’ these activities meet the criteria of physical effort and leisure. Furthermore, many of these recreational activities can be practiced in a setting of organised competition as well.
5. Products related to the so-called ‘mind sports’ such as chess, draughts and bridge are included. The mind sports meet the criteria of leisure/playfulness and (organised) competition.
6. Products are included if they relate to forms of physical activities (such as ‘downhill ice skating’) that in the future may develop into sports, but at the moment are not recognised as such by the (inter)national sports federations. In this way the SSA can be made ‘future proof’.

⁴ A description of all sport products and services included in the Dutch SSA can be found in appendix IV.

7. Products that originated in sport, but have since become mainly a product of fashion or ordinary daily use are excluded because they have 'lost' their relationship with an actual sport activity (i.e. they are not used in a sport context). This rule refers to products such as the shoes known as 'sneakers'.

1.3 Macro-economic indicators

The aim of constructing a SSA is to determine a number of important sport economic indicators, such as sport gross domestic production (sport 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. In this section the formal definitions of these indicators are presented and their relationship to the sport economy is explained. The definition and methodology of these economic indicators is based on the System of National Accounts 1993 (SNA, SNA'93, 1993). This is the main framework for the system of national accounts as we know it today. The SNA is further introduced in section 2.1.

Sport final expenditure

Final expenditure consists of final expenditure on consumption, gross capital formation and exports minus imports.

Final consumption expenditure can be broken down into expenditure incurred by resident institutional units on goods or services used for the direct satisfaction of individual needs or wants or the collective needs of members of the community. Three types of consumption expenditure are discerned in the national accounts: First, when a person buys sport shoes in a retail shop, this is registered in the national accounts as a form of consumption by households. Second, when a community amateur sports club, purchases new sports gear, it is registered as consumption of non-profit institutions serving households (NPISH's). Third, when a local government contributes to the operating costs of the community swimming pool, these expenditures are registered as final consumption expenditure of general government.

Gross capital formation is a part of final expenditure as well. It is measured by adding the total value of the gross fixed capital formation, changes in inventories and acquisitions minus disposals of valuables. In opposition to final consumption expenditure, the activity of gross fixed capital formation is restricted to producers. Examples of fixed capital formation are the acquisition of buildings or machinery by producers. Characteristic for the products registered as gross fixed capital formation is that they are not completely used up in the accounting period, in which case they would be registered as intermediate consumption. In the case of the SSA gross fixed capital formation is (largely) restricted to 'dedicated infrastructure', such as sport accommodations and other sport facilities. The Vilnius definition states that 'multipurpose infrastructure and multipurpose durable goods which are not part of the statistical definition of sport (NACE 92.6) should be excluded, e.g. roads, cars, TV sets, play stations. Changes in inventories and acquisitions minus disposals of valuables do not play a significant role in the SSA.

As final expenditure are expenditures of goods and services purchased for final use net exports should be taken into account as well. Net exports can be calculated as the difference between imports and exports.

Imports, exports and re-exports of sport products

According to the SNA'93 import and export of goods and services consist of purchases, barter, or receipts of gifts or grants, of goods and services between residents and non-residents.

All imported sport related products that are consumed by households, NPISH's and governments should be included in the SSA.

Sport related export consists of all sport related products that are consumed as such by non-resident final users (households, NPISH's or governments). In the construction of

the SSA it is advisable to discriminate between exported products of domestic origin and re-exports. Re-exports are products which are exported from a country to which they had previously been imported. In general the value added of re-exports is much less than that of produced or processed products.

Sport value added

Gross value added is the value of output minus the value of intermediate consumption. More precisely, gross value added at basic prices is output valued at basic prices minus intermediate consumption valued at purchasers' prices including non-deductible VAT.

Sport value added is added value created by producers or retailers who sell sport related products. It is important to stress that sport value added only concerns the direct or primary effects of the demand for sport products. As such, sport value added can be compared to the value added of other industries in the national accounts, such as agriculture, government or transport.

Sport GDP

Gross domestic product (GDP) is the final result of the production activity of all residential producing units. GDP, as measured by the production approach, is the sum of gross value added of all producing institutional units plus taxes minus subsidies on products.

Sport GDP is then the final result of the production activity of sport related goods and services of all residential producing units. Sport GDP is the sum of sport value added (gross) plus taxes minus subsidies on products. Notice that sport value added and sport GDP only differ in terms of valuation (see box 3).

Box 3. Value added and GDP

Value added can be expressed in different types of prices. Data on production are observed in basic prices – the production price –, whereas data collected from consumers are observed in purchasers' prices or market prices – the price the buyer pays (often exclude VAT). The term 'market prices' is usually used in the context of aggregates such as GDP, whereas 'purchasers' prices' refer to the individual transactions. Value added can thus be expressed in terms of basic and market prices:

Value added (basic prices)

Value added at basic prices is calculated as follows:

Output of industries (basic prices) - intermediate consumption of the industries (market prices).

GDP or Value added (market prices)

GDP equals value added of the whole economy at market prices. It is calculated as follows:

Total value added of all industries (basic prices) + balance of tax and subsidies on production⁵.

As the total aggregates of taxes and subsidies on products are usually only available at whole economy level, GDP is often used for measuring the output of the whole economy while value added is used for measures of the output of entities smaller than a whole economy (for instance the value of goods and services produced in a specific industry).

⁵ In the Dutch national accounts a final adjustment is made to correct for the difference between imputed and paid VAT.

Sport employed persons

A sport employee is a person who has a contract with an economic unit in one of the sport related industries to carry out work in return for financial remuneration. A sport employee works for a business unit or private household residing in the Netherlands.

Sport employed persons include persons who have a paid job for at least one hour a week in a sport related industry; perform jobs of which the payment is withheld from registration of tax and/or social insurance authorities, while the work itself is legal; are temporarily not working but who continue to receive their remuneration.

Employees are persons who performed some work for wage or salary during a reference period, in cash or in kind. Self-employed persons are those who earn their income by performing labour by themselves (company, profession) or who work within a family business. In the latter instance the person is not considered self-employed if he or she has an employment contract.

Sport related jobs

A job is an employment opportunity occupied by an employed person. When this job is within the sport related economy it is called a sport related job. The number of sport related jobs in a year is a calculated average. When a job exists only for part of the year it is accounted for accordingly. Because employed persons may hold more than one (sport related) job at a time, the number of sport related jobs is equal to or higher than the number of sport related employed persons. If a person holds more than one job at a time, the job in which they spend the most hours is considered to be their main job (CBS, 2007: 228).

Sport related labour volume

Labour volume is the volume of labour input in the production process, in terms of full-time equivalent jobs, or better, in terms of worked hours. In the Dutch SSA sport labour volume is currently measured as the number of full-time equivalent jobs.

Labour input in full-time equivalent jobs is calculated by expressing all jobs (be it full-time, part-time or flexible) to full-time equivalents. The full-time equivalent is obtained by dividing the annual contractual hours of the job by the annual contractual hours considered full-time (in the same industry). Two half-time jobs thus add up to one full-time equivalent. For the self-employed the full-time equivalent is the quotient of the usual weekly work hours of that job and the average weekly work hours of self-employed persons with 37 or more normal weekly hours (in the same industry) (CBS, 2007: 228).

PART II: METHODOLOGY

2. Methodology for compiling the Sport Satellite Account

2.1 Introduction

The national accounts constitute a set of statistics which are designed for economic analysis, policy making and decision taking. Important data from the national accounts are national income, economic growth (GDP growth), government deficit, final consumption, fixed capital formation, import and export. In the twentieth century, the national accounts transformed from a small set of statistics to an extensive system of accounts ending in balance sheets (Van de Steeg, 2009: 39). In this chapter the main concepts of the SSA in the context of the System of National Accounts (SNA) are explained.

The central framework of the SNA consists of the supply and use tables (SUT) on the one hand and the institutional sector accounts on the other.⁶ The sector accounts are not the focus of the SSA and will not be discussed here. The SUT provide an overview of economic activities classified in industries and goods and services. The supply table describes production and imports of goods and services within the economy. It can be understood as a description of the 'origins' of resources used in the economy. In the use table the use of goods and services is described per industry (intermediate consumption) and by type of final use (final consumption, export, and capital formation).

The SUT are integrated and consistent. 'Integrated' means that the classifications and definitions are used consistently in the national accounts to describe the economic processes.⁷ 'Consistent' means that entries in the accounts fulfil the identities of the SUT. For example, total supply must equal total use.

Next to the SUT (and the sector accounts) other tables are included in the national accounts as well, such as labour account tables and input-output (IO) industry-by-industry tables. The labour account tables provide employment statistics that are consistent with the SUT. IO industry-by-industry tables can be derived from the SUT in a number of ways, for example by means of a Leontief transformation.⁸ While the SUT are better suited to describe economic activities, IO industry-by-industry tables may be valuable for various specific analytical purposes. For the Dutch SSA the SUT were chosen as a starting point.

⁶ For a comprehensive overview of the relationship between the SUT, the sector accounts and the satellite accounts see chapter 9 of the National accounts 2008 (CBS 2008: 207-255).

⁷ As satellite accounts are intended to describe parts of the economy in greater detail than previously done in the national accounts, it is clear that other classifications and definitions can supplement those of the national accounts, provided that they ultimately cohere to the classifications used in the national accounts.

⁸ See for example: M. Šova (2011).

Box 4. The SUT as the basis for the SSA

The IO industry-by-industry table can be seen as a record of all transactions in a country in terms of origins and destination by industry and final demand category. This type of IO table describes which part of the production of an industry is sold to other industries (i.e. intermediate consumption) or to which final demand category.

The strength of an IO industry-by-industry framework is that it can be used to model the effects on economic transactions between industries and final demand categories, occurring as a result of changes somewhere else in the production chain. For example, one could model what would happen if imports needed for a certain industry came to a halt, or what would happen if a certain part of the national production would be outsourced to another country. Trickling down effects and interdependencies between industries can be made visible in a way that is straightforward and easy to understand. The extensive possibilities for economic modelling explain the popularity of this type of IO analysis.

While convenient for analytical purposes, the IO industry-by-industry framework is not the most practical method for describing the economy (Van de Steeg, 2009: 47). The SUT framework is more suitable to the needs of the statistician, foremost because it is better suited to work with direct statistical observations than the classical IO framework. Most data on economic activities (especially trade in goods and services) are collected by type of product, and not by type of industry to which the goods or services are sold or from which they are bought. The same is true of data on household consumption and other expenditures. Not surprisingly, in the national accounts the SUT are generally available at a more detailed level than IO tables.

Simultaneously with the increasing demand for better macro-economic statistics, many statistical offices have in the second half of the twentieth century switched from classical IO tables to the SUT framework, as was advocated in A System of Accounts (UN, 1968). For statistical offices which have introduced the SUT framework, supply and use tables serve as the foundation from which IO industry-by-industry tables, as well as IO commodity-by-commodity tables, are derived for analytic purposes.

Because it is our primary goal to describe the sport-related economy and derive the most important economic indicators from this description, and not to analyse certain specific relationships within the sport-related industries, we have compiled the SSA on the basis of the SUT framework. It enables us to start at a level of greater detail, and to use statistical resources on a lower level of aggregation. After compiling the sport SUT, it is possible to derive IO tables from them. In practical terms this means that international statistical coordination is preserved at all times.

2.1.1 Functional approach

The national accounts take the economy into account from an institutional perspective. That is to say, that all individual units in the economy are classified according to their main activity in a definite number of institutional industries, such as agriculture, government or education. Individual units may carry out other side activities (so-called 'secondary' or 'ancillary activities') next to their main activity. In such cases, the production of both main and side activities adds up to the total production of the unit. For example, in the Dutch bicycle industry, a small amount of car parts are produced, which can be seen as a secondary activity of this industry. An example of ancillary production is production related to major maintenance of buildings. Both contribute to the total production of the bicycle industry.

The sport satellite should not be restricted to the industries which can be categorised as sport related by their main activity (i.e. NACE 92.6).⁹ Our primary concern is describing the consumption and production of sport related products, and not describing the character and attributes of whole industries. It is not relevant to us whether the product is produced as a part of primary, secondary or ancillary production. Neither is relevant what the main activity of the industry at hand is. Ideally, we want to exclude all products that are not related to sport final expenditure, and include all products related to sport final expenditure. In short, a functional approach is taken for the sport satellite, not an institutional one.¹⁰ Therefore, in constructing the SSA the product groups mentioned in the Vilnius definition should be leading, not the industries.

The economic description of sport may overlap with the description of activities or products within other satellites. A good example is the Tourism Satellite Account (TSA) which describes tourism in the context of the national accounts. Recreational sports are described both in the TSA and the SSA, although the underlying definitions of sport differ partly. This implies that expenditures accounted for in the TSA and SSA may overlap. Therefore, one should never add up the resulting figures from different satellite accounts, as if they were based on totally independent sectors of the economy. The non-additivity of satellites does not impede the possibility of comparing the sport sector with other industries such as agriculture or construction, or with the tourist sector.

2.2 The sport SUT

The sport SUT form a connected and integrated set of tables in which many variables are linked together in a consistent way. The purchasing and selling of products between industries and final users are systematically described in the SUT. In this section the SUT are further explained in the context of the sport satellite.

Figure 2.2.1.1 Schematic overview of the supply table

		ISIC				Domestic supply (basic prices) (columns 1–25)	Imports of goods (cif) and services	Total supply (basic prices) (columns 26–27)	Trade and Transport margins	Taxes on products (excl. VAT)	Subsidies on products (-)	Total supply (purchaser's prices) (columns 26–31)		
		NACE												
		NACE 1	NACE 2	NACE ...	NACE n									
		1	2	...	25	26	27	28	29	30	31	32		
1	CPC	CPA	CPA 1											
2			CPA 2											
3			CPA 3											
4			CPA 4											
...			...											
44			CPA n											
45			Trade and transport margins											
46	Total production (rows 1-45)					P	I							

P = Total production (basic prices)

I = Total imports

⁹ An example of a perspective which limits itself to such boundaries is the so-called 'statistical' definition of sport, which will be mentioned later in the text.

¹⁰ Note that this functional approach to sport can only be taken when access to detailed supply and use tables is granted.

2.2.1 *The sport supply table*

The sport supply table describes the total supply of sport related products and services per product group (CPA) in the economy. A distinction is made between domestic production and import (see figure 2.2.1.1). In this manner the sport supply table can be said to describe the 'origins' of goods and services in the economy. Besides the industry categories and import column the supply table contains other columns as well. These columns contain the trade and transport margins, as well as the taxes and subsidies on products. They transform the basic prices from the supply table into the purchasers' prices of the use table.¹¹ The transformation of prices is needed to guarantee the consistency between the supply and use table. In the sport supply table, domestic output is valued at basic prices and import at cif-prices.¹² Whereas each row (1–45) of the sport supply table describes the sport supply per product group, the columns (1–25) describe the sport supply per industry.

2.2.2 *The sport use table*

The sport use table describes the ways in which products and services are used in the economy. A distinction is made between intermediate consumption (per NACE category) and final demand. Final demand is split up into: a) exports of products and services; b) final consumption: consumption by households, non-profit institutions serving households (NPISH's) and general government; c) gross fixed capital formation and changes in inventories.

A row of the use table describes the different 'destinations' of products and services within the economy. By definition, the sum of each row of the use table equals to the sum of the corresponding row in the supply table. Note that one needs to take into account the different valuations of the SUT, by accounting for trade and transport margins, taxes and subsidies.

The column in the far left-hand part of the use table describes which products and services a particular industry uses in its production process (intermediate consumption (IC), see figure 2.2.2.1). It also describes the value added (VA, see figure 2.2.2.1), generated in the production process.

Domestic output and imports are valued in purchasers' prices¹³ excluding value added tax (VAT) within the use table. Non-deductible VAT is entered in a separate row.

Within the use table the NACE and CPA classifications are used once more to describe industry categories and product groups. The table is extended with final demand categories (export, final expenditure, gross fixed capital formation). Again, since the main purpose of the SSA is to provide information on the sport sector at a greater level of detail than the national accounts are able to provide, more detailed input data are required. Sport related and non-sport related partitions must be made for the industry categories and all other columns. These include exports, final expenditure category, changes in inventories, as well as for the rows of intermediate consumption and value added.

The use table need to show the CPA's that are mentioned by the Vilnius definition. There is no need to recall the other products here. After all, in a sport satellite we are only interested in the expenditures on sport related products

¹¹ For more information about valuation in the national accounts, see chapter 9.3.5 from National accounts of the Netherlands 2008 (CBS, 2009).

¹² The cif-price is the purchasers' price minus trade and transport margins in the Netherlands minus taxes on imports and plus subsidies on imports.

¹³ For more information about valuation in the national accounts, see chapter 9.3.5 from National accounts of the Netherlands 2008 (CBS, 2009).

Figure 2.2.2.1 Schematic overview of the use table

		ISIC				Total columns 1-25	Exports of goods (fob) and services	Final consumption expenditure of households	Non-profit institutions serving households	Final consumption expenditure of general government	Fixed capital formation (gross)	Changes in inventories (incl. acquisitions less disposals of valuables)	Final consumption by resident households in the rest of the world	Paid minus imputed VAT	Total columns 26-34
		NACE													
		NACE 1	NACE 2	NACE ...	NACE n										
		1	2	...	25	26	27	28	29	30	31	32	33	34	35
1	CPC	CPA	CPA 1												
2			CPA 2												
3			CPA 3												
4			CPA 4												
...			CPA ...												
44			CPA n												
45			Non-deductible VAT												
46	Intermediate consumption (rows 1–45)					IC									
52	Value added					VA									
56	Total production (row 46+52) (=row 46 supply table)						E	FC			CF				

IC = Total intermediate consumption
T = Sum of taxes minus subsidies
CE = Sum of compensation for employees
OS = Sum of operating surplus
VA = Total value added
E = Total exports
FC = Total final consumption
CF = Total capital formation

2.2.3 Labour sport statistics

The addition of labour statistics to the SSA can give us an impression of the labour intensity, the average wages, and labour productivity in the sport sector, compared to the overall economy.

Labour statistics are often obtained per producing unit. They can be connected to the industry classification used in the SUT. When the unit produces both sport related and non-sport related output, the challenge is how to determine the amount of labour required for producing the sport related output. Sometimes detailed information is available. In other cases the sport related input of labour must be estimated, for example by relating it to the sport value added of that unit or industry.

Figure 2.2.3.1 Schematic overview of a labour table

		NACE				
		NACE 1	NACE 2	NACE ...	NACE n	Total
		1	2	...	25	26
1	Wages*					
2	Employer's social contributions*					
3	Number of employees					
4	Number of jobs					
5	Number of fte's					
6	Number of self employed persons					
7	Number of jobs of self employed persons					
8	Number of fte's of self employed persons					

* Linked with use table (rows 49+50)

The Dutch labour accounts are consistent and harmonised with the national accounts, and contain a variety of employment data, such as wages, number of jobs, number of employees, number of self-employed persons, and number of full time equivalences (fte).

Notice that the indicators 'wages' and 'employer's social contributions' are present in the use table as well as in the labour accounts. When data on specific sport related labour are available for one or more industries, they can be confronted with the findings in the sport use table.

2.3 Sport products and industries in the SUT

2.3.1 Sport products and industries

Although the broad definition of sport is very wide-ranging, not all industries fall within its scope. Moreover, not even all industries in which sport related products are produced are taken into consideration by the Vilnius definition. For example, in the Netherlands more than 90 percent of all sport bicycles is produced within NACE 35.4 'Manufacture of motorcycles and bicycles,' which is included in the Vilnius definition. The remaining few percentages are produced in NACE 36.6 'Other manufacturing,' which is not part of the Vilnius definition. Although this category is not part of the Vilnius definition, it makes sense to say that sport bicycles produced within this industry category are part of the sport related economy. Especially from a final demand perspective, it is not particularly relevant in what industry the product is produced. Whenever detailed information is available on the whereabouts of the production of certain sport products, one should not only limit oneself to recording the production within the NACE categories as mentioned by the Vilnius definition.¹⁴

Nace 92.6 – sport industry

NACE category 92.6 – the sport industry – takes a special place in the Vilnius definition, since it corresponds with the statistical definition of sport. All final expenditure related to this category should be counted as sport related consumption. However this is not to say that all production in the sport industry is necessarily sport related. For instance, in the Dutch equivalent of NACE 92.6, the production of advertisements and royalties will fully end up in intermediate consumption. To avoid double counting, the EU WG recommends that products which are only used as intermediate consumption should not be taken into account.¹⁵ Therefore one should be aware that, seen from a final demand perspective only, NACE 92.6 is completely sport related: by definition all consumption by final users of products originating from the sport industry is assumed to be 100 percent sport related.

2.3.2 Specific national product groups

The possibility exists that the (broad) Vilnius definition does not cover all sport related activities. The EU WG recommends being very careful when adding CPA categories to the definition. However in some instances this may be justified. For example, in the Netherlands commercial TV and radio are not directly used by consumers. Households pay for commercial TV and radio through their cable-TV/radio subscription. TV/radio subscriptions are covered in the product group 'telecommunications'. Telecommunications are not covered by a product group in the Vilnius definition though. Still, there are good reasons to consider them partly as sport related consumption. Sport is an important part of Dutch commercial TV and radio. Examples include live broadcasts of sport events, as well as sport related programmes and specific sport channels. When sport would cease to exist, this type of broadcasts would cease to exist as well. Therefore, we have chosen to include the product group telecommunication to the Dutch Sport Satellite. A part of the

¹⁴ Although the greater part of all sport related production will be found in the NACE categories summed up in the Vilnius definition, a fully functional perspective will take all sport related production into account, no matter in which industry it is produced. In this way the consistency between supply and use can be preserved at all times.

¹⁵ See the notes of the 3rd meeting of the EU Working Group on Sport and Economics, Brussels, May 23rd 2007.

TV/radio subscription is thus seen as sport related. This is the only exception made in the Dutch SSA.

2.4 Determining sport fractions

Most product groups (CPA categories) included in the Vilnius definition contain both sport and non- sport related products. Therefore the size of the sport related part of these product group needs to be determined. For example, the product group of clothes contains all types of clothing, although not all types are suitable for sports. Therefore only a fraction of the products in the clothing product group should be included in the SSA. The sport fraction for these product groups lies anywhere between 0 and 100 percent. The following steps may be taken in order to determine the sport fractions needed to construct the sport-SUT:

1. Determine the most relevant product groups (CPA categories)

The Vilnius definition encompasses roughly 400 product groups. In an ideal situation, the sport fraction of all these groups should be determined. Often time and resources are limited though. In such cases it is good practice to focus first on the most contributing sport products. The contribution of a product to the sport economy is determined by two dimensions: their size and their relevance to sport. Some product groups may be very large (in economic value), although their relevance to sport is low (for instance subsidized education). Other product groups are rather small but have a high relevance to sport (for instance sporting goods). Both dimensions should be taken into account in order to decide which products groups may be the most important ones.

While data on the economic size of product groups are readily at hand, data on the relevance to sport are not. Expert guesses may help to compose a shortlist of the most relevant product groups. Another option is to use information from other SSA's (e.g. those of the UK, Austria, Cyprus and Poland). These SSA's are a valuable means to determine which product groups may be expected to be the most relevant.

For the Dutch sport economy product groups within the fields of clothing and shoes, health care, education, government, hospitality business, and sport and recreation are the most relevant. Extensive research was carried out to establish the sport fractions for these product groups.

2. Determine the definition of sport related products within each product group

The next step is to define the sport related products within each product group. First, a description of all the products and services that fall within the product group according to the national accounts is needed. Then one needs to decide which products are sport related. In section 1.2 a flowchart is presented that explicates the decision-making process. All sport characteristic products and a percentage of non-sport characteristics should be included in the definition of sport within the product group. In this step data availability is not yet taken into account.

3. Search for relevant and reliable data sources

Once the relevance of a product group is clearly defined, the search for suitable and reliable data sources begins. In the case of Dutch SSA, a number of general data sources are available from Statistics Netherlands that can be used for many product groups. These are the Household budget survey (for household consumption), Government statistics (for government consumption), the Production statistics (for production), and the Foreign trade statistics (for import and export).¹⁶ These data sources are among the most important sources used in the national accounts. To ensure the compatibility of the SSA with the national accounts, data sources used by the national accounts themselves are preferred to other sources of data.

¹⁶ For a more detailed description of these sources see appendix IV.

In addition to these sources, other data sources available from Statistics Netherlands are used, such as education and health statistics. Furthermore external sources (from outside Statistics Netherlands) can be used. For the Dutch SSA we contacted various different organisations such as industry organisations and sport federations for additional information. We also searched the internet for relevant information, for example to find market research data. We did not limit ourselves to search for information on (household) consumption. Our goal was to find data on production, import and export as well. The primary focus was on consumption and export though, since the sport satellite is demand orientated.

4. Description of the sport economy measured

In almost all cases data availability is not sufficient to cover the ideal definition. A good example from the construction of the Dutch SSA is sport clothing. Ideally, the definition of sport clothing in the Dutch SSA encompasses sport characteristic clothing (e.g. jogging pants) and non-sport characteristic clothing used for sport activities (e.g. T-shirts). However, it is impossible to find high quality data on that latter category. We decided to use data on all clothes bought in sport shops and the sport sections of department stores as a proxy to measure the ideal definition. This operationalisation of the ideal definition is recorded. Not only it is important to make these operationalisations explicit in order to carry out follow-up studies, but they enable meaningful comparisons with SSA's of other countries as well. Appendix III gives an overview of the operationalisations used in the Dutch SSA per CPA category.

5. Determine the sport fractions

When all useful data are gathered, the sport fractions must be determined. It is advisable to look for separate fractions for household consumption, government consumption, production, import, export, taxes and subsidies. For example, if all consumption from the product group of 'sporting goods' is sport related, the sport fraction for the consumption of sporting goods is thus 100 percent. Further, suppose that 20 percent of all produced sporting goods ends up in intermediate consumption and that there are no imports or exports. Then the sport fraction of the production is 80 percent, for only 80 percent of all production is needed to produce the sporting goods that are used for final consumption. In an ideal situation, the fraction of the production can be crosschecked with detailed production statistics.

If multiple sources are available that point to different fractions, then the 'best source' should be used to determine the sport fraction. The best source is often one that supplies the national accounts. Reliability and future availability are the other most important criteria to choose one source above another.

It is not always necessary to determine a sport fraction. For some product groups it can be more convenient to determine the absolute level of household consumption (or production, import, and export) related to sport.

The final step in the process is to employ the sport fractions in the construction of the supply and use tables of the SSA. When separate fractions of the sport use table and the sport supply table are used in the construction of the SSA differences between supply and use may occur. In such cases alterations should be made for one or more cells in the sport supply or use table (e.g. production, import or export), to match the supply and use. In general the sport fractions based on the best data are not altered in this process. The construction of the sport SUT will be elaborated in the next section.

2.5 Constructing the sport SUT: an example

In the process of compiling the sport SUT, the sport (-related) share of each cell in the use table (see figure 2.2.2.1), supply table (see figure 2.2.1.1) and labour account table (see figure 2.2.3.1) needs to be determined. The Vilnius definition defines in which CPA categories possible sport-related content may be found. The construction of the sport SUT begins by determining the sport-related content for all cells of these sport related CPA's.

In practice, the construction of a sport SUT will always be constrained by data availability. For example, it is not uncommon to find data on final household consumption, import and export, but not for production or taxes. In such cases, different assumptions need to be made about the economic behaviour of the sport product at hand, in order to be able to give the full description of the behaviour of the product that is necessary to construct the complete sport SUT. The complete and fully integrated sport SUT are needed in order to derive macro economic indicators such as final expenditure, gross value added and GDP.

In the following sections we provide an example of how a complete sport SUT can be compiled for a product group (in this case sport shoes) when only a limited amount of data is available. Research on sport shoes resulted in sport fractions for consumption, import and export.¹⁷

Box 5. Data and assumptions in the Dutch SSA

Section 2.5 offers an overview of the assumptions made while compiling the Dutch sport SUT in different situations of data availability. This does not mean that all assumptions were held to be true in each instance.

In the Dutch SSA the 402 CPA categories of the Vilnius definition connect to 99 product groups ('goederengroepen'). For 65 product groups the sport relevance is determined in the process of compiling the SSA (see appendix III). In particular data are collected for the variables production, import, (household and/or government) consumption and export.

Table B5.1

Number of product groups based on evidence found in data in the Dutch SSA

	based on direct evidence	% of value based on direct evidence
number of product groups investigated	65	
production	29	67
import	49	54
consumption	60	96
export	53	89

Table B5.1 shows that almost all measurable consumption is based on evidence found in data sources on sport economics. In only a handful of cases consumption is estimated on the basis of production. Almost 90 percent of all export measured in the SSA is evidence based and two thirds of the total production value is directly based on sport statistics. Variables such as trade and transport margins, taxes and subsidies and value added are estimated using the assumptions shown in section 2.5.

In compiling the SSA most effort is put into the product groups and/or industries with the highest prospected value or relevance to sport. One might think of product groups related to clothing, most of the hotel and catering industry, government services, education, health care and most sport services. For these product groups at least three of the four variables in table B5.1 (production, import, consumption and export) were evidence based. Together they account for almost 70 percent of all sport final expenditure.

¹⁷ This was often the case in the construction of the Dutch SSA.

2.5.1 Constructing the sport use table

In the Dutch national accounts all CPA's related to sport shoes fall within one product group: CPA category 1 930 000 Shoes. Our research gives us three sport fractions for the product group of shoes: 13 percent of all consumption of shoes is sport related; 12 percent of all imported shoes consists of sport shoes; and 7 percent of all exported shoes are sport shoes.

As explained earlier the use table contains information about final consumption, intermediate consumption and value added. The question is how to make the best estimates for all of them, using the limited amount of data at our disposal.

Calculating final expenditure (column 27–34, row 1–46)

The first step is to determine final expenditure of sport shoes (column 27–34 of the use table). Determining final expenditure is the most important step in constructing the use table. Final expenditure can be broken down into export, final consumer expenditure, gross fixed capital formation and changes in inventories.

For sport-related export (column 27) we do not have to make any assumptions: 7 percent of the total export of shoes is sport related.¹⁸ Next we assume that the fraction for consumption (13 percent) is valid for consumption by households (column 28), consumption by NPISH's (column 29) and consumption by government (column 30). In this case we learn from the national accounts that there is only consumption of shoes by households. The estimate for sport-related consumption of shoes by households is therefore 13 percent of the total shoe consumption by households. Gross fixed capital formation (column 31) does not exist for sport shoes, as is stated in the Vilnius definition. The changes in inventories (column 32) related to sport shoes are assumed to be 13 percent of the changes in inventories for all shoes.

Using only information about export and consumption, we now have estimated all columns needed for calculating final demand. This process needs to be repeated for all product groups in the Vilnius definition.

Depending on what data are already available, different assumptions have to be made. For example, if there had not been any information available for export, we would have assumed that the relationship between consumption and export of shoes in general could have been applied to sport shoes as well. This would have given us the estimation for sport-related export of shoes. In general – when there is a lack of information – we assume that sport products within a particular product group can be described by similar products within the same product group.

Intermediate consumption (column 1–26, row 1–46)

Only in very rare occasions is detailed information on intermediate consumption (columns 1–25) available. Therefore it is common practice to estimate intermediate consumption per industry (column 1–25) on the basis of the sport production per industry, once the sport supply table is fully constructed. The assumption used is that for each unit of sport-related production the same amount of intermediate consumption is needed as for non-sport-related production. In other words, the proportion of sport-related production in a particular industry gives the proportion of intermediate consumption the industry uses to produce this sport-related production. Non-deductible VAT per industry is estimated in the same way.

Value Added (column 1–26, row 47–52)

Sport value added per industry (line 52) can easily be derived by subtracting intermediate consumption from the sport production for each industry, but only once the sport supply table is constructed.

¹⁸ Because in the Dutch economy re-exports play an important role, we did make the assumption that re-exports for sport related products can be described similar to not-sport related products. In general re-exports lead to less value added than exports of products produced in the Netherlands.

Whenever more reliable data are available, for instance about value added or changes of inventories, they are used to replace the estimates made by one or more of the assumptions described in this subsection.

2.5.2 *Constructing the sport supply table*

Total sport supply can be broken down into sport import and sport production. For sport shoes reliable data are only available for import.¹⁹ 12 percent of all shoe imports concern imports of sport shoes. In the absence of other data we have to estimate the production value of sport shoes.

By definition total sport supply must equal total sport use. So if, total sport use and sport import are known, sport production can be deducted.²⁰ But before the estimation of sport production (and/or import) can be made, total sport use in purchaser's prices (column 32) needs to be transformed in total sport use in basic prices (column 28).

Total sport use per CPA (use table, column 35) is given in the sport supply table (supply table, column 32). Again, when no other information is available, we assume that the relationship between purchasers' prices and basic prices for sport shoes is the same as the relationship between purchasers' prices and basic prices for all shoes in the product group. In this way we can make an estimate for total sport supply in basic prices.

Because both import and total sport supply (in basic prices) of sport shoes are known, we can deduce the production value of sport shoes. We found that the fraction of sport shoes produced in the Netherlands was nearly 0 percent. This means that nearly all sport shoes used by consumers in the Netherlands are imported. According to the Dutch national accounts all shoes are produced within one industry. It is possible though that a certain product is produced in a number of different industries. If that is the case, the production value of the sport-related product needs to be distributed over these industries. When there is no additional information, the distribution of the sport-related production is assumed to be similar to that of other products within the same product group.

The production value per industry is important in order to calculate intermediate consumption and value added in the sport use table (see subsection 3.1.1). Trade and transport margins (row 45) are estimated in the same way as intermediate consumption, on the basis of the relationship between sport-related production and total production per industry.

Using only information on import and total use, the necessary estimates in order to construct the row in the sport supply table for the product group of shoes were made. This process needs to be repeated for all product groups in the Vilnius definition.

2.5.3 *Derivation of the sport labour table*

Now that the sport SUT is complete, we can add information from the labour accounts. Data from the labour accounts are connected to the use table at industry level (NACE categories).²¹

Although detailed employment statistics are available for each industry, it is not uncommon for the data to lack information on sport-related employment. Many production units

¹⁹ Again, this was the most common case in during the construction of the Dutch SSA. In some cases data on production was available as well.

²⁰ In situations where no data on import are available either, the distribution between production and import for the whole product group is assumed to be valid for the sport relevant part of the product group as well.

²¹ At the level upon which the sport SUT is constructed there are 93 industries in which sport-related production exists. For each of these industries estimates are made of the number of (self-) employed persons, jobs and full-time equivalent jobs.

produce both sport- related and non-sport-related products. Therefore it is difficult, if not, impossible to determine how many people are involved in the production of sport-related production. For example, it is not possible to say how many people working at insurance companies are occupied with the insurance of sport-related goods or services (for example skiing holidays). The same holds true for the number of people involved in the production of sport shoes. For this reason, in the Dutch SSA employment figures are estimated on the basis of the sport-related production and sport value added for 93 different industries.

PART III: RESULTS

3. The Dutch SSA for 2006: Results

In this chapter we present the key results from the Dutch SSA for 2006. An more extensive account of the results is available in Dutch (De economische bijdrage van sport aan de Nederlandse economie, CBS/HAN 2012). The full sport SUT and sport labour table are found in appendix I. In table 6 from appendix 1 we show in detail how a number of important macro-economic indicators can be derived from the sport SUT.

3.1 Sport final expenditure

In the Netherlands sport final expenditure in 2006 were 11 390 million euros. Sport final expenditure are the sum of final consumption by households, NPISH's and government, gross fixed capital formation and changes in inventories. These expenditures can be found directly in the sport use table (column 28-34).

Table 3.1.1
(Sport) final expenditure (purchaser's prices), 2006

	2006
	<i>mln euro</i>
Final expenditures	891,885
Sport Final expenditures	11,390
	%
Sport share as percentage of total	1.3

The products that contribute most to sport final expenditure are sport products related to clothing, (means of) transportation, service, government, education, sporting services and fitness. The sport final expenditure constitute 1.3 percent of the total final expenditure in the Netherlands.

3.2 Sport value added

Gross value added is the value of production minus the value of intermediate consumption. This equals the sport gross value added. It is a measure of the contribution made by sport to gross value added of the economy as a whole. Sport gross value added can be found directly in the sport use table (column 26, row 52). In 2006 sport gross value added was 4 690 million euros. This is equivalent to 1 percent of the total gross value added.

Table 3.2.1
(Sport) value added (gross, basic prices), 2006

	2006
	<i>mln euro</i>
Value added	479,012
Sport Value added	4,690
	%
Sport share as percentage of total	1.0

The sectors Trade and repair, Hotels and restaurants, General government and Service activities n.e.c. (especially sport and fitness service activities) contributed the most to sport gross value added.

3.3 Sport gross domestic product (GDP)

Sport GDP at market prices is the sum of the gross values added of all resident producers of sport products at basic prices, plus all taxes minus subsidies on products. Sport GDP is a measure of the contribution of sport to total GDP in the Netherlands. In 2006 the sport domestic product was 5 240 million euros, this equals 1 percent of the total GDP in the Netherlands.

To calculate sport GDP taxes minus subsidies (columns 30-31, row 52) must be added to sport value added (column 26, row 46). Lastly, the value of paid minus imputed VAT²² must be added to this. Next a small correction must be added to account for the difference between paid and imputed VAT (column 34, row 46).

Table 3.3.1
(Sport) domestic product (gross, market prices), 2006

	2006
	<i>mln euro</i>
Domestic product	540,216
Sport domestic product	5,240
	%
Sport share as percentage of total	1.0

²² Paid minus imputed VAT is a minor statistical correction made in the (sport) SUT in order to fit taxes assigned to products with taxes assigned to industries.

3.4 Labour statistics

Key figures on the sport labour market are presented in figure 3.4.1. The results can be found directly in the sport labour table. 130 thousand people are employed in the sport economy. This means that 1.5 percent of all the employed people in the Netherlands is related to the sport economy. The greater part of the employed people working in the sport economy is employed in the following industries: Trade and repair, Hotels and restaurants, Transport, storage and communication, and Service activities n.e.c. (especially sport and fitness service activities).

Table 3.4.1
Key figures (sport) labour market, 2006

	Total economy	Sport economy	Sport share of total
	<i>x 1,000</i>		
Number of employed persons	8,392	130	1.5
Number of employees	7,227	110	1.5
Jobs of employed persons	8,920	140	1.6
Jobs of employees	7,626	120	1.6
Labour input of employed persons, in full-time equivalent jobs	6,583	100	1.4
Labour input of employees, in full-time equivalent jobs	5,773	80	1.4

PART IV: Conclusions

4. Conclusions and recommendations

In the last part of this methodological manual we discuss our conclusions and recommendations concerning the set-up of the first Dutch SSA. The aim of constructing this SSA was to provide high-quality macro-economic statistics on the Dutch sport economy, in accordance with the national accounts on the one hand, and in accordance with the recommendations of the EU WG on the other. Another objective was to contribute to the harmonisation and coordination of a European methodology for the construction of SSA. As such it aims to fuel the discussion internationally on the methodology behind SSA.

Constructing this SSA, computing the outcomes and comparing the results to other (international) studies resulted in several conclusions about a number of methodological issues. Discussing these issues is helpful for the interpretation of the outcomes of the SSA; it gives insight in how to deal with these issues in a future SSA and may help other countries when constructing a SSA.

These methodological issues can be classified into two categories: (1) gaps in data collection and (2) definition, classification, framework issues. We shall finish this part with a few interesting insights for future research concerning the Dutch SSA.

4.1 Gaps in data collection

1. The Dutch National accounts in its present form do not include the activities of sport federations or the organisation of sporting events. At this moment, there is no annual economic research on these two activities, even though their economic importance is growing. At first, figures on sport federations and sporting events were missing in the Dutch SSA. Eventually, an estimate was made of the figures on the economic contribution of sporting events in the Dutch SSA.

Recommendation: For an update of the SSA it would be useful to investigate the possibilities of including the activities of sport federations and the organisation of sporting events in the SSA. In future, it may be possible to obtain reliable annual data concerning sport federations and sporting events from the Dutch expert group evaluating sporting events or the NOC*NSF (NOC*NSF is the governing board of organized sports within the Netherlands).

2. The most important sources used while compiling the SSA originate from Statistics Netherlands, although various other sources were consulted as well. The continuity of the data sources from Statistics Netherlands is almost always guaranteed. Nevertheless, sometimes a survey is terminated. For instance, the Time Use Survey will almost certainly not be repeated. For a number of product groups the Time Use Survey was the key to determine the sport-related fraction. For data sources other than those available from Statistics Netherlands, it is even more likely that they will not be available for more recent years. Market research was an important data source for several product groups within the SSA. However, the disadvantage of market research is that it is an unreliable data source, since the necessary funding is not always guaranteed (as is the case for many Statistics Netherlands data sources). As a result market research for specific market segments is only rarely repeated. This could have consequences for the future, since data from a large market research on sport clothes and shoes expenditure were incorporated in the current Dutch SSA.

Recommendation: This will create the need to find new data sources if the SSA is repeated for more recent years. Use of other sources may possibly lead to breakages in previously found trends in the outcomes of the SSA. An even better solution is to maintain the current data sources.

4.2 Definition, classification and framework issues

1. The production and value added in the NACE category 92.6 – the sport industry – in the Dutch National accounts of 2006 is lower than should be expected when the sport statistics from Statistics Netherlands and other sources are consulted. After the revision of the Dutch National account, which is in progress at the moment, this underestimation will be solved. Because NACE category 92.6 is such an important part of the SSA, we have decided that the production and value added will only be revised for NACE category 92.6. Therefore, NACE 92.6 is the only NACE category for which a small deviation from the Nationals accounts of 2006 is allowed. This will allow for more accurate estimates of the production and value added of the Dutch sport economy to be made. Furthermore, it will prevent unrealistic mutations of this NACE category in a future SSA.
Recommendation: Revision of NACE category 92.6 in the Dutch National accounts.
2. Some of the guidelines of the Vilnius definition of sport can be interpreted in multiple ways. For instance the definition of sports used within the currently existing SSA's is not always clearly described. For example, is direct or indirect value added included? (In the Dutch SSA only direct value added is included). Therefore, it is difficult to compare the outcomes of the SSA from different countries.
Recommendation: Clear international guidelines on how to implement the Vilnius definition in the construction of a SSA. Furthermore, every country needs to be explicit in what they have included in their SSA. This can be solved by clear international guidelines for publication of a SSA.
3. In some situations, it was not possible to implement the Vilnius definition perfectly. While composing the SSA, certain choices were made that need to be re-evaluated in a future SSA. Future insights may result in different choices. For instance, in the current SSA the production of advertising and sponsorship is not included. One of the guidelines of the Vilnius definition states that only sporting goods and services directly delivered to the consumer or the government need to be considered. Advertising and sponsorship are delivered from businesses to businesses. This means that these are not covered directly in the Dutch SSA, although a part of advertising and sponsorship is covered indirectly through the prices of sporting goods and services.
Recommendation: Future research needs to address the issue how advertising and sponsorship should be included in the SSA.
4. In the Dutch SSA the so-called 'family resemblance test' is used when it is unclear whether or not a certain activity should be considered as a sport. The test is a tool to determine the distance of an activity to the 'core' Olympic sports. 'Physical intensity', 'Competition' and 'Leisure' (or 'playfulness') are the key criteria used in this test (see paragraph 1.2.2). It is a useful tool, however it lacks certain important elements. An example of a missing element is the motive of an activity. Running to catch the train is different from running to train for a marathon. The first activity should not be considered sport and the second should, even when the intensity of both activities is equal. Another issue is the criterion of physical intensity. The interpretation of this criterion is subjective. A physical intense activity for an eighty-year old would not even be considered tiring to a twenty-year old.
Recommendation: Develop a survey that can be used to investigate the missing elements (motive and physical intensity) of the family resemblance test.
5. The current SSA contains expenditures from hotel guests who stay at hotels for sport related motives (for example to attend a sporting event). However, if a hotel owns sport facilities, then all guest staying at that hotel pay for these facilities (i.e. incorporated in the hotel room price), regardless of the motive of their stay. This source of expenditure is not included in the SSA.
Recommendation: Advanced research on these specific expenditures and include them in a future SSA.

4.3 Insights for future research

1. There is a need to expand the Dutch SSA with data from more (recent) years. Following the economic contribution of sport across the years, gives possibilities to follow trends and developments. Annual updates give insight into the effects of important sporting events, such as the Olympics and the World Cup football finals, and the effects of policy changes.
2. The in- and output tables can help with the discussion about the finances of sport. What part of the Dutch economy benefits the most from the money the Dutch government invests in sports? Is there any unwanted economic growth (for instance, sports injuries or the deployment of police at football matches).
3. The SSA only gives insight into the formal sport economy. Is it also possible to make an estimation of the black economy of sport?
4. The focus of the current SSA is on macro-economic indicators. There is also a need for more detailed information. Examples of deeper breakdowns of the SSA are Small and medium-sized enterprises (SME's), regional breakdowns (for instance municipalities), specific sports (for instance football), specific industries (for instance the hotel, restaurant and catering industry), or specific populations (for instance young people). In addition it should be possible to construct quarterly figures of the SSA to investigate seasonality in the sport economy.

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Table 1**Sport economy: main macroeconomic balancing, 2006**

	2006
	<i>mln euro</i>
<i>Total Netherlands</i>	
Final expenditure	891,885
Value added (gross, basic prices)	479,012
Domestic product (gross, market prices)	540,216
<i>Sport economy¹⁾</i>	
Final expenditure sport economy	11,390
Value added sport economy (gross, basic prices)	4,690
Domestic product sport economy (gross, market prices)	5,240
	%
<i>Contribution sport economy</i>	
Final expenditure sport economy	1.3
Value added sport economy (gross, basic prices)	1.0
Domestic product sport economy (gross, market prices)	1.0

¹⁾ All values on the sports-related economy are rounded to tens of millions of euros.

Table 2**Sport economy: key figures labour market, 2006¹⁾**

	2006
	<i>x 1,000</i>
<i>Total Netherlands</i>	
Number of employed persons	8,392
Number of employees	7,227
Jobs of employed persons	8,920
Jobs of employees	7,626
Labour input of employed persons, in full-time equivalent jobs	6,583
Labour input of employees, in full-time equivalent jobs	5,773
<i>Sport economy</i>	
Number of employed persons	130
Number of employees	110
Jobs of employed persons	140
Jobs of employees	120
Labour input of employed persons, in full-time equivalent jobs	100
Labour input of employees, in full-time equivalent jobs	80
	<i>%</i>
<i>Contribution sport economy</i>	
Number of employed persons	1.5
Number of employees	1.5
Jobs of employed persons	1.6
Jobs of employees	1.6
Labour input of employed persons, in full-time equivalent jobs	1.4
Labour input of employees, in full-time equivalent jobs	1.4

¹⁾ All values on the sports-related economy are rounded to tens of millions of euros.

Table 3**Sport economy: Labour productivity in full-time equivalent job by industry¹⁾**

	Value added (gross, basic prices) per full-time equivalent job, 2006
	<i>x 1,000 euro</i>
<i>Total Netherlands</i>	73
Agriculture, forestry and fishing	50
Mining and quarrying	2,209
Manufacturing	79
Electricity, gas and water supply	315
Construction	57
Trade, hotels, restaurants and repair	57
Transport, storage and communication	84
Financial and business activities	95
General government	69
Care and other service activities	49
<i>Sport economy</i>	49

¹⁾ Labour productivity is the value added (gross, basic prices) per full-time equivalent job.

Table 4

Supply table Sport Satellite Account, basic prices (mln euro), 2006¹⁾

	Manufacture of food products, beverages and tobacco	Manufacture of textile and leather products	Manufacture of paper, paper products, publishing and printing	Manufacture of transport equipment	Other manufacturing (incl 7: manufacture of chemicals, chemical products and man-made fibres)	Construction	Trade and repair
	3	4	5	12	13	15	16
6 Food products and beverages	100	0	0	0	0	0	0
8-10 Manufacture of textile and leather products	0	40	0	0	0	0	40
13 Printed matter and recorded media	0	0	170	0	0	0	0
15 Chemical products and man-made fibres	0	0	0	0	70	0	0
26 Other transport equipment	0	0	0	310	10	0	0
27 Furniture and other manufactured goods	0	0	0	0	50	0	0
30 Construction work	0	0	0	0	0	250	0
31 Repair of consumer goods (incl. motor vehicles)	0	0	0	0	0	0	40
32 Hotel and restaurant services	0	0	0	0	0	0	0
33 Transport services	0	0	0	0	0	0	0
39 Public administration, defence, social security	0	0	0	0	0	0	0
40 Education	0	0	0	0	0	0	0
41 Health and social services	0	0	0	0	0	0	0
42 Services n.e.c.	0	0	0	0	0	0	0
43 Not imputed goods and services	0	0	0	0	0	0	0
45 Trade and transport margins	0	0	0	0	0	0	1,250
46 Total (= row 56 use table)	100	40	170	310	130	250	1,330

¹⁾ All values are rounded to tens of millions of euros.

Table 5

Use table Sport Satellite Account, purchasers' prices (mln euro), 2006¹⁾

	Manufacture of food products, beverages and tobacco	Manufacture of textile and leather products	Manufacture of paper, paper products, publishing and printing	Manufacture of transport equipment	Other manufacturing (incl 7: manufacture of chemicals, chemical products and man-made fibres)	Construction	Trade and repair	Hotels and restaurants	Transport, storage and communication	General government
	3	4	5	12	13	15	16	17	18	22
6 Food products and beverages	.	.	.	.	.	.	.	.	.	.
8-10 Manufacture of textile and leather products	.	.	.	.	.	.	.	.	.	.
13 Printed matter and recorded media	.	.	.	.	.	.	.	.	.	.
15 Chemical products and man-made fibres	.	.	.	.	.	.	.	.	.	.
26 Other transport equipment	.	.	.	.	.	.	.	.	.	.
27 Furniture and other manufactured goods	.	.	.	.	.	.	.	.	.	.
30 Construction work	.	.	.	.	.	.	.	.	.	.
31 Repair of consumer goods (incl. motor vehicles)	.	.	.	.	.	.	.	.	.	.
32 Hotel and restaurant services	.	.	.	.	.	.	.	.	.	.
33 Transport services	.	.	.	.	.	.	.	.	.	.
39 Public administration, defence, social security	.	.	.	.	.	.	.	.	.	.
40 Education	.	.	.	.	.	.	.	.	.	.
41 Health and social services	.	.	.	.	.	.	.	.	.	.
42 Services n.e.c.	.	.	.	.	.	.	.	.	.	.
43 Not imputed goods and services	.	.	.	.	.	.	.	.	.	.
45 Non-deductible VAT	0	0	0	0	0	0	0	0	0	80
46 Intermediate consumption (rows 6-45)	70	30	90	220	90	170	550	340	350	770
52 Value added	30	10	80	90	50	80	780	340	170	1,600
56 Total (row 46+52) (=row 46 supply table)	100	40	170	310	130	250	1,330	680	510	2,380

¹⁾ All values are rounded to tens of millions of euros.

Hotels and restaurants	Transport, storage and communication	General government	Health and social work activities	Service activities n.e.c.	Good and services n.e.c.	Domestic supply (basic prices) (columns 3-25)	Imports of goods (cif) and services	Supply (basic prices) (columns 26-27)	Trade and transport margins, taxes on products (excl. VAT) and subsidies on products (-)	Total supply (purchasers' prices) (columns 28-31) (=column 35 use table)
17	18	22	23	24	25	26=3-25	27	28=26-27	29-31	32=28-31
0	0	0	0	0	0	100	40	130	40	180
0	0	0	0	0	0	80	550	630	530	1 160
0	0	0	0	0	0	170	30	200	10	210
0	0	0	0	0	0	70	220	290	100	380
0	0	0	0	0	0	330	320	650	250	900
0	0	0	0	0	0	50	500	540	330	870
0	0	0	0	0	0	250	0	250	0	250
0	0	0	0	0	0	40	0	40	0	40
660	0	0	0	430	0	1,090	0	1,090	0	1,090
0	490	0	0	0	0	490	10	500	0	500
0	30	990	0	0	0	1,010	0	1,010	0	1,010
0	0	1,210	30	0	0	1,230	0	1,230	0	1,230
0	0	0	350	0	0	350	0	350	0	350
30	0	180	0	2,320	0	2,520	0	2,520	-120	2,400
0	0	0	0	0	150	150	110	260	40	310
0	0	0	0	0	0	1,250	0	1,250	-1,250	0
680	510	2,380	380	2,750	150	9,180	1,780	10,960	-80	10,880

Health and social work activities	Service activities n.e.c.	Good and services n.e.c.	Intermediate consumption (columns 3-25)	Exports of goods (fob) and services	Final consumption expenditure of households	Non-profit institutions serving households	Final consumption expenditure of general government	Final capital formation (gross)	Changes in inventories and paid minus imputed VAT	Total final expenditure in purchasers' prices (columns 27-34) (=column 32 supply table)
23	24	25	26=3-25	27	28	29	30	31	32-34	35=27-34
.	.	.	.	60	110	0	0	0	0	180
.	.	.	.	370	790	0	0	0	10	1,160
.	.	.	.	30	180	0	0	0	0	210
.	.	.	.	230	40	0	110	0	0	380
.	.	.	.	270	640	0	0	0	-10	900
.	.	.	.	460	410	0	0	0	0	870
.	.	.	.	0	0	0	0	250	0	250
.	.	.	.	0	40	0	0	0	0	40
.	.	.	.	0	1,090	0	0	0	0	1,090
.	.	.	.	10	450	0	40	0	0	500
.	.	.	.	0	0	0	1,010	0	0	1,010
.	.	.	.	0	20	0	1,210	0	0	1,230
.	.	.	.	0	100	0	250	0	0	350
.	.	.	.	0	1,440	950	10	0	0	2,400
.	.	.	.	190	110	10	0	0	0	310
10	60	0	150	0	480	0	0	20	0	510
100	1,620	90	4,490	1,620	5,890	960	2,650	270	10	11,390
280	1,130	60	4,690							
380	2,750	150	9,180	1,620	5,890	960	2,650	270	-	-

Table 6

Sport economy: composition of the main macroeconomic indicators, 2006

	Sport economy	Total Netherlands
	<i>mln euro</i>	
final consumption expenditures	9,500	390,317
fixed capital formation	+ 270	106,373
exports of goods and services	+ 1,620	393,475
changes in inventories	+ 10	1,720
Final expenditure (purchasers' prices)	11,390	891,885
intermediate consumption (purchasers' prices)	+ 542,771	542,771
non-deductible VAT	- 510	39,888
cif/fob-adjustment for exports + paid minus imputed VAT (not in sport SUT)	+ x	2,727
Total use / supply (purchasers' prices)	10,880	1,397,495
imports of goods and services (cif prices)	- 1,780	351,669
trade and transport margins, taxes and subsidies on products	- -80	21,160
Production (basic prices)	9,180	1,021,783
intermediate consumption (purchasers' prices)	- 4,490	542,771
Value added (gross, basic prices)	4,690	479,012
non-deductible VAT	+ 510	39,888
taxes on products	+ x	25,329
subsidies on products	- x	4,169
paid minus imputed VAT	+ 0	156
GDP (gross, purchasers' prices)	5,240	540,216

Appendix II: Classifications

Classifications play an important role in the SSA: they provide the framework in which economic processes can be described. The Vilnius definition of sport is based on two European harmonized classifications: the NACE (or Nomenclature générale des Activités économiques dans la Communauté Européenne) and the CPA (or Classification of Products by Activity). These classifications themselves are based on the International Standard Industrial Classification of all Economic Activities (ISIC) and Central Product Classification (CPC) used by the United Nations. The aim of this appendix is to show the connection of the NACE and CPA classification with the classifications used in the Dutch National accounts.

In figure A2.1 the connection between the different classifications is represented schematically²³. In order to make the connection from the NACE classification of the Vilnius definition of sport to the classification used in the Dutch national accounts, one needs to connect the NACE to the production side in the Dutch national accounts.

The NACE classification translated to the Dutch situation is called the SIC'93 or SBI'93 (Standard Industry Classification, or Standaard Bedrijfsindeling in Dutch). This classification differs from the NACE in that the Dutch version (as is common practice in other countries) is more detailed than the NACE and is specially suited to describe the Dutch economy. The classification of industries used in the Dutch national accounts (referred to as Regkols) is based on the SIC'93, albeit less detailed. The connection between the NACE-categories of the Vilnius definition and the Dutch national accounts is preserved at all times through the SBI'93.

The product classification used in the Dutch national accounts is directly based on the CPA classification. This means that the CPA-categories of the Vilnius definition can be translated directly into the classification of the Dutch national accounts (referred to as goederengroepen). In general the Dutch product group classification is less detailed than the CPA. The CPA categories of the Vilnius definition translate into 99 unique product groups in the Dutch national accounts.²⁴

The mutual connection between the different classifications guarantees that the SSA remains conceptually consistent with the national accounts at all times, as well as with international classifications. Notice however, that it is inherent to the SSA that data collection will take place on a more detailed level than that of the national accounts. After all, the SSA is a refinement of a (sub) section of the total system of national accounts.

Figure A2.1

Relation between international and national classifications

Level	Economic activities	Product classifications
United Nations	ISIC, rev 3.1	CPC
European Union	NACE, rev 1.1	CPA, 2002
Netherlands	SIC'93 / SBI'93	
Dutch national accounts	'regkols'	'goederengroepen'

²³ For an extensive overview see the table of connections between classifications on the CBS-website (<http://www.cbs.nl/NR/rdonlyres/C5E31C16-BECB-4025-B70B-250F70387C1D/0/schemaclassificaties.pdf>).

²⁴ Excluding (27) product groups that fully end up in intermediate consumption and product groups related to trade and transport margins.

Appendix III: Operationalisation of the sport economy in the Dutch SSA

Product group code (2006D)	Description of product group	Line number in National accounts publication	Operationalisation of sport relevant part	CPA-code (2002)	Description of CPA
129100	Ov. Dieren	43	Horses for (recreational) equestrian sports	01.22.13	Horses, asses, mules and hinnies, live
1588107	Kind-/dieetv	6	Dietary supplement (for athletes)	15.88.10	Homogenized food preparations and dietetic food
1598124	Fris/waters	6	Sportenergy drinks used during sports activities	15.98.99	Industrial services for soft drinks
1740110	Beddengoed	8-10	Sleeping bags for mountaineering and other outdoor sports	17.40.24	Sleeping bags; articles of bedding
1759900	Ov.textl.war	8-10	Tents and camping equipment for sport related use	17.40.22	Tarpaulins, awnings and sunblinds; sails for boats, sailboards or landcraft; tents and camping goods
				17.40.23	Parachutes (including dirigible parachutes) and rotochutes; parts thereof
				17.40.90	Repair services of tarpaulins and camping equipment, and other made-up articles
				17.52.00	Cordage, rope, twine and netting
1821000	Werkkleding	8-10	Workwear used for sports activities	18.21.00	Workwear
1822900	Bovenkleding	8-10	Other outerwear used for sports activities	18.10.10	Leather clothes
				18.22.00	Other outerwear used for sports activities; Riding dresses
				18.23.11	Men's or boys' shirts, knitted or crocheted
				18.23.13	Women's or girls' blouses, shirts and shirt-blouses, knitted or crocheted
				18.23.21	Men's or boys' shirts, not knitted or crocheted
				18.23.23	Women's or girls' blouses, shirts and shirt-blouses, not knitted or crocheted
				18.24.31	Clothing accessories of leather or of composition leather
1823900	Onderkleding	8-10	Underwear used for sports activities	18.23.12	Men's or boys' underpants, briefs, pyjamas, dressing gowns and similar articles, knitted or crocheted
				18.23.14	Women's or girls' suits, ensembles, jackets, dresses, skirts, trousers, bib and brace overalls, shorts, knitted or crocheted
				18.23.22	Men's or boys' singlets and other vests, underpants, briefs, pyjamas, dressing gowns, not knitted or crocheted
				18.23.24	Women's and girls' singlets and other vests, slips, petticoats, panties, nightdresses, bath robes, dressing gowns and similar articles, not knitted or crocheted
				18.23.25	Brassieres, girdles, corsets, braces, suspenders, garters and similar articles and parts thereof, not knitted or crocheted
				18.23.30	T-shirts, singlets and other vests, knitted or crocheted
				18.24.00	Other wearing apparel and accessories n.e.c.
1824990	Ov. kleding	8-10	Other clothing used for sports activities	18.24.00	Other wearing apparel and accessories n.e.c.
1920900	Lederwrn/leer	8-10	Saddle goods	19.20.11	Saddlery and harness for any animal, of any material
		8-10			
1930000	Schoenen		Footwear used for sports activities (excluding sneakers)	19.30.00	Footwear
2211200	Studieboeken	13	Textbooks and manuals with sport related content (e.g. books about chess and draughts)	22.11.21	Books, brochures, leaflets and the like; printed
				22.11.22	Books, brochures, leaflets and the like; electronic

Product group code (2006D)	Description of product group	Line number in National accounts publication	Operationalisation of sport relevant part	CPA-code (2002)	Description of CPA
2211900	Ov. boeken	13	Books with sport related contents	22.11.10	Printed books, brochures, leaflets and similar printed matter, in single sheets
				22.11.31	Dictionaries and encyclopaedias, and serial instalments thereof; printed
				22.11.32	Dictionaries and encyclopaedias, and serial instalments thereof; electronic
				22.11.41	Atlases and other books of maps or charts; printed
				22.11.42	Atlases and other books of maps or charts; electronic
				22.11.51	Maps and hydrographic or similar charts, globes, other than in book form; printed
				22.11.52	Maps and hydrographic or similar charts, globes, other than in book form; electronic
2212101	Dagbl.abonn.	13	Sport newspapers, sport enclosures in newspapers, journals and periodicals	22.12.11	Newspapers, journals and periodicals, appearing at least four times a week; printed
				22.12.12	Newspapers, journals and periodicals, appearing at least four times a week;electronic
2213201	Vaktijds.abo	13	Subscriptions to journals and periodicals with sport related content (topics as sport and society, sport and psychology, sport and health)	22.13.11	Newspapers, journals and periodicals, appearing less than four times a week; printed
				22.13.12	Newspapers, journals and periodicals, appearing less than four times a week; electronic
2213901	Ov.tijds.abo	13	Subscriptions to other periodicals with sport as the main topic	22.13.11	Newspapers, journals and periodicals, appearing less than four times a week; printed
				22.13.12	Newspapers, journals and periodicals, appearing less than four times a week; electronic
2219000	Naslw/Kalend	13	Calenders and reference books with sport as the main topic	22.11.21	Books, brochures, leaflets and the like; printed
				22.11.22	Books, brochures, leaflets and the like; electronic
				22.15.00	Illustrated postcards; printed cards bearing greetings and the like
2442100	Geneesmiddel	15	Pharmaceutical preparations used for sports activities (e.g. medical care for athletes)	24.42.11	Medicaments, containing penicillins or other antibiotics
				24.42.12	Medicaments, containing hormones, but not antibiotics
				24.42.13	Medicaments, containing alkaloids or derivatives thereof, but not hormones or antibiotics
2442210	Sera/vaccins	15	Antisera and vaccines used for sports activities (e.g. after injury during sports activities)	24.42.21	Antisera and vaccines
2442240	Gaas/verband	43	Adhesive dressings, catgut and similar materials; first-aid boxes used for sports activities (e.g. after injury during sports activities)	24.42.24	Adhesive dressings, catgut and similar materials; first-aid boxes
2511010	Autoband ed.	43	Pneumatic rubber tyres used for motor sports cars	25.11.11	New pneumatic tyres, of rubber, of a kind used on motor cars
2511099	Ov. Banden	43	Pneumatic rubber tyres for bicycles	25.11.12	New pneumatic tyres, of rubber, of a kind used on motorcycles or bicycles
				25.11.13	New pneumatic tyres, of rubber, of a kind used on buses, lorries or aircraft
				25.11.15	Inner tubes, solid or cushion tyres, interchangeable tyre treads and tyre flaps, of rubber
				29.60.92	Maintenance and repair services of weapons and weapons systems
3340100	Bril/lenzen	43	Goggles used by diving/wswimming athletes; contact lenses used by diving/wimming athletes; spectacles used by alpinists, climbers	33.40	Contact lenses; spectacle lenses of any material; Spectacles, goggles and the like, corrective, protective or other
3410200	Pers. auto's	43	Motor vehicles used for motor sports (racecars)	34.10.21	Vehicles with spark-ignition engine of a cylinder capacity 1 500 cc, new

Product group code (2006D)	Description of product group	Line number in National accounts publication	Operationalisation of sport relevant part	CPA-code (2002)	Description of CPA
				34.10.22	Vehicles with spark-ignition engine of a cylinder capacity > 1 500 cc, new
				34.10.23	Vehicles with compression-ignition internal combustion piston engine (diesel or semi-diesel), new
				34.10.24	Other motor vehicles for the transport of persons n.e.c.
				34.10.53	Vehicles for travelling on snow; golf cars and the like, with engines
3512000	Plezierboten	26	Sailboats for pleasure or sports, including maintenance and repair	35.12.00	Sailboats for pleasure or sports
3541100	Motorfiets	26	Motorcycles used for motor sports	35.41.00	Motorcycles and cycles with an auxiliary motor
3542000	Fietsen/ond	26	Bicycles and other cycles, not motorized used for sports activities	35.42.00	Bicycles and other cycles, not motorized
3640000	Sportartikel	27	Fishing rods, fishhooks, other line fishing tackle, articles for hunting and fishing n.e.c. skis, bindings and skisticks, skates, waterskis, surfboards, sailboards, rackets, golf equipment, other sports goods, repair and maintenance services of sport equipment	36.40.00	Sports goods
3650000	Speelgoed	27	Billiards, bowling alleys, video sports games, video game consoles used for playing sports games, playing cards, chess and draught games, darts, etc.	36.50.00	Games and toys
4521021	Nw.bouw geb	30	Sports-infrastructure (swimming pools, sport centres, fitness centres, other buildings for sport)	45.21.00	General construction for structures for sport and recreation installations
4523139	Ns/vlieg/Sfac. gww	30	Sports-infrastructure (exclusive buildings)	45.23.00	Flatwork for stadia and sport grounds
4524000	Waterbw. gww	30	General coastal and port construction work used for sports	45.24.11	General coastal and port construction work
4529022	Oh. b&u. geb	30	General construction of buildings and civil engineering works used for sports n.e.c.	45.21.00	General construction of buildings and civil engineering works
5029000	Rep. Auto/motor	31	Maintenance and repair of racecars and motorcycles used for motor sports	50.20.00 50.40.40	Maintenance and repair of motor vehicles Maintenance and repair services of motorcycles
5510000	Hotels/pens.	32	Hotel services for athletes, visitors to sport events and for persons on a sports holiday	55.10.10	Hotel services
5520000	Ov. logies	32	Youth hostel and camping site services for athletes, visitors to sport events and persons on a sports holiday	55.21.10 55.22.10 55.23.00	Youth hostel services Camping site services, including caravan site services Children's holiday camp, holiday centres and holiday homes services
5530000	Maalt.verstr	32	Meals serving services for athletes and visitors of sport events	55.30.00	Meals serving services
5540000	Drank verstr	32	Beverage serving services for athletes and visitors to sport events	55.40.10	Beverage serving services
5550000	Catering	32	Canteen services for athletes and visitors to sport events	55.51.10 55.52.13	Canteen services Catering services for other enterprises and other institutions
6010100	Ns reis.verv	33	Interurban passenger and vehicle transportation by railway for athletes and visitors to sport events	60.10.00	Interurban passenger transportation by railway
6029100	Ov.pers.verv	33	Taxi services and transport services n.e.c. for athletes and visitors to sport events	60.22.00 60.23.12	Taxi services and rental services of passenger cars with driver Sightseeing-bus services
6330010	Reisorganis.	33	Organization of package tour services related to sports holidays	63.30.11	Organization of package tour services
6330020	Reisbemidd.	33	Specialised travel guides for sports holidays	63.30.12 63.30.13 63.30.14	Sales of travel tickets, lodging and package tours on a fee or contract basis Tourist information services Tourist guide services
6420000	Telecommunic	43	Subscription fees for radio/TV inasmuch they can be attributed to sport related broadcasting	64.20.00	Telecommunication

Product group code (2006D)	Description of product group	Line number in National accounts publication	Operationalisation of sport relevant part	CPA-code (2002)	Description of CPA
6603000	Ovverzeker.	43	Insurance services related to sport: insurance of horses, pleasure boats, racecars and motorcycles, trailers (used for sport), sports bicycles, winter sports holidays and insurance related to dangerous sports	66.03.00	Insurance services
7500010	Overh. Dnstr	39	Public administration of sports services	75.12.00 75.30.00	Administrative educational, recreational, cultural and religious services Compulsory social security services concerning sickness, maternity or temporary disablement benefits
8010010	Gesubs.ondw.	40	Gymclasses, physical education classes, swimming lessons, education related to sports, sportmanagement, sport teaching, sports physician, sports physiologist, sports physiotherapist, etc.	80.21.00 80.30.00	Second stage general secondary education services Post-secondary technical and vocational education services
8010030	Lv.ondw.drdrn	40	Education fees paid for by third parties for education services delivered by the public educational system	80.21.00 80.30.00	Second stage general secondary education services Post-secondary technical and vocational education services
8041000	Autorijles	40	Specialised driving lessons for race-drivers, flying school services for amateur pilots	80.41.12	Flying and sailing school services
8511100	Ziekenh.zorg	41	Hospital activities for athletes (in order to provide medical care for athletes or after injury during sports activities)	85.11.11	Hospital surgical services
8512100	Huisartsenzg	41	Consultations and treatment by general practitioners for athletes (in order to provide medical care for athletes or after injury during sports activities)	85.11.12 85.11.14 85.12.11	Hospital medical services Hospital rehabilitation services Consultations and treatment by general practitioners
8513000	Tandheel.zg	41	Orthodontic services for athletes (after injury during sports activities)	85.13.11	Orthodontic services
8514000	Paramed.zorg	41	Services provided by physiotherapists, nurses and other para-medical persons, residential health facilities services.	85.14.11 85.14.12 85.14.13 85.14.15	Services provided by midwives Services provided by nurses Services provided by physiotherapists and other para-medical persons, including homeopathological and similar services without services of psychotherapists Residential health facilities services other than hospital services
8515000	Ovcur&ondrst	41	Ambulance services after sport injuries and sport related services provided by medical laboratories and blood banks	85.14.14 85.14.16 85.14.17	Ambulance services Services provided by medical laboratories Services provided by blood, sperm and transplant organ banks
8516000	Prevent.zorg	41	Consultations and treatment by medical and surgical specialists in ambulatories (in order to provide medical care for athletes or after injury during sports activities)	85.12.12	Consultations and treatment by medical and surgical specialists in ambulatories
8520000	Veterin.dnst	41	Veterinary services for horses used for equestrian sports	85.20.00	Veterinary services for pet animals
9211000	FilmsVideo's	42	Videos and DVD's with sports contents	92.11.11 92.11.12 92.11.20	Cinematographic film, exposed and developed, of a width 35 mm Cinematographic film, exposed and developed, of a width < 35 mm Magnetic tapes with sound and vision recordings
9221000	Radio/tv pub	42	Public Radio and television services related to sport	92.20.11 92.20.12 92.20.20	Radio services Television services Sale of TV/radio advertising time
9239000	Amusement	42	Ballrooms and dance instructors' services related to dance as a sport, excluding ballet	92.34.12	Ballrooms and dance instructors' services
9261000	Sport ama	42	Exploitation of sportaccomodations (e.g. swimming pools, stadiums, marinas), sport organisations (sporting clubs, schools for martial arts, sport instructors, riding schools), sport associations, sport federations, sport event organisation services and other services related to sports events n.e.c. (not taxable)	92.61.10	Swimming pool and stadium operation services

Product group code (2006D)	Description of product group	Line number in National accounts publication	Operationalisation of sport relevant part	CPA-code (2002)	Description of CPA
				92.61.10	Other sport arena and stadium operation services
				92.62.11	Sports event promotion services
				92.62.12	Sports event organization services
				92.62.13	Other services related to sports events n.e.c.
9262000	Sport prof	42	Exploitation of sportaccomodations (e.g. swimming pools, stadiums, marinas), sport organisations (sporting clubs, schools for martial arts, sport instructors, riding schools), sport associations, sport federations, sport event organisation services and other services related to sports events n.e.c. (taxable)	92.61.10	Swimming pool and stadium operation services
				92.61.10	Other sport arena and stadium operation services
				92.62.11	Sports event promotion services
				92.62.12	Sports event organization services
				92.62.13	Other services related to sports events n.e.c.
9271000	Gokwezen	42	Betting on sports and lotteries organised by major sport organisations	92.71.10	Lottery and other betting services
9272000	Ov.recreatie	42	Renting of boats	92.72.00	Recreation parks and beach services
9309000	Ov.pers.dnst	42	Services of fitness centres	93.04.10	Services of reducing and slendering salons, massage salons and fitness centres

Appendix IV: Main sources used for compiling the Dutch SSA

This appendix provides an overview of some of the important sources used in compiling the SSA, followed by a brief description. Although all main sources originate from Statistics Netherlands, various other sources were consulted as well.

1. *Registers*

General Business Register

The General Business Register (GBR) contains all types of activity units that are relevant to the economic process in the Netherlands, and as such constitutes the population for national accounts. In the GBR, which is only used for statistical purposes, units are classified by their activity (SIC) and size class (based in the number of employees). The latter is used in industrial surveys: all large units are surveyed using a detailed questionnaire, while smaller units are sampled and are given a less detailed questionnaire. Although statistical information is derived from the GBR, it is mainly used as instrument of coordinating the program on industrial statistics. It enables checks to avoid double counting, point at gaps in the data sources and, last but not least, it provides a sampling framework for survey statistics.

The GBR forms the basis of the survey populations (and samples) of all so-called 'institutional statistics' made by Statistics Netherlands, such as the production statistics, PRODCOM, and so on.

2. *Data on industries*

Production Statistics and PRODCOM

Production statistics cover a larger part of the economy: manufacturing, public utilities, construction, wholesale and retail trade, hotels, restaurants, catering, transportation and communication, commercial services and a part of the personal services industry.

Production statistics provide survey-based data and are exhaustive for large units and sampled for smaller units on output, intermediate consumption, wages and value added. The manufacturing output at the commodity level is created using the so-called PRODCOM statistics. In these statistics units are asked to report their output detailed on a CPA-breakdown. The breakdown of intermediate consumption to the CPA-commodities is part of the production statistics questionnaire. Smaller units obtain a less detailed questionnaire.

For other branches outside manufacturing, a less detailed specification of both output and intermediate consumption is asked. In the food processing industry the production statistics are used in combination with other detailed information on specific items such as slaughtering, beer brewing, etc.

Health Cost and Financing Statistics

A specially designed survey is conducted in order to collect a broad scope of health service-related data. The obtained data are processed into a form similar to that of the production statistics. A part of these data are incorporated within the national accounts.

Government and financial institutions

Government data are derived from the central government administration, local government and education institutions. Data on financial services are provided by the supervising bodies of the (central) banking and insurance (insurance chamber) industries.

3. *Data on final expenditure*

Foreign trade

Data on foreign trade are based on two types of data sources. Data on foreign trade outside the European Union are based on customized data. For intra European Union-trade survey data are collected. Both are classified using the harmonised nomenclature, which is much more detailed than the supply and use tables of national accounts. The registration allows for a breakdown of imports and exports in regular, process and transit flows to be made. Data on the country of origin and destination are available in order to distinguish between trade within and outside European Union.

New survey-based statistics were compiled by Statistics Netherlands for the 'trade in services' from 2003 onwards.

Budget survey

The household budget survey is a sample of approximately 1500 households, that provides detailed data on household expenditure according to the type of goods and services. Combined with retail trade statistics, the budget survey is an important source of information for estimating household consumption.

Investment statistics

A separate statistic is available for gross fixed capital formation, which is coordinated with the production statistics since both surveys are based on the same population and share the same units. This statistic provides data on fixed capital formation by type of asset and industry. The classification of assets matches the requirements of national accounts.

Appendix V: Glossary²⁵

Ancillary activity

An ancillary is a supporting activity undertaken within an enterprise in order to create the conditions within which the principal or secondary activities can be carried out. Ancillary activities generally produce services that are commonly found as inputs into almost any kinds of productive activity and the value of an individual ancillary activity's output is likely to be small compared to other activities of an enterprise (e.g. cleaning and maintenance of buildings).

Basic price

The basic price is the amount received by the producer from the purchaser per unit of goods or services produced as output minus any tax duties and plus any received subsidies on that unit as a consequence of its production or sale. The basic price does not include any transport charges as these are invoiced separately by the producer.

Changes in inventories (including work-in-progress)

Changes in inventories (including work-in-progress) consist of changes in: (a) stocks of outputs and (b) stocks of products. Stocks of outputs occur when output units are still held by the units that produced them prior to their being further processed, sold, delivered to other units or used in other ways. Stocks of products occur when products that are intended to be used for intermediate consumption or for resale without further processing are acquired from producers. Stocks of products are measured by the value of the entries in inventories minus the value of withdrawals and the value of any recurrent losses of goods held in inventories.

Compensation of employees

Compensation of employees is the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period.

Durable consumer good

Durables consumer goods are durable goods acquired by households for final consumption (i.e. those that are not used by households as stores of value or by unincorporated enterprises owned by households for purposes of production); they may be used for purposes of repeated consumption or continuous consumption over a period of a year or more.

Consumption

Consumption is an activity in which institutional units use up goods or services; consumption can be either intermediate or final.

Consumption good or service

A consumption good or service is one that is used (without further transformation in production) by households, NPISHs or government units for the direct satisfaction of individual needs or wants or the collective needs of members of the community.

Deductible VAT

Deductible VAT is the VAT payable on purchases of goods or services intended for intermediate consumption, gross fixed capital formation or for resale which a producer is permitted to deduct from his own VAT liability to the government in respect of VAT invoiced to his customers.

²⁵ Unless stated otherwise all entries come from: <http://unstats.un.org/unsd/nationalaccount/glossary.asp>.

Durable good

A durable good is one which may be used repeatedly or continuously over a period of more than a year, assuming a normal or average rate of physical usage.

Employers' social contributions

Employers' social contributions are payments by employers which are intended to secure the social benefits rights of their employees should certain events occur or certain circumstances exist, that may adversely affect their employees' income or welfare, such as sickness, accidents, redundancy, retirement, etc.

Expenditures

Expenditures are the values of the amounts that buyers pay, or agree to pay, to sellers in exchange for goods or services provided by the seller or other institutional units designated by the buyers.

Export of goods

Export of goods and services consists of sales, barter, gifts or grants, in goods or services from residents to non-residents.

Final consumption expenditure

Final consumption consists of goods and services used up by individual households or the community to satisfy their individual or collective needs or wants.

Final expenditure

Final expenditure consists of final expenditures on consumption, gross capital formation and exports minus imports.

Full-time equivalent employment

Full-time equivalent employment is the number of full-time equivalent jobs, defined as the total number of worked hours divided by average annual number of worked hours in full-time jobs.

Gross domestic product – output based

Output-based gross domestic product is the sum of the gross values added of all resident producers at basic prices, plus all taxes minus subsidies on products.

Gross domestic product at market prices

Gross domestic product at market prices is the sum of the gross values added of all resident producers at market prices, plus taxes minus subsidies on imports.

GNI – Gross national income

GNI (gross national income) is GDP minus net taxes on production and imports, minus compensation of employees and property income payable to the rest of the world plus the corresponding items receivable from the rest of the world (in other words, GDP less primary incomes payable to non-resident units plus primary incomes receivable from non-resident units); an alternative approach to measuring GNI at market prices is as the aggregate value of the balances of gross primary incomes for all sectors (note that GNI is identical to gross national product (GNP) as previously used in national accounts generally).

Gross capital formation

Gross capital formation is measured as the total value of the gross fixed capital formation, changes in inventories and acquisitions minus disposal of valuables.

Gross fixed capital formation

Gross fixed capital formation is measured as the total value of a producer's acquisitions, minus disposal of fixed assets during the accounting period plus certain additions to the value of non-produced assets (such as subsoil assets or major improvements in the quantity, quality or productivity of land) realised by the production activity of institutional units.

Gross value added

Gross value added is the value of output minus the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector; gross value added is the source from which the primary incomes of the SNA are generated and is therefore carried forward into the primary distribution of income account.

Gross value added at basic prices

Gross value added at basic prices is output valued at basic prices minus intermediate consumption valued at purchaser's prices.

Import of goods and services

Imports of goods and services consist of purchases, barter, or receipts of gifts or grants, of goods and services by residents from non-residents.

Industry

An industry consists of a group of establishments engaged in the same, or similar, kinds of production activity; the classification of productive activities used in the SNA is ISIC (Rev.3).

Intermediate consumption

Intermediate consumption consists of the value of the goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital; the goods or services may be either transformed or used up by the production process.

Inventories

Inventories consist of stocks of outputs that are still held by the units that produced them prior to their being further processed, sold, delivered to other units or used in other ways and stocks of products acquired from other units that are intended to be used for intermediate consumption or for resale without further processing.

Market output

Market output is output that is sold at prices that are economically significant or otherwise disposed of on the market or intended for sale or disposal on the market.

Net value added

Net value added is the value of output minus the values of both intermediate consumption and consumption of fixed capital.

Non deductible VAT

Non-deductible VAT is the VAT payable by a purchaser which is not deductible from his own VAT liability, if any.

Non-market output

Other non-market output consists of goods and individual or collective services produced by non-profit institutions serving households (NPISHs) or government that are supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole; such output is one of three broad categories of output in the SNA, with the others being market output and output produced for own final use.

NPIs – Non-profit institutions

Non-profit institutions (NPIs) are legal or social entities created for the purpose of producing goods and services whose status does not permit them to be a source of income, profit or other financial gain for the units that establish, control or finance them.

NPISHs – Non-profit institutions serving households

Non-profit institutions serving households (NPISHs) consist of NPIs which are not predominantly financed and controlled by government and which provide goods or services to households free or at prices that are not economically significant.

Principal activity

The principal activity of a producer unit is the activity whose value added exceeds that of any other activity carried out within the same unit (the output of the principal activity must consist of goods or services that are capable of being delivered to other units even though they may be used for own consumption or own capital formation).

Producers' price

A producer's price is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any VAT, or similar deductible tax, invoiced to the purchaser; it excludes any transport charges invoiced separately by the producer.

Production

Production is an activity, carried out under the responsibility, control and management of an institutional unit, which uses inputs of labour, capital and goods and services to produce outputs of goods and services.

Production measure of GDP

The production measure of gross domestic product (GDP) is derived as the value of output less intermediate consumption plus any taxes less subsidies on products not already included in the value of output.

Products

Products, also called 'goods and services', are the result of production; they are exchanged and used for various purposes: as inputs in the production of other goods and services, as final consumption or for investment.

Purchaser's price

The purchaser's price is the amount paid by the purchaser, excluding any deductible VAT or similar deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser; the purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

Secondary activity

A secondary activity is an activity carried out within a single producer unit in addition to the principal activity and whose output, like that of the principal activity, must be suitable for delivery outside the producer unit.

Self-employed workers

Self-employed workers are persons who are the sole owners, or joint owners, of the unincorporated enterprises in which they work, excluding those unincorporated enterprises that are classified as quasi-corporations.

Services

Services are outputs produced to order and which cannot be traded separately from their production; ownership rights cannot be established over services and by the time their production is completed they must have been provided to the consumers; however as an exception to this rule there is a group of industries, generally classified as service industries, some of whose outputs have characteristics of goods, i.e. those concerned with the provision, storage, communication and dissemination of information, advice and entertainment in the broadest sense of those terms; the products of these industries, where ownership rights can be established, may be classified either as goods or services depending on the medium by which these outputs are supplied.

Social contributions

Social contributions are actual or imputed payments to social insurance schemes in order to build-up provisions for social insurance benefit duties.

Social transfers in kind

Social transfers in kind consist of individual goods and services provided as transfers in kind to individual households by government units (including social security funds) and NPISHs,

whether purchased on the market or produced as non-market output by government units or NPISHs; the items included are: (a) social security benefits, reimbursements, (b) other social security benefits in kind, (c) social assistance benefits in kind, and (d) transfers of individual non-market goods or services.

Subsidies

Subsidies are current unrequited payments that government units, including non-resident government units, make to enterprises on the basis of the levels of their production activities or the quantities or values of the goods or services which they produce, sell or import.

Supply table

A supply table at [basic] prices consists of a rectangular matrix with the rows corresponding to the same groups of products as the matching use tables and columns corresponding to the supply from domestic production valued at basic prices plus columns for imports and the valuation adjustments necessary to have total supply of each.

Supply and use tables

Supply and use tables are matrices that record how supplies of different kinds of goods and services originate from domestic industries and imports and how those supplies are allocated between various intermediate or final uses, including exports.

Taxes on income

Taxes on income consist of taxes on incomes, profits and capital gains; they are assessed on the actual or presumed incomes of individuals, households, NPIs or corporations.

Taxes on products

Taxes on products, excluding VAT, import and export taxes, consist of taxes on goods and services that become payable as a result of the production, sale, transfer, leasing or delivery of those goods or services, or as a result of their use for own consumption or own capital formation.

Trade margin

A trade margin is the difference between the actual or imputed price realised on a good purchased for resale (either wholesale or retail) and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of.

Use table

A use table at purchaser's prices consists of a set of product balances covering all products available in an economy arranged in the form of a rectangular matrix with the products, valued at purchaser's prices, appearing in the rows and the columns indicating the disposition of the products to various types of uses.

Value added tax

Value added tax (VAT) is a tax on products collected in stages by enterprises; it is a wide-ranging tax usually designed to cover most or all goods and services but producers are obliged to pay to government only the difference between the VAT on their sales and the VAT on their purchases for intermediate consumption or capital formation, while VAT is not usually charged on sales to non-residents (i.e. exports).

Appendix VI: List of Abbreviations

CBS	Statistics Netherlands
CPA	Classification of Products by Activity
CPC	Central Product Classification
EU	European Union
EU WG	EU Working group on sport and economics
GDP	Gross Domestic Product
GNI	Gross National Income
GVA	Gross Value Added
HAN	Hogeschool van Arnhem en Nijmegen (HAN University of Applied Sciences)
HBS	Household Budget Survey
ISIC	International Standard Industrial Classification of all Economic Activities
IO	Input-output
NACE	Nomenclature générale des Activités économiques dans la Communauté Européenne
n.e.c.	Not elsewhere classified
NPIs	Non-profit Institutions
NPISHs	Non-profit institutions serving households
SIC (/ SBI)	Standard Industry Classification (/ Standaard bedrijfsindeling)
SMEs	Small and Medium-sized Enterprises
SSA	Sport Satellite Account
SUT	Supply and Use Tables
VAT	Value added tax