## Culture in a time of Covid An Early Warning Reporting System

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This paper proposes a simplified reporting system for Canada’s Cultural and Creative Industries (CCI), to complement existing Cultural Satellite Account (CSA) reports. This will help industry, government, and statistical providers react to events, such as the recent pandemic, that impact jobs, output, infrastructure and financial viability but require a rapid response. It also offers a flexible system for studying detail, including deviation from trend. It addresses two difficulties facing users of the present reports:

1. CSA data are very comprehensive, but lag 2-3 years behind the events they report on.
2. The CSA applies ‘partials’ or split factors to industries in the North American Industrial Classification (NAICS) system. For privacy reasons these are not disclosable, making the results harder to interpret.

Figure 1:Employment in CCI performance, CCI non-performance, and non-CCI industries

Source: Labour Force Monthly Survey, Author calculations

We propose to supplement this with a subset of four-digit NAICS codes, and a classification into domains and subdomains, whose primary function is cultural and/or creative. Total employment, output and productivity will be reported for these codes and this classification, exactly as for traditional industries like aerospace or agriculture. If split factors are employed these will be public. This offers an ‘early warning’ of the impact of short-term change, and provides additional insights into trends. Finally, independent researchers, industry and government can study the data using the proposed system without increasing the burden on statistical agencies, because it is entirely public.

Figure 1 illustrates the idea. It records the number of people employed in Performing industries (principally Music and Theatre) in other CCI industries, and the remainder. We indexed the data to 1st January 2020, to compare their growth rates.[[1]](#footnote-1)

COVID hit all industries, but the performing arts suffered most, as we would expect, since they depend on live venues that closed. Figure 1 displays the severity of the impact, its duration, and the timing and extent of the recovery so far. The *non-*performing CC industries did quite well, recovering to trend by December. The data also suggest that performance-based industries have an inverse seasonal relationship to the rest, rising in winter months while everything else rises in the summer months to a peak in early autumn. Finally the data suggest that in 2015, performing industries employment uncharacteristically dipped. We don’t know what happened, but the data tell us something worth looking into.

Figure 2: Employment change between November 2019 and November 2020

Source: Labour Force Monthly Survey, Author calculation

We can drill down into this data to get more detail. Figure 2 shows how employment changed, between November 2019 and November 2020, in a selection of ‘sub-domains’ which fine-tune the analysis. Since we compares like months, the result is unaffected by seasonal variations. Like Figure 1, this yields new information. Beside the predictable decline in Performance, Advertising also suffered. The big winners were Film and its related activities (nowadays Media Production Services or MPS) and IT.

Of course, the picture is incomplete. We don’t know, for example, if artists who lost employment in live performance benefitted from the growth in MPS, or which Media Services benefitted most: online services, film production, broadcasting, photography, or video production? We don’t know the extent to which growth in MPS and IT were interconnected. We can hazard guesses—but the data, if we treat them respectfully, will tell us if we are right. Our proposed system makes this possible.

We can also compare the Creative and Cultural Industries meaningfully with others. Figure 3 displays pre-pandemic growth in the Labour Force between 2010 and 2019 in a selection of traditional industries, and compares them with the CCI, using our proposed classification.

Figure 1, presenting employment, already suggests that CI industries outperform the rest of the economy. By December 2019, trend employment had grown by over 30% compared to 12% for the rest of the economy. Figure 3, presenting the labour force (whether employed or not) confirms this.

Figure 3 Growth in the labour force, 2010-2019

Source: Labour Force Monthly Survey, Author calculation. Labour Force is calculated as the average over the year

Figure 3 illustrates a fact confirmed by other countries including the United Kingdom, Europe, Australia and several East Asian economies: the CCI are a driver of growth in the economy. This is not always apparent in CSA data which are concerned with structure and therefore records both *direct* activity in industries like Music and Performance, and *indirect* activity in industries they rely on, such as Electronics, whose primary function is not cultural. Both have a place; however statistics describing traditional industries—such as Tourism—only report on direct effects. Since the CCI also includes indirect effects, the result is a misleading comparison. Figure 3 offers a strictly equivalent, fair, comparison.

Figure 4: Labour force growth, CCI and non-CCI, 2010-2019

Source: Labour Force Monthly Survey, Author calculation. Labour Force is calculated as the average over the year

This also helps provincial administrations. Figure 4 displays the growth of the directly-employed CCI and non-CCI labour force between 2020 and 2019, broken down by province. It can be seen that in *every* province the CCI labour force grew faster than the non-CCI labour force. In the Northern Provinces, the difference is very marked.

## Why industries?

All the above offers valuable and easily-accessible information for decision-makers. How do we get there? We start by asking what an industry is. Canada, like all modern nations, measures employment and output by asking people what kind of business they work for. If you work on a farm, you’re in agriculture – even if what you actually do is keep the books or mend the fences. If you work in a school, whether you are a janitor, a teacher, or an A-V technician, you’re in the education industry,.

An industry is just a bunch of enterprises with something in common. The idea is part of everyday speech: we talk about agriculture, manufacture, finance, aerospace, education, and so on, without thinking much about it. All we do, when we use such language, is assign businesses to mental categories. NAICS makes this intuitive idea formal: it puts every enterprise in a pigeonhole, depending on its ‘primary’ activity. It then attaches a numeric code to it.

This has advantages and disadvantages. Enterprises are what makes the economy tick. If government, or an investor, wants to interact with aerospace, they only need to find the businesses in the ‘aerospace industry’. The disadvantage is that the enterprises are interrelated. So, for example, the advertising industry doesn’t just employ video producers but outsources work to specialist video companies. Advertisers and video makers thus depend on each other. The CSA production chain approach captures such relationships.

But for many practical purposes this has drawbacks. It takes a long time, and leads to potentially misleading comparisons. The issue here is not that one approach is any better than the other, but for the full picture, we need *both* sets of statistics. We therefore propose to measure the *direct* effects of Canada’s Cultural and Creative Industries, by identifying those industries whose *primary* activity is Cultural or Creative.

Table 1: Candidate components of the creative industries from the four main approaches

|  |  |  |
| --- | --- | --- |
| Domain | Definitions where this figures | CSA domain or sub-domain? |
| Advertising | All four | Yes |
| Film and Video | All foura | Yes |
| Music | All fourb | Yes |
| Performing and Visual Arts | All fourc | Yes |
| Publishing | All fourd | Yes |
| Television and radio | All four | Yes |
| Fashion | All four | Overlaps |
| Video and computer games | All foure | Yes |
| Architecture | DCMS and CC | Yes |
| Software | DCMS, WIPO and STf | Partly |
| Design | DCMS and CC | Yes |
| Crafts | DCMS and STg | Yes |
| Art and antiques | DCMS and STg | Yes |
| Museums and libraries | DCMS and CC | Yes |
| Collecting Societies | WIPO |  |
| Consumer electronics | WIPO |  |
| Governance | No | Yes |
| Education and Training | Overlaps all fourh | Yes |
| Multi-domain | Overlaps all fourh | Yes |

a ST and CC refer only to ‘Film'

b CC adds ‘Sound Recording

c ST refers to 'Creative Arts'

d CC refers to 'Literature'

e WIPO omits games, but this must be an oversight

f ST includes only ‘Internet’

g Crafts and art are missing from the ST model: this must be an oversight

h The CSA education and governance domains are restricted to specifically cultural components

## What is a cultural industry?

At first sight, it might seem difficult and contentious to decide whether an industry is ‘cultural’ or ‘creative’. Indeed, many reams of paper have been devoted to disputing how it should be done. It’s therefore surprising to find that there is quite widespread agreement, in *practice*, about which industries should be treated as either cultural, or creative, or both. The agreement is so marked that in this paper, we treat the two as different ways of talking about the same thing. We will first look at the international discussion, then home in on Canada.

We can start at the international level. An influential and very thorough review by UNCTAD (2010) lists four basic classification systems or ‘models’: the DCMS model developed by the UK Department of Cultural, Media and Sport; the ‘Symbolic Texts’ (ST) model, the ‘Concentric Circles’ (CC) model and the WIPO (intellectual property model). Table 1 lists 16 candidate ‘domains’, or broad groups of industries, which each approach considers creative. Of these, all four models agree on Advertising, Film/ Video, Music, Performing/Visual Arts, Publishing, Television and Radio, Fashion and Video/Computer Games. Three agree on software, and two on Architecture, Design, Crafts, Arts/Antiques, and Museums/ Libraries. The only outliers are Collecting Societies and Consumer Electronics.

The CSA domain structure is slightly more complex, because it lists domains and sub-domains. However every single domain considered by UNCTAD appears in it and CSA adds only three further domains, being governance, education and ‘multi-domain’. Even these, except for governance, are essentially a restructuring of the domains in Table 1.

This suggests a start point of the following domains, which could of course be reconfigured to conform more closely to the CSA domain hierarchy, and adapted through discussion with industry, the CSA team, and government. They would probably also benefit from being combined, not least because it reduces the amount of redaction that might take place – so, for example, ‘Software’ and ‘Video and computer Games’ could be amalgamated. I suggest the name ‘Industry’ is used in place of ‘Domain’, since it’s better-known.

Table : Proposed List of Primary Cultural and Creative Industries

|  |
| --- |
| Advertising |
| Film and Video |
| Music |
| Performing and Visual Arts |
| Publishing |
| Television and radio |
| Fashion |
| Video and computer games |
| Architecture |
| Software |
| Design |
| Crafts |
| Art and antiques |
| Museums and libraries |

## Assigning NAICS codes to industries

This section to be written

1. For visualization purposes we reduced spikiness using a statistical method called the Hodrick-Prescott filter. The technical details (<https://en.wikipedia.org/wiki/Hodrick%E2%80%93Prescott_filter>) don’t matter. We customised it to preserve seasonal variations because they are interesting, but the filter can be customised to eliminate them. [↑](#footnote-ref-1)