CULTURE SATELLITE ACCOUNT
FREQUENTLY ASKED QUESTIONS
April 2015

CSA '101' Questions

- **What is the Canadian Culture Satellite Account (CSA)?**

The CSA is an accounting framework – or, simply stated, a tool – developed to measure the economic importance of culture (radio, television, newspapers, magazines, etc.), the arts, heritage and sport to the Canadian economy, e.g.:

- To provide credible estimates of their associated Gross Domestic Product (GDP), jobs, and total output.

- To support further expansions, which can include such options as international trade, economic impact modelling, and government expenditures and revenues associated with culture.

- To allow for comparability over time and amongst jurisdictions, as well as with other industries or activities, such as tourism.

- **What is the design and structure of the CSA based on?**

The CSA is founded on three major components:

- The *Canadian System of National Accounts* (CSNA) – the primary source of CSA data, which is used to broadly measure economic activity occurring in the national economy – i.e. industries, and their respective commodities.

- The *Canadian Framework for Culture Statistics 2011* (CFCS) – it provides a common definition for culture, which is used to identify industry, commodity, and jobs data relevant to culture (i.e. for the arts, cultural industries, heritage, and sport) within the CSNA.

- The *Annual Survey of Service Industries* – includes individual surveys for industries in the arts, cultural industries, heritage, and sport; they are used to calculate 'split factors' for the CSA (i.e. to help determine what is cultural, and what is not).

- **Where does the CSA get its data from?**

The CSA draws most of its data from the *Canadian System of National Accounts* (CSNA)**,** with the help of the *2011 Canadian Framework for Culture Statistics* (CFCS). The former is a massive, complex economic database maintained by Statistics Canada, which is their comprehensive "portrait" of the Canadian economy. It can be used to produce a variety of different economic measures, ranging from GDP to the number of jobs. By contrast, the CFCS is a framework that defines culture, and, more specifically, identifies which industries, products (i.e. goods and services), occupations, and educational programs (e.g. post-secondary courses) should be considered as cultural.

The CSA is essentially a smaller "portrait" of CSNA – i.e. just the culture and sport portion of the CSNA – for which the CFCS provides the concepts, definitions and classifications used to identify the cultural economic data from the CSNA needed to create this smaller "portrait."

The *Annual Survey of Service Industries*, along with other various data sources (see Table 1 for a full list), are used to calculate 'split factors' for the CSA to help divide CSNA data into cultural and non-cultural components (e.g. separating box office sales of movie theatres [the cultural component] from sales of concessions [the non-cultural component]).

TABLE 1 – Data sources used in the Culture Satellite Account, 2010

Surveys used in Culture Satellite Account, Canada, 2010

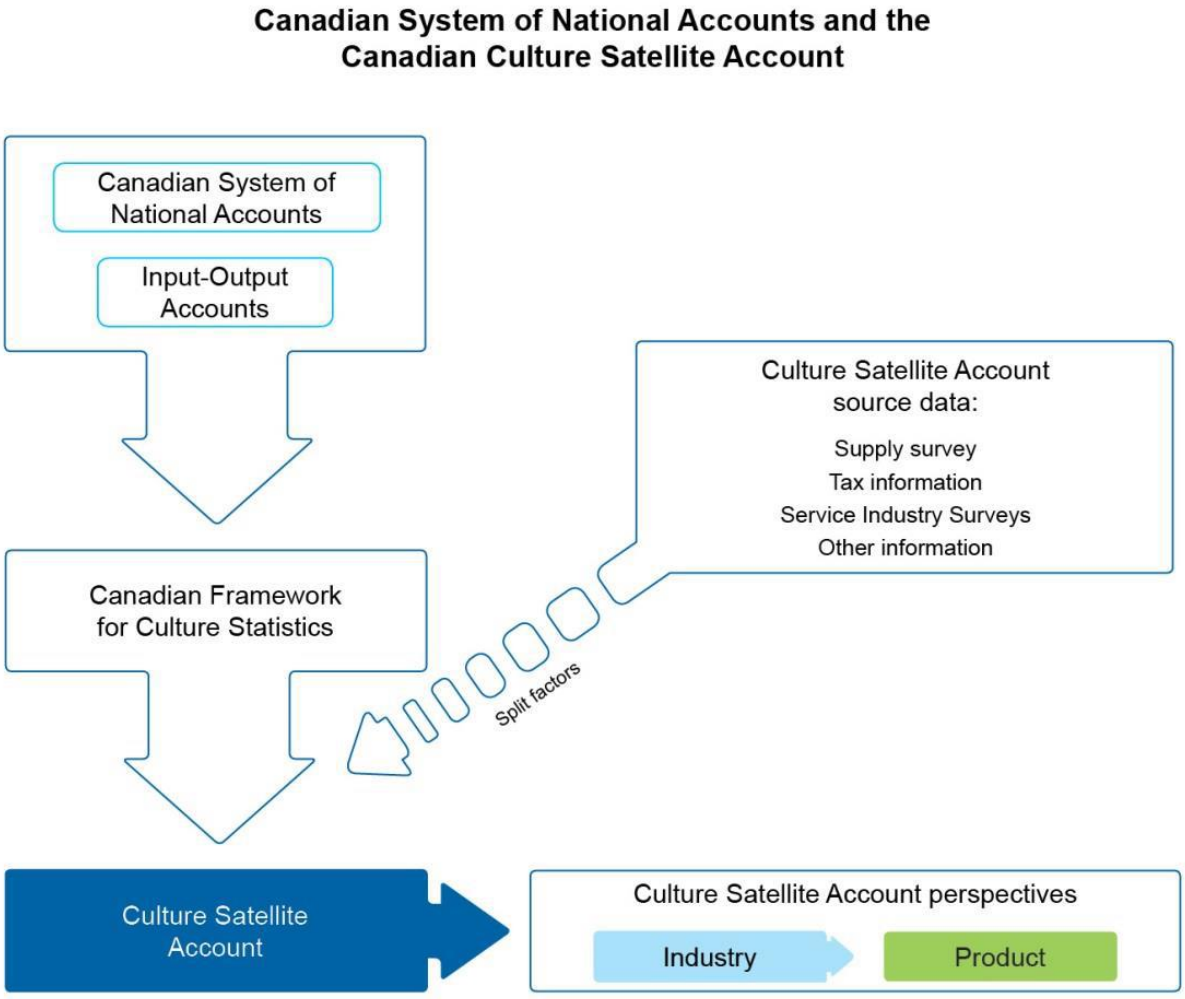
Survey name	Survey ID
Annual Survey of Manufactures and Logging (ASML)	2103
Annual Survey of Service Industries: Software Development and Computer Services	2410
Survey of Service Industries: Film, Television and Video Production	2413
Survey of Service Industries: Film and Video Distribution	2414
Survey of Service Industries: Film, Television and Video Post-production	2415
Survey of Service Industries: Motion Picture Theatres	2416
Annual Survey of Service Industries: Architectural Services	2420
Annual Survey of Service Industries: Personal Services	2424
Annual Survey of Service Industries: Consumer Goods Rental	2434
Annual Survey of Service Industries: Advertising and Related Services	2437
Annual Wholesale Trade Survey	2445
Annual Retail Trade Survey	2447
Survey of Service Industries: Book Publishers	3105
Annual Survey of Service Industries: Heritage Institutions	3107
Survey of Service Industries: Performing Arts	3108
Survey of Service Industries: Sound Recording and Music Publishing	3115
Survey of Provincial/Territorial Government Expenditures on Culture	3116
Survey of Federal Government Expenditures on Culture	3117
Survey of Service Industries: Newspaper Publishers	4710
Annual Survey of Service Industries: Database, Directory and Specialty Publishers	4711
Annual Survey of Service Industries: Specialized Design	4719
Postsecondary Student Information System (PSIS)	5017
Survey of Service Industries: Periodical Publishers	5091
Annual Survey of Service Industries: Spectator Sports, Event Promoters, Artists and Related Industries	5132

Source: Statistics Canada.

The CFCS tells us which data to extract, whereas the split factors make it possible. See Table 2 below for a summary view of how these components interact, to ultimately result in the

"Industry" and "Product" perspectives (discussed later under *What is 'Gross Domestic Product (GDP)' in the CSA?*):

TABLE 2 – Interrelationship between the CSA components



More specifically, the CSA uses the *Input-Output (I-O) tables* of the CSNA, which contain the most comprehensive and detailed statistics relating to production, intermediate use and final consumption of goods and services in the Canadian economy. They measure economic activity by industry as well as by product, and are the primary building block of the CSA. As their name suggests, I-O tables contain two important dimensions: the input table and the output table.

The input table shows the goods and services used by each industry in the production of their goods and services. This table also shows the costs of "primary inputs" used in production, including labour income, income of unincorporated businesses, other operating surplus and net

indirect taxes (often referred to as the payments to labour, capital and appropriations by government).

The output table shows the goods and services produced by each industry in the Canadian economy. In most cases, domestic production or output of an industry is simply its sales or shipments adjusted for changes in inventories, measured at basic prices. Estimates of the supply (output) of culture products in the CSA originate in the output table.

From these tables, it is possible to measure GDP by taking the total output of an industry, and then subtracting the intermediate inputs used in the production of that output. The estimates of Culture GDP and GDP of culture industries (as well as Sport GDP and GDP of sport industries) in the CSA are based on the data reported in these tables.

In addition to the Input-Output tables, other information is used to construct the CSA. This includes several surveys covering: amusement and recreation; book publishers, film and video distribution; film, television and video post-production; film, television and video production; motion picture theatres; newspaper publishers; performing arts; heritage institutions; and periodical publishing. They produce biennial estimates for selected financial variables and industry characteristics. Other surveys such as retail trade, wholesale trade and manufacturing, as well as available tax data were also used to build the CSA.

For education, annual enrollment (headcount) data from the *Postsecondary Student Information System* was used in order to distinguish culture education programs or education programs related to sport from the other programs. As this source of information is available annually, it is more up to date than the *Census of Population* and *National Household Survey*. These data were classified according to a detailed classification system: the Classification of Instructional Programs (CIP). CIP allowed for the selection of enrollments for specific culture programs (or fields of study) and specific sport programs according to pre-established codes. A sub-set of pre-established education codes had been determined in the CFCS 2011.

For government support, government expenditures from the *Survey of Federal Government Expenditures on Culture* and the *Survey of Provincial/Territorial Government Expenditures on Culture* were used. This information was used to estimate the culture and sport portion of the CSNA government industries.

Employment data (i.e., the number of jobs) used in the CSA comes from the *Canadian Productivity Accounts* of the CSNA. These accounts provide information on employment following CSNA principles and using I-O industries. At the aggregate level, the number of jobs in this database is benchmarked to the *Labour Force Survey* (LFS), which measures the total number of people employed in the various industries. The industry distribution of these jobs, however, is primarily based on information from the *Survey of Employment, Payrolls and Hours* (SEPH), although other industry surveys and administrative sources are used as well.

- **Who is responsible for the CSA?**

Work on, and administration of, the CSA is undertaken by Statistics Canada, which has been made possible with the varied support of the CSA funding partners (i.e. the CSS Consortium):

- The Department of Canadian Heritage;
- All thirteen provincial / territorial ministries of culture and/or heritage;
- Ontario Media Development Corporation;
- Ontario Arts Council;
- OCAD University;
- Creative Cities Network Canada;
- Canada Council for the Arts;
- Library and Archives Canada;
- Telefilm Canada;
- The Cultural Human Resources Council;
- BC Alliance for Arts + Culture.

- **How often will new CSA figures be published?**

The most recent CSA publication, of national-level figures for reference year 2010, were released in September 2014. A copy of the report is available online for free:

http://www.statcan.gc.ca/pub/13-604-m/13-604-m2014075-eng.htm
New CSA figures are expected every year, though the actual publication schedule has yet to be determined. The only confirmed releases at this point are June 9, 2015, for the first public release of the provincial / territorial (PT) CSA, followed by select national and PT indicators in Spring of 2016.

- **Do other countries have culture satellite accounts?**

A number of other countries have developed culture satellite accounts comparable to the Canadian CSA, though there are notable differences between their respective definitions of culture and methodologies. For example, Finland includes gambling as part of their culture satellite account, whereas the Canadian CSA does not. Therefore any comparison between the

CSA and its counterparts in other countries should be made with caution, due to these differences.

Despite differences in definitions and methodologies, however, the estimates of culture activity tend to be within the same range for the more developed economies. The U.S., Australia, Finland and the U.K. all estimate that creative or cultural activity account for between 2-7% of national economic activity.

See below for a list of several prominent culture satellite accounts outside of Canada:

Australia
http://www.abs.gov.au/ausstats/abs@.nsf/Products/4147.4.55.001~Sep+2013~Main+Features~Cultural+and+Creative+Activity+Satellite+Accounts?OpenDocument

Finland
http://www.stat.fi/til/klts/index_en.html

France
http://www.ladocumentationfrancaise.fr/rapports-publics/144000006/

Spain
http://www.mcu.es/estadisticas/docs/CSCE/advance_results_csce-2011.pdf

United Kingdom
https://www.gov.uk/government/statistics/creative-industries-economic-estimates-january-2014

United States
http://arts.gov/artistic-fields/research-analysis/arts-data-profiles/arts-data-profile-6/arts-data-profile-6

- **How does the CSA compare with other sources of Canadian culture data?**

There are various other sources of cultural economic statistics available for Canada, which have been produced over the last several years. Each one has its own strengths and weaknesses, respectively, yet the CSA stands out as a significantly strong addition to this field. The CSA embodies a number of unique characteristics which distinguish it from other sources:

- **Comprehensive** – the CSA includes a multitude of industries and products identifiable as cultural, based upon the highly detailed *Canadian Framework for Culture Statistics 2011*. Other sources tend to focus only on one or a few areas in the culture sector, to the exclusion of seeing the broader cultural economic landscape, and do not necessarily reflect the full range of cultural economic activity within a given area (or areas).

- **Consistent** – the CSA will effectively use the same methodology over time, notwithstanding refinements, which adheres to the *Canadian Framework for Culture Statistics* 2011. This enables ongoing comparison over time, between industries, and across jurisdictions, which is not possible for data sources that are one-time or limited run projects.

- **Adaptable** – years of significant investment and intensive work on the CSA has resulted in a solid foundation, upon which additional 'modules' can be built (e.g. for detailed labour or trade data) based on the needs of its funders. Building a similar, adaptable foundation, even if it were feasible, would require substantial time and resources to realize (and still be incapable of achieving that which is possible via the CSA).

- **Proprietary** – much of the raw data used to construct the CSA is available only to Statistics Canada, and will never be released publicly (which is necessary to protect the privacy of survey respondents). This includes the development of any modules for the CSA, which would also draw from proprietary data sources of Statistics Canada.

  Other organizations do not have the capacity to collect similar data to the same degree, especially as they lack the legal weight of the *Statistics Act* to compel organizations surveyed to report. Additionally, the only Statistics Canada data available to them are not the same raw data, but 'public' data that are far more limited in use for analysis.

- **Expert support** – the CSA is developed and maintained by statistical and economic experts at Statistics Canada, backed by the culture sector expertise of Canadian Heritage and its numerous partners.

- **Why do CSA numbers change between official releases?**

The CSA is a project that is evolving over time, with the goal of ensuring the methodology is as precise and accurate as possible. This invariably requires various refinements to the methodology, a number of which have already been applied to the CSA, which impact the numbers reported between releases. The ongoing process of improving the CSA, and the PTCSA, result from consultations and collaboration between Statistics Canada, Canadian Heritage and the CSA funding partners.

The differences between the National CSA economic figures released on September 10, 2014, and the PTCSA released on June 9, 2015, are due to such methodological refinements made by Statistics Canada. While the methodological refinements improve the overall quality of the CSA, the resulting changes in the culture estimates remain relatively small.

This speaks to the general robustness of the CSA, and its capacity to accurately capture the economic contribution of culture and sport to the Canadian economy. However, any changes

that occurred between the National CSA and PTCSA releases should not be interpreted as either an increase or a decrease in economic activity, though such interpretation should be possible with future releases.

Economics '101' Questions

- **What is 'Gross Domestic Product' (GDP) in the CSA?**

Gross Domestic Product (GDP) is a key indicator of economic performance in the CSA. It measures:

- The *market value* of new final-use goods and services (i.e. they are not used for other production, or resold),
- Which is *unduplicated* value (i.e. there is no double-counting of value),
- Within a specific geographic area (usually a country's borders),
- During a fixed period of time.

Specifically, GDP represents the output of an industry minus the cost of intermediate inputs that were used up in the production of the culture goods and services.

For example, publishing a book requires a number of 'inputs' to create the final book. It requires a manuscript, the services of an editor, printing and binding services, etc. GDP is calculated by taking the sale price of the book and subtracting the cost of the inputs used in its creation.

If the price to produce a short-run of books is $100,000, and the total cost of the inputs is $80,000, the GDP of the book is equal to $20,000 (i.e. $100,000 - $80,000 = $20,000). The $20,000 is the new, unduplicated value added to the economy, which did not exist before. Calculating GDP for the books must subtract the value of the inputs in order to avoid double-counting, because the value of the inputs would already have been counted as the outputs of other industries.

The CSA reports on GDP from two different perspectives:

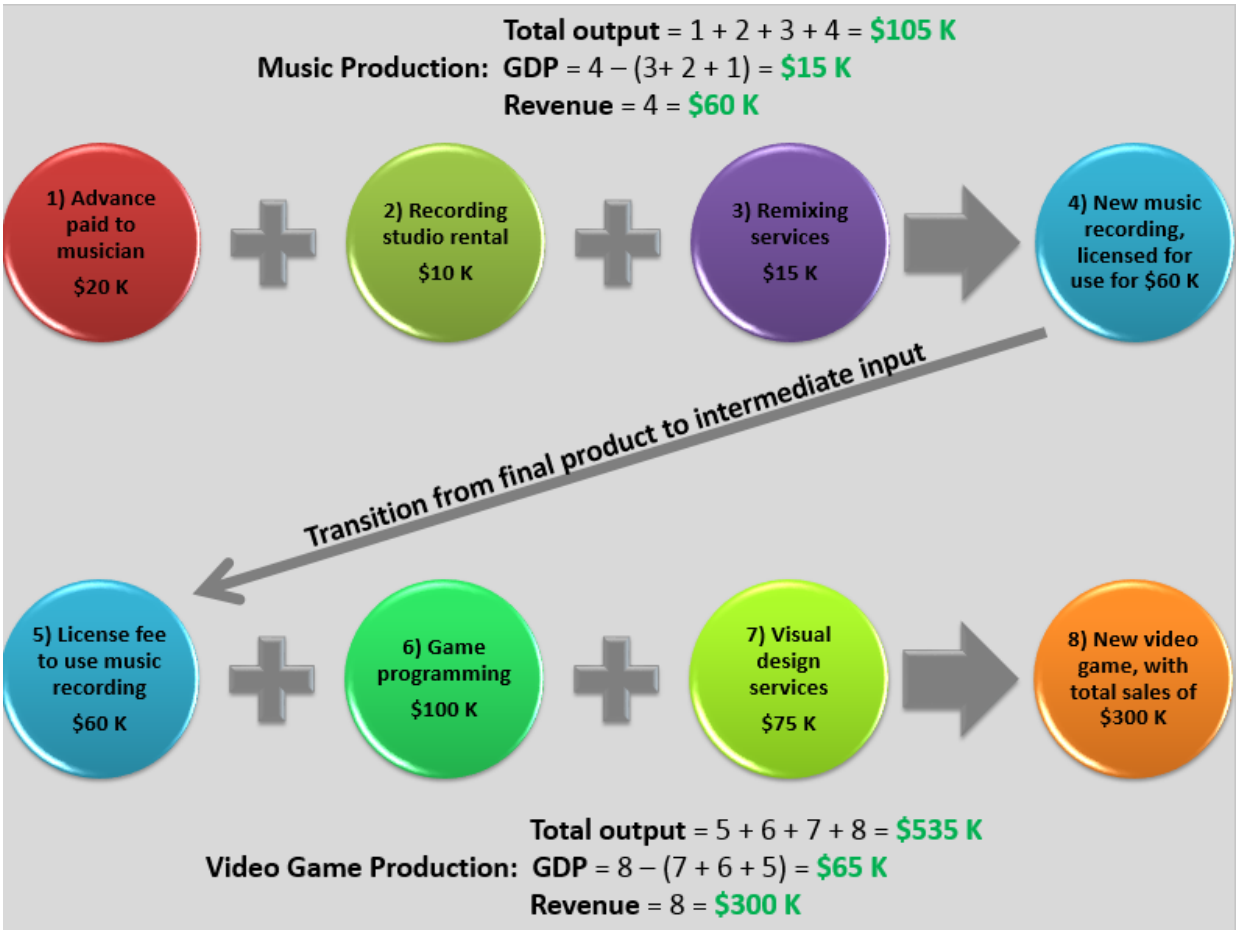
The GDP of culture industries is the measure of GDP for each of the culture industries. It covers all of their outputs – culture and non-culture products. For example, the performing arts industry may generate GDP from both admissions to live performances (a culture activity) and food and beverages services (a non-culture activity). The GDP for both activities is included in the GDP of culture industries. This measure is also known as the "industry perspective," which is similarly used to calculate the associated output and jobs.

Culture GDP is the value of the production of culture goods and services across the economy, regardless of the producing industry. For example, the performing arts industry may generate GDP from admissions to live performances and food and beverages services (a non-culture

activity), but only the GDP from admissions to live performances (the culture activity) will be counted. However, it will also include any GDP from admissions to live performances produced outside of the live performance industry. The culture GDP measures the GDP from the production of all culture goods and services in the Canadian economy – regardless of the industry in which they are produced. This measure is also known as the "product perspective," which is similarly used to calculate the associated output and jobs.

Notably, GDP is interrelated (but different in comparison) with two related economic concepts – Revenue and Output – which will be discussed in the following questions. The connection between the three concepts is summarized in *Diagram 1* below, by using two hypothetical production processes – the creation of a new music recording, and of a new video game – to illustrate how they are calculated differently, respectively, and their interrelationship.

Diagram 1 – The Interrelationship and Differences between GDP, Output, and Revenue



- **What is 'Output' in the CSA, and how does it compare to GDP?**

Output consists of those goods or services that are produced within a business that become available for use outside that company. This is different from GDP, as output *includes* the value of all inputs used to produce a given good or service, *plus* the value of the good or service itself.

As such, if the price to produce a short-run of books is $100,000, and the total cost of the inputs is $80,000, the output value is equal to $180,000 (i.e. $100,000 + $80,000 = $180,000). This is different from GDP, equal to $20,000 in this case, which would subtract the cost of the inputs from the price of producing the books (i.e. $100,000 - $80,000 = $20,000).

There are two types of output captured by the CSA: *market output* and *non-market output*. *Market output* is the price of a good or service that influences their supply and demand (i.e. the price at which producers are willing to sell, and the price at which buyers are willing to buy).

Non-market output comprises goods and services that are not sold on the market and are generally valued at cost. For instance, free art exhibits in which services are provided by volunteers would be considered non-market output.

- **What is 'Revenue', which is not included in the CSA, and how is it different from GDP?**

Revenue represents the value of total sales of a given quantity of goods or services. Specifically, it is the income of a business, or that of a combined industry, and is calculated by multiplying the quantity of goods sold by the price of the goods.

The price is generally set by the seller to 1) offset the costs of getting a good or service to market, and 2) to make a profit. The first part, offsetting of costs, includes the costs (i.e. the value) of the inputs for production of a good or services. In this sense, revenue can involve double-counting of the value of a given good or service – first, when it is originally sold, and then again to offset its cost when used to produce a different good or service (i.e. as included in the price of the latter).

By comparison, GDP only includes the value of a good or service *once*, based on the sale price set by the producer, prior to the addition of other related costs (e.g. taxes). GDP is calculated by subtracting the total costs of the inputs used to produce a good or service from its sale price. As such, GDP represents only *new* value added to the economy which did not exist before, and avoids the problem of double-counting.

- **What is represented by 'jobs' in the CSA, and is it different from 'employment'?**

The jobs reported by the CSA refers to *the total number of positions* within a given domain or sub-domain of the CSA. This is different from *measures of employment* which count the number of people working.

The major difference between the two measures is how an individual is captured. For employment, a person is considered to either be working or not, and therefore be counted only once (at most) even if they held multiple jobs. Conversely, jobs count the number of positions,

regardless of whether some individuals occupy more than one position and in different industries.

For the CSA, jobs data is derived from the Canadian Productivity Accounts of the CSNA, which represent the number of jobs held by the self-employed, employees and unpaid family workers. It should be noted that a job that exists for only part of the year (e.g. four months) counts as only a fraction of a job (1/3 of a job) for the year. Additionally, a part-time job of ten hours a week counts as much as a full-time job at fifty hours a week.

- **What are 'direct', 'indirect', and 'induced' economic effects, and what does the CSA report?[1]**

The three types of effects – *direct*, *indirect*, and *induced* – represent different orders of economic impact resulting from an activity, such as the publication of a book. They are comparable to a series of concentric circles, all sharing a common starting point in the middle (i.e. the original transaction), moving outwards from direct impact closest to the center to indirect impact and finally, in the furthest ring, to induced impact.

Generally speaking, the closer one is to the middle – the original activity – the stronger the causal link is between the original activity and the related economic effect (and, consequently, its measurement). The CSA reports *only* at the level of direct effect, which ensures the greatest integrity of its results in terms of causality.

In the CSA, *direct effects* are the economic impacts resulting from *cultural* activity – such as staging a music concert, or filming a movie – and the resulting GDP, output, and jobs it creates. This can include a variety of expenditures required for the cultural activity, such as money spent to pay for salaries, supplies, raw materials, and operating expenses. However, the CSA focuses on measuring the larger indicators of impact, namely the GDP, output, and jobs.

Indirect effects are the result of business-to-business transactions indirectly caused by the direct effects. Businesses initially benefiting from the direct effects will subsequently increase spending at other businesses. The indirect effect is a measure of this increase in business-to-business activity (excluding the initial activity, which is already captured in the direct effects).

Induced effects are the result of increased personal income caused by the direct and indirect effects. Businesses experiencing increased revenue from the direct and indirect effects will subsequently increase payroll expenditures (by hiring more employees, increasing payroll hours, raising salaries, etc.). Households will, in turn, increase spending at local businesses. The induced effect is a measure of this increase in household-to-business activity.

It should be noted that the term "economic impact" is often used to signify direct, indirect and induced impact, whereas the CSA only includes the direct impact. As such, it is preferable to say that the CSA provides data on the "economic importance" of culture, as opposed to its impact, so

[1] Source (partial): http://en.wikipedia.org/wiki/Economic_impact_analysis

as to distinguish it from economic impact. However, in future, an economic impact module may be developed for the CSA, which could potentially be used to calculate direct, indirect and perhaps even induced effects.