



The Economic Impact of CBC/Radio- Canada.

Report for CBC/Radio-Canada

8 June 2011

This report has been prepared on the basis of the limitations set out in the engagement letter and the matters noted in the Important Notice From Deloitte on page 1.

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Executive Summary

This report was commissioned by CBC/Radio-Canada to provide a measure of the impact of CBC/Radio-Canada on the Canadian economy. It estimates the core economic value CBC/Radio-Canada adds to the Canadian economy, based on broadcasting year 2010, and some of the additional economic benefits that arise as a result of CBC/Radio-Canada's role as a public service broadcaster in Canada ("spill-over effects"). This report does not comment on the performance of CBC/Radio-Canada against its mandate, or attempt to value the cultural and societal contributions that CBC/Radio-Canada's mandate and activities generate and represent, although examples of such contributions are given. We have not attempted to quantify any wider more indirect impacts that CBC/Radio-Canada has on the Canadian economy because of the difficulty in providing a robust estimate of such impacts.

Key findings

We estimate that the contribution of CBC/Radio-Canada to the Canadian economy, or the gross value added ("**GVA**"), in 2010 was \$3.7 billion, arising from an expenditure of \$1.7 billion.

CBC/Radio-Canada's net additional contribution to the economy, or net value added ("**NVA**"), is estimated to be \$1.3 billion. This means that the direct government funding of \$1.1 billion in 2010 not only contributed to the GVA for CBC/Radio-Canada of \$3.7 billion, but also created additional value of \$1.3 billion to the Canadian economy compared to the alternative use of the funding. This is estimated by comparing our estimate of GVA against the GVA of a hypothetical scenario where CBC/Radio-Canada is commercially funded, or a "counterfactual CBC/Radio-Canada". The main factors contributing to the NVA estimate are:

- the smaller scale of an almost exclusively commercially funded and focused counterfactual CBC/Radio-Canada;
- the higher weight that would be given to foreign content, in the absence of the current public service mandate, leading to significant leakage of programming expenditures out of Canada;
- the crowding out of private broadcasters and other media by the counterfactual CBC/Radio-Canada through increased competition for available advertising revenues; and
- the lower value to the Canadian economy from the alternative use of the current government funding of CBC/Radio-Canada.

Underlying and included in the NVA estimate are some fundamental differences in the activities and type of content broadcast by the counterfactual CBC/Radio-Canada. These include higher spend on foreign content, lower diversity of programming, and, notably, less spend on original journalistic news and information programming as the focus changes from relatively labour intensive (and costly) journalism towards more profitable formats. These changes are likely to have wider indirect impacts in Canada, not considered in this report.

We note that CBC/Radio-Canada generates additional spill-over benefits as follows:

- CBC/Radio-Canada's commissioning of independent productions in 2010 lead to \$1,123 million in independent TV production GVA and NVA of \$492 million for the sector, of which \$245 million is additional to the NVA estimate above.
- CBC/Radio-Canada helps create diversity and depth in the Canadian independent production sector through commissioning a wide range of genres and committing substantial funds for program development.
- CBC/Radio-Canada's regional and local activities contribute to the local economies and creative clusters, particularly the creative cluster in Montreal.
- CBC/Radio-Canada creates additional economic value for other broadcasters and wider creative sector in Canada through its role in implementing new technologies, promoting digital content and third party distribution and by its support to Canadian artists.

Measuring the economic impact of CBC/Radio-Canada

The scope of CBC/Radio-Canada's economic activities

The scope of this report includes all the main economic activities of CBC/Radio-Canada.

The public service mandate of CBC/Radio-Canada is reflected in its focus on original Canadian content in English and in French, as well as in its regional presence. CBC/Radio-Canada's principal TV services which implement its public service mandate comprise the two main TV channels CBC Television (in English) and Television de Radio-Canada (in French), and CBC/Radio-Canada's five specialty TV channels. CBC/Radio-Canada's radio services are arguably even better recognised for their public service aspects, including the main English and French talk and music radio services, as well as Radio-Canada International ("RCI") and regional radio stations. Associated with the TV and radio services, CBC/Radio-Canada also provides online content through its main media websites CBC.ca (in English) and Radio-Canada.ca (in French), as well as its dedicated content streaming site tou.tv (in French) and various web radio services.

Through these services and activities CBC/Radio-Canada has an economic impact in generating economic value added both directly through its own spend on its people and on suppliers and services, as well as more widely through additional effects both in the creative sector and in the wider economy.

The methodological framework for assessing CBC/Radio-Canada's economic impact

Our approach to estimating the economic impact of CBC/Radio-Canada is in two parts.

In the first part, we estimate the gross and net value added of CBC/Radio-Canada. Gross Value Added ("GVA") is an estimate of value generated for the Canadian economy as a result of an organisation's economic activity. We apply standard economic impact analysis which distinguishes three types of GVA impact: direct value added and the wider indirect and induced impacts.¹ The

¹ Direct value added for an organisation is defined as the value of total sales or revenue less expenditure on goods or services purchased from other organisations. This is roughly equivalent to the wage bill and operating surplus of the

wider indirect and induced impacts are estimated by applying multipliers to CBC/Radio-Canada's direct expenditure. We use multipliers estimated by Statistics Canada for appropriate sectors.

The Net Value Added (“**NVA**”) is the difference between the GVA that we estimate for CBC/Radio-Canada and an equivalent measure of GVA that we estimate for a commercially funded and focused counterfactual CBC/Radio-Canada. The counterfactual scenario sets out what CBC/Radio-Canada and the wider creative sector would be like without the current public service mandate. This is specifically designed to facilitate an assessment of the net incremental contribution to the Canadian economy from the public service mandate and government funding given to CBC/Radio-Canada.

In the second part of the report, we examine the impact of a number of ‘spill-over effects’. Spill-over effects are by-products of an organisation’s activity, experienced by other firms in the same sector or by the wider economy. We consider CBC/Radio-Canada’s spill-over effects relating in particular to the independent production sector, CBC/Radio-Canada’s investment in regional clusters, and some of the ways in which CBC/Radio-Canada creates value for others in the Canadian creative industries and wider economy.

Part I - CBC/Radio-Canada’s GVA and NVA

Our estimates show that CBC/Radio-Canada generated a GVA of \$3.7 billion in 2010, arising from an expenditure of \$1.7 billion due to the indirect and induced multiplier effects.

CBC/Radio-Canada’s value add composition by service

In line with the level of expenditure, Television contributes the highest GVA amongst CBC/Radio-Canada’s activities accounting for approximately 71%. Radio contributes \$752 million GVA to the Canadian economy. The contribution of Radio in comparison to TV is smaller as a result of lower expenditure levels as well as lower multipliers for programming. Specialty Services contribute \$263 million GVA.

These GVA numbers can be further broken down by the language of broadcast. The private national conventional broadcasters expend significantly more in English language services compared to French language services due to commercial considerations. However, CBC/Radio-Canada’s spend and investment in French language services reflects its obligation to promote English and French languages in the Canadian society. CBC/Radio-Canada each year generates over \$1.5 billion GVA through French language services in TV and Radio compared to \$1.9 billion from English language services. This corresponds to the intent of CBC/Radio-Canada to make linguistic duality a priority and to reflect Canada’s regional diversity through its broadcasting.

organisation. Indirect impact is the impact of the organisation on the GVA of firms in the supply chain which supply goods and services purchased by the organisation in question. Induced impacts arise on the GVA of firms outside the immediate supply chain, as a result of the expenditure of the organisation’s own employees and those in the supply chain.

CBC/Radio-Canada GVA across provinces

The economic impact of CBC/Radio-Canada encompasses ten provinces and three territories in Canada. Table 1 below shows a regional breakdown of CBC/Radio-Canada expenditure and the associated Canada wide GVA.

Table 1: CBC/Radio-Canada regional expenditure and GVA generated (2010)

Province / Territory	Expenditure (\$m)	GVA (\$m)
Newfoundland	25	51
Nova Scotia	42	93
Prince Edward Island	10	20
New Brunswick	42	90
Quebec	654	1,449
Ontario	731	1,499
Manitoba	39	78
Saskatchewan	29	60
Alberta	61	127
British Columbia	68	147
Yukon	3	6
North West Territories	17	34
Nunavut	5	10
Total	1,724	3,663

Deloitte analysis of CBC/Radio-Canada data

CBC/Radio-Canada's NVA

We estimate a NVA of \$1.3 billion, after adjusting the GVA for the impact of the counterfactual and other wider impacts within the creative sector and a redistribution of CBC/Radio-Canada's government funding. This means that the direct government funding of \$1.1 billion in 2010 not only contributed to the GVA for CBC/Radio-Canada of \$3.7 billion, but also created additional value of \$1.3 billion to the Canadian economy compared to the alternative use of the funding.

Table 2 below shows the breakdown of CBC/Radio-Canada's GVA and NVA. The estimated NVA consists primarily of a "narrow" NVA of \$2.5 billion due to the reduction in the scale of spending in CBC/Radio-Canada. This is increased by the impact of crowding out of private broadcasters and other media that would occur in the counterfactual. It is substantially reduced by the GVA that would arise in the counterfactual from the alternative use of the government funding of CBC/Radio-Canada. The commercially focused activities of a counterfactual CBC/Radio-Canada would lead to crowding out of other private broadcasters and other media. This implies a GVA loss of \$293 million and \$246 million respectively, which add to the NVA estimate. Finally, the alternative use of government funding (currently committed to CBC/Radio-Canada) contributes a GVA of \$1.8 billion after adjusting for leakages, reducing the CBC/Radio-Canada NVA estimate by that amount.

Table 2: Composition of CBC/Radio-Canada Net Value Added (\$ million 2010)

Components of economic impact	GVA			Total
	TV	Radio	Specialty Services	
CBC/Radio-Canada factual GVA	2,648	752	263	3,663
<i>Less</i>				
CBC/Radio-Canada counterfactual GVA	(530)	(365)	(263)	(1,158)
CBC/Radio-Canada Narrow NVA (a)				2,505
<i>Plus</i>				
Impact on other broadcasters GVA (b)	126	168		293
<i>Plus</i>				
Impact on online and other media GVA (c)				246
<i>Less</i>				
GVA of alternative use of government funding (d)				(1,791)
<i>Equals</i>				
Overall CBC/Radio-Canada NVA: (a)+(b)+(c)-(d)				1,253

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada data

Part II - CBC/Radio-Canada's spill-over effects

Spill-over effects are by-products of an organisation's activity, experienced by other firms in the same sector or by the economy more generally. In the context of this study, we consider spill-over effects relating in particular to the independent production sector, CBC/Radio-Canada's investment in regional clusters and value created for others. CBC/Radio-Canada potentially creates additional benefits we do not analyse further, including through sustaining Canadian citizenship and civil society, by encouraging interest in cultural products and activities, through its training and development of talent, as well as building the Canadian brand.

CBC/Radio-Canada's impact on the independent production sector

The economic impact of CBC/Radio-Canada goes beyond the impacts attributable to its direct spend. It is also recognised as a crucial support of the independent production sector. We estimate a \$1,123 million CBC/Radio-Canada driven independent production sector GVA.

We also estimate an independent sector NVA impact of \$492 million that would follow from reduced independent production sector funding in the counterfactual. This comprises:

- \$245 million foregone Value Add resulting from a loss of \$114 million tax credit funding; and
- \$247 million foregone Value Add resulting from a loss of independent sector CBC/Radio-Canada funding. This \$247 million is included in our Net Value Add estimates shown in Table 2 above.

In addition, CBC/Radio-Canada also makes wider contributions to the independent production sector in a number of ways.

- CBC/Radio-Canada's presence in a wide range of genres helps create diversity and depth in the sector and ensures an income stream for a significant number of producers across various genres.
- CBC/Radio-Canada commits substantial funds to development spend which helps to create a backbone for the Canadian independent production sector. The level of spend and relationships with independent producers outside Quebec and Ontario helps support the creative sector in those areas and grow the regional economies.
- CBC/Radio-Canada contributes to the success of the independent production sector through its provision of a consistent revenue source; this helps drive investments in the sector, increases competitiveness in the international markets and indirectly helps to drive export growth.

The economic impact of CBC/Radio-Canada's regional activities

CBC/Radio-Canada's regional and local activities contribute to the local economies, communities and the creative sector. Some highlights of such contributions include CBC/Radio-Canada's regional production centres in Halifax, the reputation for investigative journalism of CBC/Radio-Canada's Winnipeg centre, the success of programming produced in Moncton, and various links with local universities and colleges.

One of the ways in which these wider impacts of CBC/Radio-Canada's spend in different locations can be reflected is through consideration of productive cluster effects. In particular, CBC/Radio-Canada's commitment to French services is recognised as having been important to the formation of a creative sector cluster in Montreal. CBC/Radio-Canada contributes to the vibrancy of the other main media clusters of Toronto and Vancouver, as well as having been instrumental in establishing production capabilities in smaller media markets, such as in Halifax, Winnipeg and Moncton.

Organisations in a cluster receive various benefits, including easier and cheaper communication and trade with each other, with their customers and potential employees. Clusters can bring particular benefits to the creative sector in terms of innovations of use of technologies, new business models and new products.

Quantifying the spill-over benefits from the clusters CBC/Radio-Canada has contributed to is challenging. Clusters develop over time, sometime decades, making it hard to define how the cluster would have developed in the counterfactual scenario with less CBC/Radio-Canada presence. To provide an indication of the value created by CBC/Radio-Canada, we have estimated the value of CBC/Radio-Canada's presence on the Montreal cluster. To do so, we have used a counterfactual scenario consistent with that for the NVA analysis above, in which CBC/Radio-Canada spend and activity in French services falls to that supported by direct commercial opportunity alone. We assume that this has additional effects on non-CBC/Radio-Canada creative sector employment and activity in the city.

Overall, we estimate that the impact of the government funded CBC/Radio-Canada in the GVA of the creative sector cluster in Montreal is \$52.4 million. The majority of this estimate is a direct employment impact, estimated to be over 1,500 full time employees. In addition to the employment impact, without CBC/Radio-Canada's current strong presence in Montreal, due to relatively high focus on French services, the firms in the cluster would be 0.2% less productive, which implies a \$0.5 million impact on the cluster GVA. The productivity impact is additional to the NVA impact shown in Table 2 above. However, this could be offset in the counterfactual by movement of jobs to a larger cluster in Toronto.

Other impacts of CBC/Radio-Canada on creating value for others

We examine the impact of CBC/Radio-Canada with respect to the creation of value for others in the creative sector. These comprise such effects as the impact CBC/Radio-Canada has on the implementation of new technologies in broadcasting, promoting digital content and distribution, and supporting Canadian artists. We find evidence to suggest that incremental value is generated in these areas, and that there is a positive net impact. However, due to the diffuse and complex nature of these impacts it is not possible to quantify them robustly.

CBC/Radio-Canada's leading role on implementing new technologies: CBC/Radio-Canada is often at the forefront of implementing new technologies in broadcasting. As a government funded broadcaster with focus on original Canadian content, it is uniquely placed in Canada to gain exposure, test and lead the implementation of emerging technologies, acting as a test bed for the wider industry.

Promoting digital content and distribution: CBC/Radio-Canada plays an active role in promoting digital content and distribution methods in Canada through its own net portals, particularly cbc.ca, radio-canada.ca and tou.tv. Also the provision of Canadian content produced by CBC/Radio-Canada to third party distributors helps promote Canadian productions, and generate additional revenues for the distributors used.

Supporting Canadian artists: CBC/Radio-Canada has demonstrated over time through its relatively high investment in *made in Canada* content that it is a platform for nurturing Canadian talent, providing opportunities for emerging artists and an outlet for established stars to showcase their skills. CBC/Radio-Canada also commission a number of awards designed to recognize and develop talent. CBC/Radio-Canada exposure has also been credited by many artists as a key element in enhancing their careers.

1 Introduction

This report was commissioned by CBC/Radio-Canada to provide a measure of the impact of CBC/Radio-Canada on the Canadian economy. It estimates CBC/Radio-Canada's value added in the economy, based on the broadcasting year 2010² and some of the additional economic benefits that arise as a result of CBC/Radio-Canada's role as a public service broadcaster in Canada ("spill over effects").

In 2010 Deloitte published a similar study undertaken for the British Broadcasting Corporation, which utilised the same methodological framework.

1.1 Objectives and scope of the report

This report assesses the economic impact of CBC/Radio-Canada in Canada. The public mandate and government funding given to CBC/Radio-Canada are some of the main expressions of cultural policy in Canada. Accordingly, there are many additional cultural and societal impacts from fulfilment of CBC/Radio-Canada mandate that fall outside the scope of this report. This report does not comment on the performance of CBC/Radio-Canada against its mandate, or attempt to value the cultural and societal contributions that CBC/Radio-Canada's mandate and activities generate and represent, although examples of such contributions are given.

The analysis covers all CBC/Radio-Canada activities to support its TV, radio and Specialty Services channels and related services. These are combined into the following groups of service for the purposes of this report³:

- English language conventional TV;
- French language conventional TV;
- English language radio;
- French language radio; and
- Specialty Services.

The economic impact analysis includes CBC/Radio-Canada's impact on creative and non-creative sectors. This is done through the analysis of the supply chain contributing to CBC/Radio-Canada's services and applying economic multipliers measuring the depth and extent of the supply chain to capture the ripple effects of CBC/Radio-Canada's spend throughout the economy. The estimated spill-over effects complement these estimated impacts, investigating CBC/Radio-Canada's additional contributions to the independent sector and Canadian regions, as well as highlighting some of the ways in which CBC/Radio-Canada creates value for others in the Canadian creative industries.

² Broadcasting year refers to the reporting year to the Canadian Radio-television and Telecommunications Commission ending 31st August 2010.

³ Online and digital services are included in these groups of services.

1.2 Report structure

This report first describes:

- the scope of CBC/Radio-Canada's activities that contribute to its economic impact (Section 2);
- the framework we use to assess CBC/Radio-Canada's economic impact (Section 3);

The remainder of the report is divided into two parts:

- Part I discusses the gross and net value added of CBC/Radio-Canada's spend in Canada; and
- Part II sets out our analysis of the spill-over effects of CBC/Radio-Canada's activities.

Part I

In Part I we estimate the gross value added ("GVA") of CBC/Radio-Canada for the broadcasting year 2010 as a result of its overall expenditure as reported to the Canadian Radio-television and Telecommunications Commission ("CRTC") in its annual return. We estimate a "factual" GVA impact, and compare it to a hypothetical "counterfactual" scenario in order to estimate the incremental economic impact of CBC/Radio-Canada's activities. This is the amount of economic activity that would not exist in Canada without a publicly funded CBC/Radio-Canada (as defined in our counterfactual scenario). This is the net value added ("NVA") of CBC/Radio-Canada in the Canadian economy. We take into account an alternative use of the current public funding CBC/Radio-Canada receives and the economic activity it creates, as well as impacts of the counterfactual scenario on the wider media sector in Canada.

Part I is divided into two sections:

- Section 4 presents the analysis and results of the factual GVA; and
- Section 5 sets out the counterfactual and our estimate of the NVA.

Part II

Part II analyses some of the spill-over effects that arise as by-products of CBC/Radio-Canada's activities and spend that creates the NVA estimated in Part I. This report focuses on a subset of spill-over effects that lend themselves to quantification; namely impacts on the independent production sector in Canada, the regional economies in particular areas where CBC/Radio-Canada maintains a presence, and additional value created for others across a range of activities such as technology implementation and giving exposure to Canadian artists.

Part II is divided into three sections:

- Section 6 presents our analysis of CBC/Radio-Canada's impact on the independent production sector;

- Section 7 discusses CBC/Radio-Canada's additional impacts on regional economies particularly through contributions towards the creation of media clusters; and
- Section 8 describes the ways in which CBC/Radio-Canada creates value for others in the Canadian media and creative industries.

2 The Scope of CBC/Radio-Canada's Economic Activities

This section first describes the public mandate on CBC/Radio-Canada, which gives rise to the various TV, radio and online services it provides (discussed in Section 2.1). The nature, extent and location of the economic activities that arise as a result of this mandate and the associated public funding distinguish CBC/Radio-Canada from the private broadcasters in Canada. In particular, the mandate:

- compels and empowers CBC/Radio-Canada to have a focus on high quality original Canadian content in English and in French (discussed in Section 2.2); and
- leads to a wide social reach and strong regional presence across Canadian provinces and territories (discussed in Section 2.3).

This report provides an estimation of the economic impact – as opposed to wider cultural or other impacts – of these activities. Accordingly this section comprises a description of the form and scope of CBC/Radio-Canada's activities.

2.1 CBC/Radio-Canada mandate and services

2.1.1 CBC/Radio-Canada's mandate

CBC/Radio-Canada reports annually to Parliament through the Minister of Canadian Heritage. Its public mandate is set out in the 1991 Broadcasting Act: "The Canadian Broadcasting Corporation, as the national public broadcaster, should provide radio and television services incorporating a wide range of programming that informs, enlightens and entertains" and "the programming provided by the Corporation should"⁴:

- be predominantly and distinctively Canadian, reflect Canada and its regions to national and regional audiences, while serving the special needs of those regions;
- actively contribute to the flow and exchange of cultural expression;
- be in English and in French, reflecting the different needs and circumstances of each official language community, including the particular needs and circumstances of English and French linguistic minorities;
- strive to be of equivalent quality in English and French;
- contribute to shared national consciousness and identity;
- be made available throughout Canada by the most appropriate and efficient means and as resources become available for the purpose; and

⁴ Broadcasting Act 1991, Section 3 "Broadcasting Policy for Canada", part m.

- reflect the multicultural and multiracial nature of Canada.

2.1.2 CBC/Radio-Canada's primary services

CBC/Radio-Canada's specific services span a wide range of television, radio and internet programming, as well as a wide variety of content. The content and activities of CBC/Radio-Canada reflect the objectives contained within its mandate as a public broadcaster, including Canadian content, English and French language focused programming, regional based programming, and programming for Canada's diverse population. These have an effect on its economic footprint in Canada.

CBC/Radio-Canada's principal TV services which implement its public service mandate comprise the two main TV channels CBC Television (in English) and Télévision de Radio-Canada (in French). These main channels provide a mix of news, current affairs, sports, drama, documentary, children's as well as arts and culture programming. Their focus is on Canadian content; produced by Canadians for Canadians. CBC/Radio-Canada's specialty TV channels complement the main conventional broadcast channels. CBC News Network and Réseau de L'information de Radio-Canada ("RDI") are the specialist news and current affairs channels respectively in English and in French. The public service mandate is particularly reflected in CBC/Radio-Canada's focus on Canadian content as well as in CBC/Radio-Canada's regional presence. For example, CBC/Radio-Canada North provides programming for the diverse communities in Canada's northern regions, including radio and television services in eight Aboriginal languages.

CBC/Radio-Canada's radio services are also recognised for their public service aspects, including the main English and French talk and music radio services, as well as Radio-Canada International ("RCI"). They have a strong regional focus and wide geographic spread – including in the Canadian North and for French language services outside Quebec. The main talk radio channels CBC Radio One and Première Chaîne offer listeners a mix of local, national and international news, current affairs, documentaries, and cultural programming. CBC Radio 2 and Espace Musique are CBC/Radio-Canada's main music radio services, providing a diverse range of advertising free music programming with focus on Canadian artists.

Associated with the TV and radio services, CBC/Radio-Canada provides content through its main media websites CBC.ca (in English) and Radio-Canada.ca (in French). In addition, it operates a dedicated web television site tou.tv (Canada's largest French language entertainment web television site), as well as online and satellite radio services and mobile services. These provide various on demand streaming video and radio content throughout the different provinces and territories.

A brief description of CBC/Radio-Canada's primary services is provided in the table below.

Table 3: Primary CBC/Radio-Canada services

Primary CBC/Radio-Canada Services	Description
CBC Television	English language network of news, information, sports, and entertainment programming
CBC News Network	Focuses on breaking news, live event coverage, in-depth news and current affairs programming
Bold	English language digital television service; includes drama and comedy, performing arts and exclusive sporting event programming
Documentary	English language digital television station showing documentaries from Canada and around the world
Télévision de Radio-Canada	French language television network, with news, current affairs, drama, arts and culture, and children and youth programming
Réseau de l'information de Radio-Canada (RDI)	French language news; includes current affairs programming, interviews and documentaries
CBC North	Broadcasting radio and television services in English, French and eight Aboriginal languages in Canada's northern regions
ARTV	French language television channel covering arts and culture, film, theatre, music, dance, and visual arts
TV5MONDE	Worldwide French language television network; encompasses ten broadcast partners across the globe
CBC Radio One	English language information service, providing local, national and international news, current affairs, documentaries, arts and culture, on radio, Sirius Satellite Radio, online and mobile platforms
CBC Radio 2	English language music; programming includes classical, jazz, world beat, pop, etc. on radio and dedicated genre streams online
CBC Radio 3	English language Canadian music via the Internet at radio3.cbc.ca, podcast and Sirius Satellite Radio
Première Chaîne	French language radio network, with a mix of information and cultural programming
Espace Musique	French language musical radio in classical, jazz, vocal, world music, and emerging artists
Bande à part	Popular and alternative French language music via Espace Musique, the Internet, podcast, and Sirius Satellite Radio
Première Plus	French language programming; selection of Première Chaîne's news, current affairs and cultural broadcasts; in partnership with Radio-Canada International and Radio France International, across North America on Sirius Satellite Radio
Sports Extra	French language sports service on satellite radio
Radio-Canada International (RCI)	International radio service, broadcasting information and cultural programs in seven languages via the Internet, digital and analogue shortwave, satellite, and hundreds of partner stations worldwide
RCI Plus	Radio services in seven languages on Sirius Satellite Radio
CBC.ca	English language media website, with news and information, streaming audio and video, sports highlights, Web-only interactive features, multimedia archives, etc.
Radio-Canada.ca	French language radio and television content from Radio-Canada online
Espace Classique	Web radio; continuous classical music
Espace Jazz	Web radio; continuous jazz music
TOU.TV	French language entertainment Web television site; brings together 20 national and international producers and broadcasters
CBC Records / Les disques SRC	In-house recording label which partners with Canadian musicians
Mobile Services	WAP and SMS messaging services, delivering CBC/Radio-Canada interactive content to mobile devices

Source: CBC/Radio-Canada's 2009-2010 Annual Report

2.1.3 Basis of funding

The majority of CBC/Radio-Canada's funding is in the form of the Parliamentary Appropriation (hereafter "public funding"), which is used to support the delivery of the public service mandate. This is supplemented mainly by income from advertising carried on both English and French TV broadcasts, and from subscription revenues related to Specialty Services. In addition, CBC/Radio-Canada earns other income including revenues from the leasing of space, facilities and services; program sales; commercial production sales; host broadcaster's activities; net gains from disposal of equipment; and other minor items.

The funding model affects the incremental economic impact of CBC/Radio-Canada, discussed further and estimated in Sections 4 and 5.

2.2 Canadian content

We discuss below some of the ways in which CBC/Radio-Canada attains the key goals outlined within its mandate as a public broadcaster through providing high quality original Canadian content and through its balance of English and French language services.

2.2.1 Focus on Canadian content

CBC/Radio-Canada has a long history as the largest supplier of original Canadian television content. This is reflected in the prevalence of Canadian content in the CBC/Radio-Canada schedules compared to private broadcasters, and in the balance of expenditure between Canadian and foreign content.

Priority on Canadian content

In 2010, CBC Television showed 81% Canadian programming over the full broadcast day, and 81% Canadian programming during evening prime time hours (from 7:00 to 11:00 pm). On the French side, Télévision de Radio-Canada aired 80% Canadian content during the day and 91% during prime time. In terms of radio broadcasting, in 2010, CBC Radio aired 99% Canadian content over the broadcast day, and 100% Canadian content during its prime time (which for radio takes place from 6:00 to 9:00 am on weekdays). Radio de Radio-Canada's Canadian content was 100% during the broadcast day and 100% during prime time.

It is not just the higher weight given to Canadian content in the overall schedule, but also the priority given to Canadian content in prime time that distinguishes CBC/Radio-Canada from the private broadcasters. Indeed, in the 2010 broadcast year, CBC/Radio-Canada either met or outperformed all targets related to Canadian content programming as set by CRTC as summarised in Table 4.

Table 4: Canadian programming content targets and results

Canadian content	2010 Targets	2010 Results
CBC Television		
Broadcast day	75%	81%
Prime time	80%	81%
Télévision de Radio-Canada		
Broadcast day	75%	80%
Prime time	80%	91%
CBC Radio		
Broadcast day	99%	99%
Prime time	100%	100%
Radio de Radio-Canada		
Broadcast day	99%	100%
Prime time	100%	100%

Source: CBC/Radio-Canada's 2009-2010 Annual Report

The figures in Table 4 contrast with the Canadian content provided by private broadcasters. The CRTC places requirements on private television and radio licence holders to achieve specific Canadian content levels. For television, depending on the type of network, this is generally set at 60%, measured over the course of the entire broadcast day rather than prime time, and is set at 50% between 6 pm and midnight. Some networks have lower targets; for example, TV5 Québec Canada commits only 15% of its programming to the distribution of Canadian programs during the day and prime time.

It appears that some television networks have found it challenging to achieve their mandated Canadian content targets. For example, in October 2010, the CRTC received requests from CTV and Rogers to reduce their minimum Canadian content requirements from 60% to 55%, at some 35 over the air ("OTA") stations across the country. While this request was rejected, more flexible Canadian content regulations are expected to come into effect for private broadcasters in the near future⁵. This has significant implications for our analysis in Section 5 and 6.

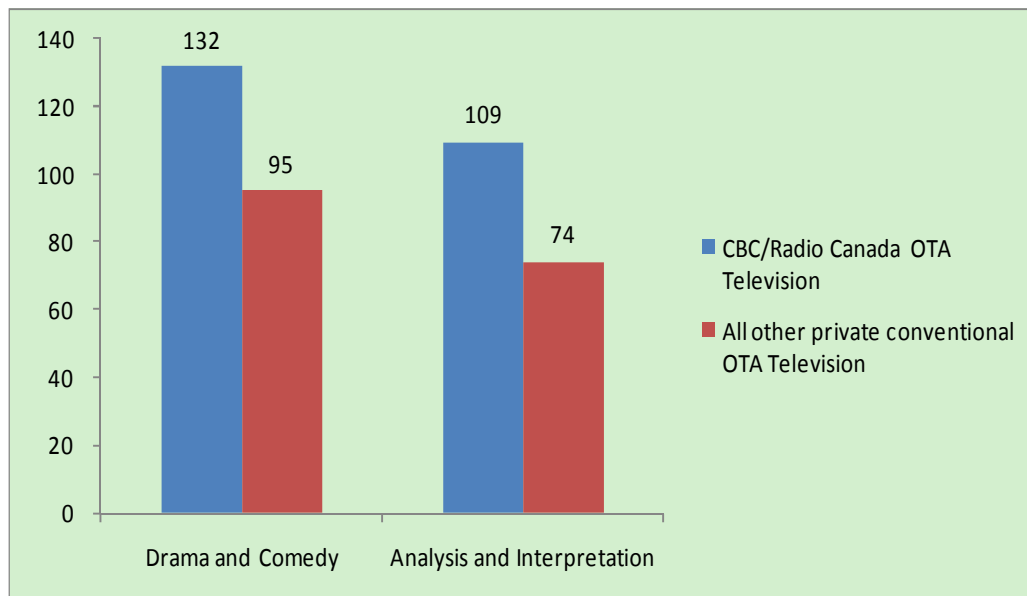
Canadian Content Expenditures

In 2010, Canadian television and radio programming comprised approximately 93% of CBC/Radio-Canada's programming budget. Compared to private conventional OTA television programming by other Canadian broadcasters, CBC/Radio-Canada invests significantly more than all of the other conventional broadcasters combined on Canadian content (Figure 1).

⁵ <http://www.tvb.ca/pages/crtc+rejects+ctv+and+rogers+bid+for+reduction+of+canadian+content.htm>

Figure 1 shows that in the area of English and French drama and comedy Canadian content programming, CBC/Radio-Canada spends approximately 39% more than all private Canadian conventional over the air television combined. In the area of English and French “analysis and interpretation” programming, CBC/Radio-Canada spends approximately 48% more than all private Canadian conventional over the air television combined.

Figure 1: Canadian programming expenditure 2010 \$ million



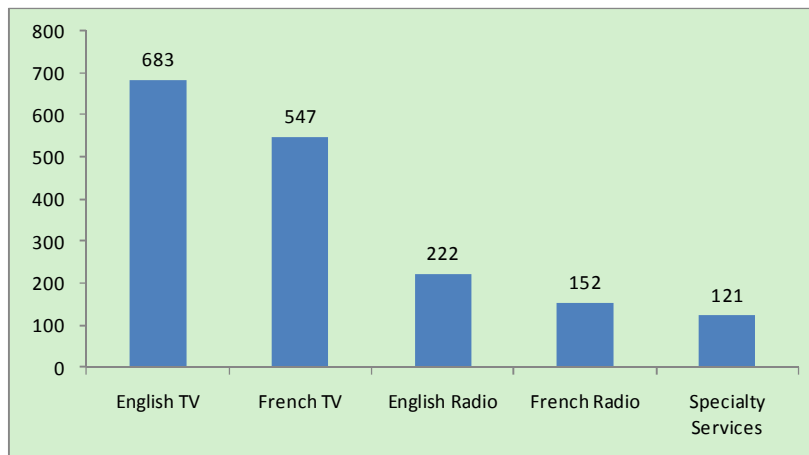
Source: CBC/Radio-Canada's 2009-2010 Annual Report

The focus on Canadian content is one of the main drivers of CBC/Radio-Canada's positive impacts on the Canadian economy. We return to this in Section 5.

2.2.2 Balance of English and French services

CBC/Radio-Canada is the only cultural institution and the only broadcaster to offer services in both English and in French across Canada. English television is programmed in every province and one territory, while English radio is programmed in all provinces and territories. French television is programmed in seven provinces, while French radio is programmed in nine provinces. Additionally, CBC/Radio-Canada offers programming in eight aboriginal languages.

CBC/Radio-Canada's allocation of expenditures and human capital that is devoted to English and French programming reflects its mandate to provide a balance of programming of equivalent quality in English and in French, to reflect the different needs and circumstances of each official language quality, and to reflect the multicultural nature of Canada. Due to the nature of broadcasting and its public service mandate, CBC/Radio-Canada's channels, workforce and programming expenditure are more equally balanced between the two languages, as shown in Figure 2.

Figure 2: CBC/Radio-Canada Expenditures by English / French services

Source: CBC/Radio-Canada's 2010 CRTC return data. Note that Specialty Services are not supported through public funds, but are self financed through subscription and advertising revenues.

The implications for the economic impact of CBC/Radio-Canada from the current balance of spend between the languages are further explored in Sections 4 and 5.

2.3 Social and geographic reach

The CBC/Radio-Canada's mandate is to "inform, enlighten and entertain" Canadians by providing a wide range of programs. The mandate requires the programming to be available throughout Canada and reflect Canada and its regions to national and regional audiences. Further, reflecting the significant cultural diversity in Canada's population is an important part of CBC/Radio-Canada's mandate.

Canadians place a value on the public service provided by CBC/Radio-Canada. According to CBC/Radio-Canada research, 89% of Anglophone and 94% of Francophone survey respondents think it is important to have a public broadcaster like CBC/Radio-Canada⁶. This is consistent with perceptions of public broadcasters in other jurisdictions⁷. The same research also indicates that over 80% of respondents find CBC/Radio-Canada programming to be informative, enlightening and entertaining. Further in terms of diversity, 78% of Anglophone and 80% of Francophone respondents think that CBC/Radio-Canada television programming reflects the multicultural diversity of Canada, whereas 69% and 82% of Anglophone and Francophone respondents

⁶ CBC/Radio-Canada Mission Metrics survey, November 2010.

⁷ In the UK, research commissioned by the BBC Trust indicated that 'the vast majority' of those interviewed supported the maintenance of a strong BBC with an obligation to provide something for everyone. Strategy Review, Research conducted on behalf of the BBC Trust, The Knowledge Agency 1st July 2010. Also research commissioned by Ofcom on Public Service Broadcaster Audience Impact across all UK PSBs indicates the importance of PSB purposes to audiences is high. The percentage of respondents that regarded PSB purposes as important ranged between 86%-78% (Purpose 1 - informing our understanding of the world), 70%-63% (Purpose 2- stimulating knowledge and learning), 79%-58% (Purpose 3- reflecting the UK's national identity) and 73%-66% (Purpose 4 – Representing diversity and alternative viewpoints), Public Service Broadcasting, Annual Report 2010, Appendix E – PSB Audience Impact.

respectively think it reflects their own cultural background also. The results are similar for radio programming, with slightly higher scores on reflecting multicultural diversity of Canada.

The economic implications of the type of programming provided by CBC/Radio-Canada due to the mandate are explored further in Sections 4 to 6 and Section 8.

2.3.1 Regional presence and programming

CBC/Radio-Canada provides regional and cultural programming to Canadians across the country. It is the only national radio broadcaster providing locally based programming to a variety of different communities nationwide. At the end of June 2010, CBC/Radio-Canada employed approximately 9,400 Canadians in 27 regional offices across the country. CBC/Radio-Canada radio services strongly reflect Canada's regions with 53 locations, 37 stations, 16 news bureau, 30 local morning shows, and 22 afternoon shows combined for English and French radio services.

This is reflected in public's perception of CBC/Radio-Canada. According to CBC/Radio-Canada research, 88% of Anglophone and 86% of Francophone survey respondents find that CBC/Radio-Canada television programming lets them know what is happening in other regions of the country, whereas 58% and 75% respectively find that the programming lets them know what is happening in their local communities. The results are similar for French language radio programming, but higher for English language radio.

There seems to be higher demand for regional programming than currently provided. According to a 2010 CBC/Radio-Canada focus group report, it was noted that CBC/Radio-Canada should attempt to increase its local or regional presence through "more regional productions" and "more local news broadcasts". Similarly, a 2004 survey of over 2,000 Canadian adults demonstrated a clear demand for CBC/Radio-Canada regional programming. Some of the survey's findings include:

- 80% of Canadians wish to receive "more CBC/Radio-Canada television and radio programming about their part of the country/region";
- 80% of Canadians want to see an increased presence for CBC/Radio-Canada in their part of the country/region; and
- Canadians look to CBC/Radio-Canada as the legitimate provider of local and community oriented programming.

We discuss CBC/Radio-Canada's regional presence, some highlights of specific contributions, and spill-over economic impacts from those in more detail in Section 7.

3 The Framework for Assessing CBC/Radio-Canada's Economic Impact

3.1 Background

The evaluation of the economic importance of a firm, a policy or an activity can facilitate the definition of industry impact and economic value. Economic impact assessments are one of the many approaches of measuring economic value.

This section sets out our overall approach to assessing the economic impact of CBC/Radio-Canada. This is based on considering two main types of economic impact: Value Added ("VA") and spill-over impact of CBC/Radio-Canada to the creative industries and Canada as a whole.

We then go on to estimate the Net Value Added ("NVA") of CBC/Radio-Canada; this is a measure of the incremental economic impact of CBC/Radio-Canada relative to a counterfactual estimate of the value added that would have been created in the absence of a publicly funded CBC/Radio-Canada. We consider two main measures of Value Added; the Gross Value Added ("GVA") and an assessment of "an alternative framework" on the calculated factual GVA. A counterfactual estimate is applied to derive the Net Value Add ("NVA"); a measure of the incremental impact of a government funded CBC/Radio-Canada.

We first explain these measures of economic activity in general terms and then go on to describe our approach to estimating them in respect of CBC/Radio-Canada.

3.2 Measuring economic activity

Our overall approach to assessing and quantifying the economic impact of CBC/Radio-Canada is based on estimating GVA and spill over effects.

Gross Value Added – We measure gross economic impact

GVA is an estimate of value generated for the Canadian economy as a result of an organisation's activity, in this case CBC/Radio-Canada. Standard economic impact analysis distinguishes three components of overall GVA impacts:

- the organisation's own or **direct value added**, defined as the value of its total sales or revenue less its expenditure on goods or services purchased from other organisations, roughly equivalent to its wage bill and operating surplus;
- **indirect impact** on the GVA of firms in the supply chain, whereby these firms add value to the goods and services purchased by the organisation in question and in their further transactions with other firms in the entire supply chain throughout the economy; and
- **induced impacts** on the wider economy as a result of the expenditure of employees of all affected firms in the economy.

Multipliers – combining GVA impacts

The combined GVA impact of the direct value added and second-round or ‘ripple’ effects through the economy can be measured by applying multipliers to expenditure. For instance, a multiplier of 1.7 would imply that \$100 million of activity by the organisation in question results in a total GVA impact of \$170 million.⁸

The appropriate size of a multiplier applied to an organisation’s GVA depends partly on the extent of linkages between the organisation and its supply chain and the depth of further linkages within this supply chain. The greater the linkages between the organisation and its supply chain in the geographical area of interest (whether the local economy, the region, the province or Canada as a whole) the larger the multiplier will be. However, though the expenditure of the organisation will re-circulate through the supply chain and other sectors of the economy, the impact on overall GVA tapers off in each successive round. This is because as expenditure occurs it is subject to varying forms of leakage.⁹ Accordingly, as we discuss further below, for the purposes of our analysis it is necessary to use multipliers that as far as possible relate to the nature of CBC/Radio-Canada’s operations and expenditure.

Spill-over effects

Spill-over effects are by-products of an organisation’s activity, experienced by other firms in the same sector or by the economy more generally. In the context of CBC/Radio-Canada we consider spill-over effects relating in particular to the independent production sector, CBC/Radio-Canada’s investment in regional clusters and some of the ways in which CBC/Radio-Canada creates value for others.

Some spill-over effects generated by an organisation over the past (such as its impact on the competitive environment of the sector) will have influenced the structure of the supply chain, and therefore should be reflected in indirect and induced value-add impacts. However, other spill-over effects will not be reflected in the estimates of GVA impact and can therefore be added to GVA estimates.

Estimating Net Value Added – using a Counterfactual

For both GVA and spill over effects, the estimated ‘factual’ impacts can be compared to impacts estimated in a hypothetical ‘counterfactual’ scenario. The difference between the GVA and spill

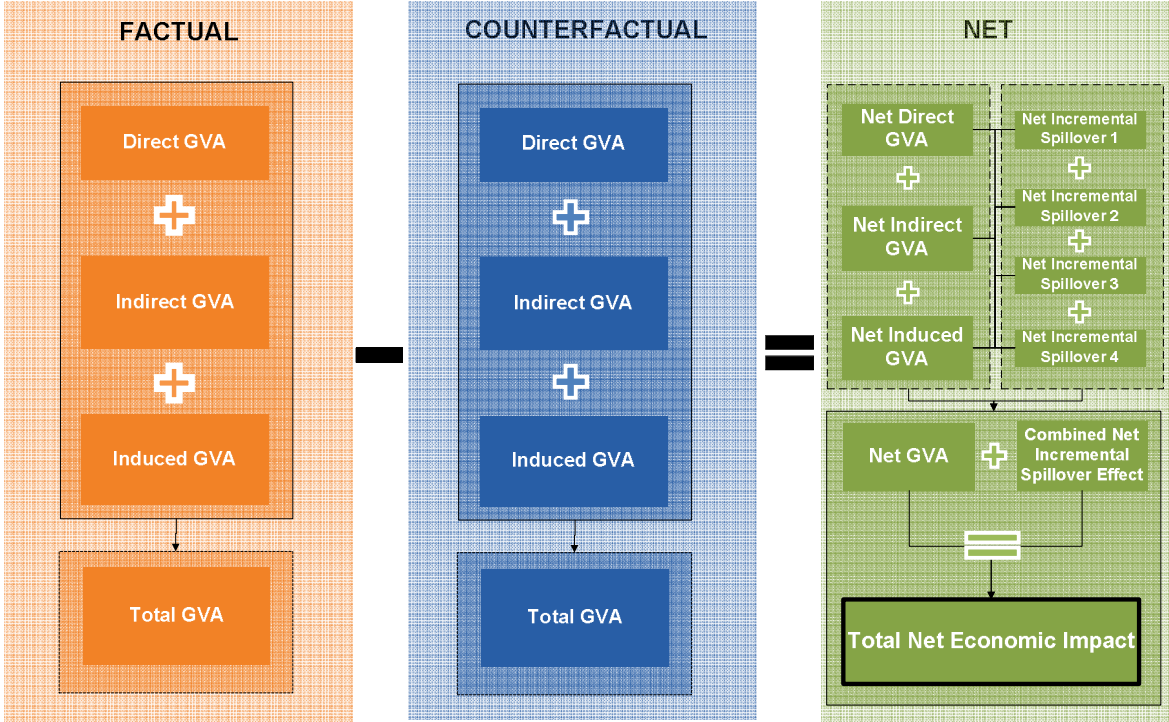
⁸ The multipliers are estimated by providing the impact of an activity in one sector on the level of activity in other sectors of the economy. The focus of this report is on the total economic impacts of the CBC/Radio-Canada’s current level of activity gross basis. The question of a change in output is addressed through the use of a counterfactual level of activity to estimate the net economic impact. The Statistics Canada multipliers are further explained in: <http://www.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=15-201-XWE&lang=eng>.

⁹ This may be through the employees of the organisation and in the supply chain saving a proportion of their income, or spending some of their income on imports. Similarly, firms in the supply chain may import some proportion of their inputs (where imports could be from outside the local area or region, as well as from outside Canada) which will diminish the subsequent effects for the economy.

over impacts in the factual and counterfactual scenarios provides a measure of the incremental economic impact of an organisation. In our analysis of the economic impact of CBC/Radio-Canada the use of a counterfactual allows us to take into account the likelihood that in the absence of a publicly funded CBC/Radio-Canada, there would be an alternatively funded broadcaster.

Figure 3 below illustrates these concepts.

Figure 3: Overview of approach to estimating economic impact



Source: Deloitte analysis

Part I: CBC/Radio-Canada's Gross and Net Value Added

4 CBC/Radio-Canada's Gross Value Added

CBC/Radio-Canada reported an expenditure of \$1.77 billion in its CRTC return filings for 2010. After excluding non-Canadian expenditure, the operating expenditure we used for the purposes of our GVA estimation was \$1.73 billion¹⁰.

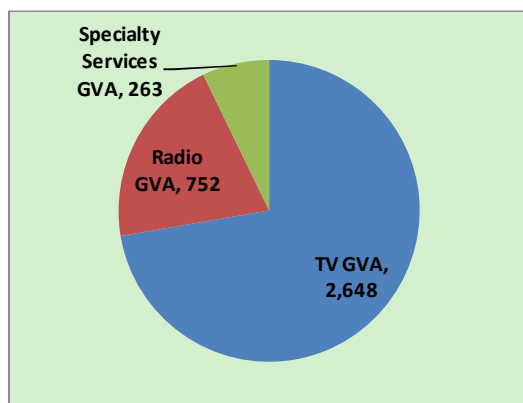
This expenditure was incurred across CBC/Radio-Canada's three main services, Television, Radio and Specialty Services of which television expenditure accounted for the largest share. \$1.2 billion was spent on Television representing 71% of CBC/Radio-Canada's total outlay in 2010. Radio and Specialty Services expenditure were \$373 million and \$123 million¹¹ respectively.

4.1 Summary

Our estimates show that CBC/Radio-Canada generated a GVA of \$3.7 billion in 2010. Television contributed \$2.7 billion; Radio contributed \$752 million and Specialty Services contributed \$263 million. The distribution of GVA reflects the distribution of CBC/Radio-Canada's expenditure across the three services.

In terms of geographical spread, Quebec and Ontario benefitted from the majority of the GVA generated by CBC/Radio-Canada. This is largely a consequence of the concentration of a significant proportion of CBC/Radio-Canada expenditure in these provinces and the importance of these two provinces as important clusters of media activity. Figure 4 below illustrates the distribution of CBC/Radio-Canada's GVA by the main service categories, based on analysis of detailed activities undertaken to deliver the services.

Figure 4: CBC/Radio-Canada GVA by service in \$m



Source: Deloitte analysis of CBC/Radio-Canada data

¹⁰ CBC/Radio-Canada provided us with an expenditure breakdown totalling \$1.77 billion. The data included non-Canadian programming expenditure of \$49 million. Imports do not contribute to the Canadian economic impact.

¹¹ This includes non-Canadian expenditure of \$1.8 million

4.2 Our approach

GVA captures the economic value generated for the Canadian economy as a result of CBC/Radio-Canada's expenditure in remunerating factors of production both *directly* within CBC/Radio-Canada and *indirectly* across CBC/Radio-Canada's supply chain and more widely as money continues to flow through the economy (*induced* impact).

Our approach to analysing the economic impact follows a series of steps:

- We identify the multipliers to be adopted for the different expenditure categories which encompass direct and indirect impacts;
- We identify the sources of impacts in terms of spend on Television, Radio and Specialty Services; and
- We show where these impacts may be measured across both the supply chain and the provinces in Canada.

We capture the separate economic impact of CBC/Radio-Canada's Television, Radio and Specialty Services activities. Each of these activities has different impacts due to:

- Different supply chain structures or market focuses (such as content production, transmission and related technology markets)
- Different Canadian versus international expenditure patterns, which will determine the size of the relevant multiplier and extent of leakage; and
- Different scale of activity across province.

We also carry out an analysis by province using appropriate multipliers enabling us to identify the impact of specific provinces benefiting from the presence and activities of CBC/Radio-Canada and the magnitude of the corresponding GVA¹².

4.2.1 Multiplier analysis

Overview

The combined GVA impact of the direct value added and second-round or 'ripple' effects through the economy can be measured by applying multipliers to expenditure.

The appropriate size of a multiplier applied to an organization's GVA depends on the extent of linkages between the given organization and the broader economy with which it interacts. Some key factors which influence the size of multipliers include:

- **The overall size and economic diversity of the region's economy**

¹² The provincial analysis capture the benefits as defined by the GVA framework, other wider quantifiable and qualitative benefits are not captured in this provincial analysis.

- regions with large, diversified economies producing many higher order goods and services will have larger multipliers as businesses can find most of the goods and services they need locally;
- **The geographic extent of the region and its role within the broader region**
 - regions of a large geographic extent will have larger multipliers, all other things equal, than small, isolated areas;
 - regions that serve as central places for the surrounding area and have a greater amount of economic activity will also have larger multipliers than more isolated areas;
- **The nature of the economic sectors under consideration**
 - multipliers vary across different sectors of the economy based on the mix of labour and other inputs and the propensity of each sector to buy goods and services from within the region;
 - labour-intensive sectors tend to have relatively larger induced effects than indirect effects, as they are purchasing a higher proportion of labour than capital inputs; and
- **Supply chain linkages**
 - the greater the linkages between an organization and its supply chain, the larger the multiplier will be; however, though the expenditure of the organization will re-circulate through the supply chain and other sectors of the economy, the impact on overall GVA tapers off in each successive round as it is subject to varying forms of leakages.

As we discuss further below, for the purposes of our analysis it is necessary to estimate multipliers that are as far as possible specific to CBC/Radio-Canada and the nature of its operations and spending.

Source and Methodology

Input-Output multipliers are derived from Input-Output tables and show the impact of spending in a certain industry on various economic variables including GDP, employment, output and wages and salaries. We have used Input-Output Multipliers for the Canadian economy sourced from Statistics Canada, for 2006, at both the national and provincial level.¹³

¹³ The 2006 multipliers are the most recent ones available.

The multipliers extracted for our analysis are “Type II multipliers¹⁴” which comprise direct, indirect and induced impacts. These are defined in Section 3.

Specific multipliers utilised in this study include “output” multipliers and “employment” multipliers, for various industry classifications and different provinces of Canada. Output multipliers used measure the effect of CBC/Radio-Canada expenditure on output of the economy. The employment multipliers provide an alternative presentation of the impact, representing the impact on number of jobs per one million dollars of output impact.

Based on the primary areas of CBC/Radio-Canada expenditure, corresponding industry categories were identified within the Statistics Canada Input-Output multiplier data set to accurately reflect the multiplier effect of these expenditures, as the magnitude of the multipliers vary across different industries (discussed above).

The corresponding categories were identified as follows:

Expenditure Category	Statistics Canada Type II Multiplier
Programming and Production	Radio and Television Broadcasting
Transmission	Telecommunications
Sales and Promotion	Advertising and Related Services
Administration and General	Other Administrative and Support Services
Professional Services	Other Professional and Technical Services
Amortization	Non-residential Building Construction / Software Publishers

Source: Deloitte analysis

The Statistics Canada dataset does not include multipliers for some of CBC/Radio-Canada expenditure categories and provinces. We employed different assumptions and adjustments in order to appropriately estimate multipliers that were unavailable directly from the dataset.¹⁵

These adjustments and assumptions include:

- Statistics Canada’s “Radio and Television Broadcasting” multipliers were disaggregated into separate television and radio multipliers by using 100% of this multiplier for television expenditures, and a 90% proportion of this multiplier for radio programming expenditures. Comparatively, this ratio is similar to that estimated for UK regions (where radio broadcasting multipliers are 86.4%-90.4% of television broadcasting multipliers) and the

¹⁴ Type II multipliers include direct, indirect and induced impacts; this can be distinguished from Type I which exclude induced impacts.

¹⁵ Statistics Canada information officers / representatives were consulted on the plausibility of these assumptions and adjustments.

same as that estimated for the UK overall (where the radio broadcasting multiplier has been estimated to be 90% of the television broadcasting multiplier).

- For English and French television programming, multipliers were assumed to be the same, and for English and French radio programming, multipliers were assumed to be the same (although the multipliers do differ between different provinces).
- As the smallest province, Prince Edward Island multipliers were utilized as a proxy for Northwest Territories, Nunavut, and Yukon based expenditures for which Statistics Canada does not publish separate multipliers.
- Both building and software multipliers were utilized for CBC/Radio-Canada's amortization related expenditures, in order to reflect the nature of expenditures contained in this category.

Television Programming Multipliers

The following table sets out the Type II output multipliers for CBC/Radio-Canada's television related expenditures. Provincial multipliers shown are inter-province multipliers, which measure the effects in all provinces based on expenditure in each province.

Table 5: Multipliers used for TV expenditures

Television	Programming	Transmission	Sales and Promotion	Administration and General	Professional Services	Amortization (Building)	Amortization (Software)
	Output	Output	Output	Output	Output	Output	Output
Newfoundland	2.1	1.8	2.1	2.4	2.5	2.7	2.4
Nova Scotia	2.4	1.7	2.1	1.9	2.2	2.4	1.9
Prince Edward Island	2.1	1.7	2.1	1.9	2.7	2.4	2.5
New Brunswick	2.3	1.6	1.9	2.2	2.2	2.5	2.2
Quebec	2.3	1.8	2.2	2.1	2.3	2.4	2.2
Ontario	2.1	1.7	2.0	1.9	2.1	2.2	2.2
Manitoba	2.2	1.6	2.0	1.9	2.2	2.6	2.2
Saskatchewan	2.3	1.6	2.0	1.7	2.3	2.4	2.1
Alberta	2.2	1.6	2.1	2.2	2.4	2.4	2.0
British	2.3	1.6	2.4	2.1	2.2	2.5	2.1

Television	Programming	Transmission	Sales and Promotion	Administration and General	Professional Services	Amortization (Building)	Amortization (Software)
	Output	Output	Output	Output	Output	Output	Output
Columbia							
North West Territories	2.1	1.7	2.1	1.9	2.7	2.4	2.5
Yukon	2.1	1.7	2.1	1.9	2.7	2.4	2.5
Nunavut	2.1	1.7	2.1	1.9	2.7	2.4	2.5
Canada	2.2	1.7	2.1	2.1	2.2	2.2	2.2

Source: Statistics Canada

Radio Programming Multipliers

The following table sets out the Type II output multipliers for CBC/Radio-Canada's radio related expenditures. Provincial multipliers are inter-province multipliers, which measure the effects in all provinces based on expenditure in each province.

Table 6: Multipliers used for Radio expenditures

Radio	Programming	Transmission	Sales and Promotion	Administration and General	Professional Services	Amortization (Building)	Amortization (Software)
	Output	Output	Output	Output	Output	Output	Output
Newfoundland	1.9	1.8	2.1	2.4	2.5	2.7	2.4
Nova Scotia	2.2	1.7	2.1	1.9	2.2	2.4	1.9
Prince Edward Island	1.9	1.7	2.1	1.9	2.7	2.4	2.5
New Brunswick	2.1	1.6	1.9	2.2	2.2	2.5	2.2
Quebec	2.1	1.8	2.2	2.1	2.3	2.4	2.2
Ontario	1.9	1.7	2.0	1.9	2.1	2.2	2.2
Manitoba	2.0	1.6	2.0	1.9	2.2	2.6	2.2

Radio	Programming	Transmission	Sales and Promotion	Administration and General	Professional Services	Amortization (Building)	Amortization (Software)
	Output	Output	Output	Output	Output	Output	Output
Saskatchewan	2.1	1.6	2.0	1.7	2.3	2.4	2.1
Alberta	2.0	1.6	2.1	2.2	2.4	2.4	2.0
British Columbia	2.1	1.6	2.4	2.1	2.2	2.5	2.1
North West Territories	1.9	1.7	2.1	1.9	2.7	2.4	2.5
Canada	2.0	1.7	2.1	2.1	2.2	2.2	2.2

Source: Statistics Canada

Counterfactual Multipliers

We have used the same multipliers both in the factual and counterfactual GVA estimation. It might be argued that the counterfactual scenario leads to a smaller and less interlinked supply chain, leading to a fall in the multipliers. This is as a result of lower spend by the counterfactual CBC/Radio-Canada on local Canadian content and consequent effects on the supply chain. The case may be made particularly in relation to the smaller regional markets where CBC/Radio-Canada operates (i.e. Yellowknife, Whitehorse, Iqaluit, etc.) in which a commercial operator may not be as active. However, the data required for such adjustment are not readily available. Assuming no change to the multipliers leads to a more conservative estimate of CBC/Radio-Canada's net impact than assuming a reduction in the multipliers.

Multipliers Applied to Alternative Use of Public Funding

We assume the government funding that CBC/Radio-Canada currently gets will be spent in the same proportion as current government expenditure profile. This will include expenditure on defence, health and debt repayments.

The following table outlines the Type II national output and employment multipliers for public funding expenditures.

Table 7: Multipliers used for government expenditure

Public Expenditure Categories	Output	Employment
Hospitals	2.0	19.39
Government Residential Care Facilities	2.1	24.90
Universities	2.0	17.74
Government Elementary and Secondary Schools	1.9	20.31
Government Community Colleges and C.E.G.E.P.s	2.1	21.43
Other Government Education Services	2.1	19.67
Other Municipal Government Services	2.1	15.42
Other Provincial and Territorial Government Services	2.31	15.65
Other Federal Government Services including Defence	2.1	15.45

Source: Statistics Canada

4.3 Our assessment of CBC/Radio-Canada's Gross Value Added

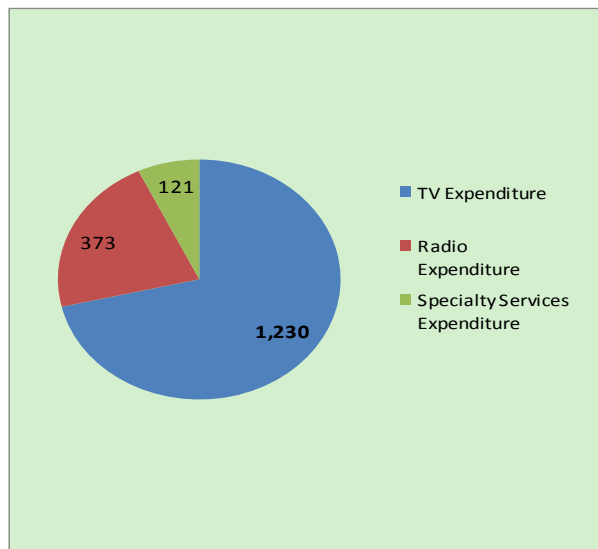
4.3.1 CBC/Radio-Canada's total direct and supply-chain spend and GVA

CBC/Radio-Canada's total direct and supply-chain spend

CBC/Radio-Canada's total expenditure in 2010 was \$1.77 billion. After excluding expenditure outside Canada, the operating expenditure we used for the purposes of our GVA estimation was \$1.73 billion.¹⁶ This expenditure was incurred amongst other things on programming activities, transmission, sales & promotion, administrative expenses and amortisation¹⁷. CBC/Radio-Canada's expenditure profile is distributed between television (72% of total expenditures), radio (21%) and Specialty Services (7%).

¹⁶ CBC/Radio-Canada 2010 CRTC returns

¹⁷ Though amortisation is a periodic allocation and not an "incurred expense" in the year, we include it in computing GVA to take into account capital costs incurred by CBC/Radio-Canada which also benefits the economy. Including an allocation rather than actual expenditure allows a smoothing of the effect of capital expenditure over a number of years.

Figure 5: Total expenditure share by service type in \$m

Source: Data as provided by CBC/Radio-Canada, Deloitte analysis

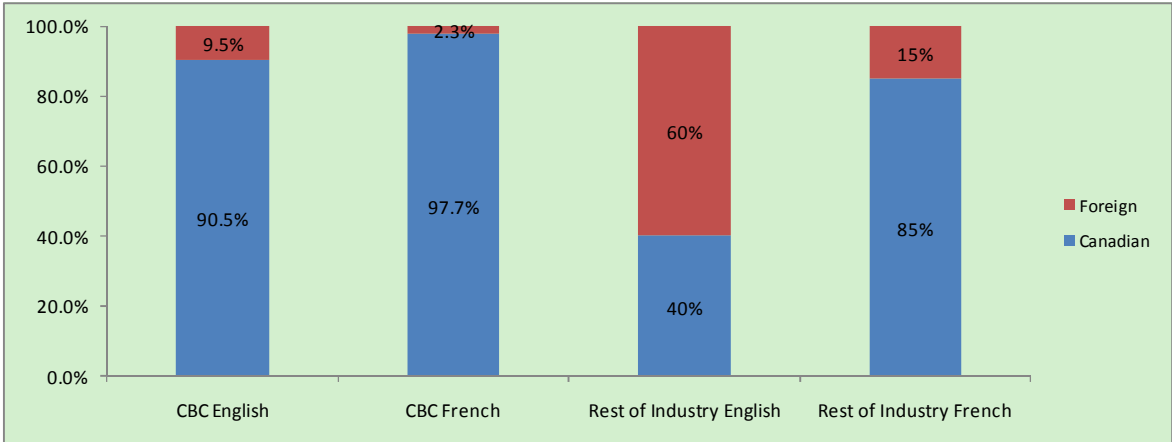
A substantial percentage of this total expenditure, about 65%¹⁸, is spent on programming and production related expenditure across all three of CBC/Radio-Canada's main services. CBC/Radio-Canada's programming spend is primarily concentrated on local Canadian content and production. The proportion spent by CBC/Radio-Canada on foreign programming accounts for less than 7%¹⁹ of CBC/Radio-Canada's programming expenditure. This is in contrast to the rest of the broadcasting industry where foreign programming outlay tends to be a significant portion of the overall programming expenditure. According to a comparison report for conventional TV competitors for 2010 prepared by CBC/Radio-Canada which was based on CRTC return data, on average the major private TV broadcasters spend 60% (English) and 15% (French) of their programming budget on foreign programming. Also, to further underline the unique position of CBC/Radio-Canada, CBC/Radio-Canada spends significantly more than all the other conventional broadcasters combined on Canadian programming²⁰.

¹⁸ Analysis of data provided by CBC/Radio-Canada

¹⁹ Analysis of data provided by CBC/Radio-Canada

²⁰ Financial Results and Comparison of Conventional Television Competitors 2010 Update prepared by CBC/Radio-Canada

Figure 6: CBC/Radio-Canada's and other conventional broadcasters Canadian / foreign programming expenditure profile 2010



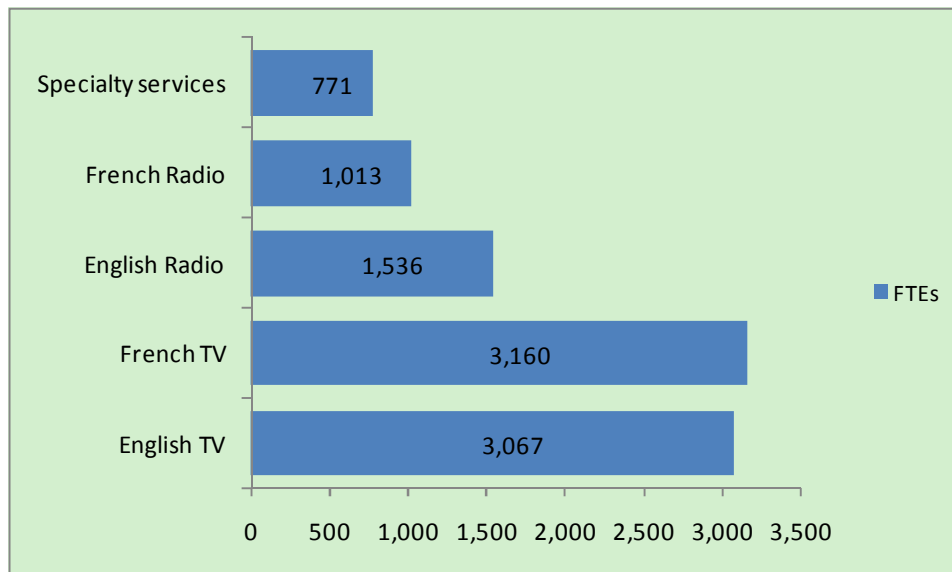
Source: Data as provided by CBC/Radio-Canada, Deloitte analysis

This substantial difference in foreign versus Canadian programming expenditure in comparison with the rest of the industry emphasizes the importance of CBC/Radio-Canada in supporting the Canadian media industry.²¹

CBC/Radio-Canada’s number of full time employees

In 2010, CBC/Radio-Canada employed 9,500 full time equivalent employees (“FTEs”). The majority of FTEs were employed in Television, with Specialty Services having the least number of FTEs due to its relatively smaller operational size.

²¹ Spend on Canadian by the other conventional broadcasters in 2010 may be higher than usual due to the Vancouver Winter Olympic Games. This data may therefore underestimate the difference between CBC/Radio-Canada and private broadcasters.

Figure 7: CBC/Radio-Canada FTEs

Source: CBC/Radio-Canada

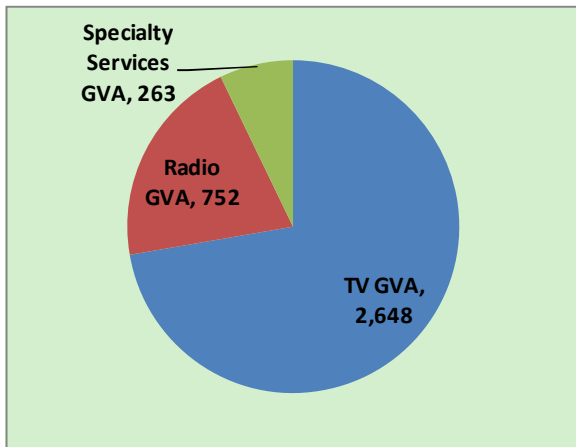
CBC/Radio-Canada's GVA

The GVA of CBC/Radio-Canada is driven by the magnitude of spend and the size of the appropriate multipliers. The multipliers for each category of economic activity vary across provinces. This is determined by, among other things, the strength and extent of the supply linkages in the provinces.

Total GVA

Our estimate of CBC/Radio-Canada GVA in 2010 is \$3.7 billion. The distribution of this GVA across the three main CBC/Radio-Canada activities is as shown in Figure 8 below. In line with the level of expenditure, Television contributes the highest GVA amongst CBC/Radio-Canada's services.

Figure 8: CBC/Radio-Canada GVA distribution by service.

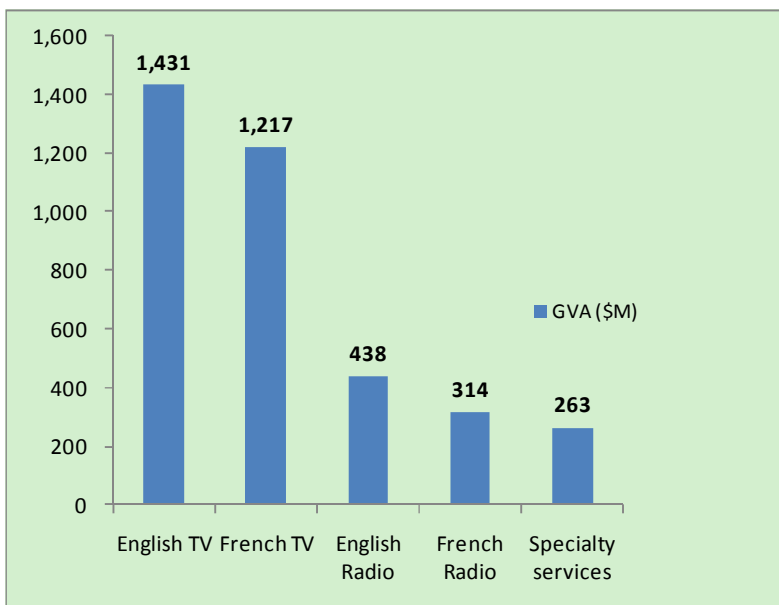


Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

GVA by service type

CBC/Radio-Canada’s services are further defined by the language of broadcast. Figure 9 below shows the distribution of the GVA generated by CBC/Radio-Canada split by services and language. English language services, as shown below, in aggregate generate more GVA than their French language counterparts. This is due to the higher level of expenditure and investment in English services. The ratio of English to French expenditure is approximately 7:5.

Figure 9: Distribution of CBC/Radio-Canada GVA into service and language of broadcast



Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

Provincial expenditure contribution to GVA

CBC/Radio-Canada's impact in Canada encompasses all ten provinces and three territories of the country. Table 8 below shows a regional breakdown of CBC/Radio-Canada expenditure and the associated Canada wide GVA.²²

Table 8: CBC/Radio-Canada expenditure by province / territory and corresponding Canada wide GVA

Province / Territory	Expenditure (\$m)	GVA (\$m)
Newfoundland	25	51
Nova Scotia	42	93
Prince Edward Island	10	20
New Brunswick	42	90
Quebec	654	1,449
Ontario	731	1,499
Manitoba	39	78
Saskatchewan	29	60
Alberta	61	127
British Columbia	68	147
Yukon	3	6
North West Territories	17	34
Nunavut	5	10
Total	1,724	3,663

Source: CBC/Radio-Canada data, Deloitte analysis

As highlighted above, GVA for each province and territory is closely correlated to the magnitude of the expenditure. However, the multiplier values are also important drivers of GVA. Provinces with higher multipliers would, all other things been equal, report proportionately higher GVAs.

The figures in Table 8 above show the "Canada wide" effect of CBC/Radio-Canada's spend. A "Canada wide" impact would capture injections and leakages between provinces (leakage from one province is an injection to another). For example, a leakage from Alberta to British Columbia would be captured in British Columbia and vice versa. This table captures inter provincial GVA leakages.

²² The regional split of expenditure is based on CBC/Radio-Canada's CTTC returns. Although the majority of expenditures are recorded against the province they take place in, the figures include some allocation of overhead expenditures to each station. The great majority of these are allocated to Ontario and Quebec.

4.3.2 CBC/Radio-Canada Television expenditure and GVA

CBC/Radio-Canada Television expenditure

CBC/Radio-Canada Television expenditure for the period ended 31 March 2010 was \$1.2 billion²³. This can be broken down by expenditure on English and French language services, and further into different regions, as well as by detailed activities supporting the services. In terms of language split, \$683 million of this expenditure was incurred on English language services and \$547 million on French language services. These figures exclude non-Canadian spend.

With regard to geographical spread, Quebec and Ontario accounted for over \$1 billion of the total TV expenditure representing 84%. This concentration of expenditure is vital in creating a vibrant media cluster in these areas and supporting the media supply chain. Table 9 sets out the regional spread of CBC/Radio-Canada's TV expenditure by language. Quebec accounts for the largest share of French TV spend. However, CBC/Radio-Canada has French TV expenditure outside Quebec as well, accounting for approximately \$80 million.

Table 9: CBC/Radio-Canada TV expenditure reported by language and province / territory

Province / Territory	English (\$m)	French (\$m)	Total (\$m)
Newfoundland	12	-	12
Nova Scotia	25	-	25
Prince Edward Island	6	-	6
New Brunswick	7	20	27
Quebec	19	469	488
Ontario	524	27	551
Manitoba	13	8	21
Saskatchewan	9	8	17
Alberta	31	7	38
British Columbia	28	9	37
Yukon	-	-	-
North West Territories	9	-	9
Nunavut	-	-	-
Total	683	547	1,230

Source: CBC/Radio-Canada data

Expenditure on programming, commissioned from independent producers, acquired or made in-house accounts for 63% of CBC/Radio-Canada's total TV expenditure. CBC/Radio-Canada's focus on developing their programming offerings is further demonstrated by CBC/Radio-Canada being the only French language broadcaster to increase French programming expenditures in

²³ This is the figure adopted in our value add estimation, it excludes non-Canadian expenditure of \$49 million

2010²⁴. In addition, compared to 2009, CBC/Radio-Canada has grown its overall local Canadian programming expenditure by 5%²⁵. This reflects CBC/Radio-Canada's continuous investment in "made in Canada" content.

CBC/Radio-Canada's expenditure on programming and production includes expenditure on commissioning from the independent sector. In the year to March 2010, CBC/Radio-Canada spent \$177 million (representing 23% of total programming expenditure) on television content from external production companies. This underscores how critical CBC/Radio-Canada is to overall investment in the creative industries and the independent production sector (discussed further in Part II).

Table 10 and Table 11 show the breakdown of CBC/Radio-Canada's TV expenditure into different high level activities.

CBC/Radio-Canada Television GVA

We estimate the TV GVA by matching and applying the appropriate multipliers to different categories of expenditure. Television accounted for 71% of CBC/Radio-Canada's GVA. This proportion reflects the magnitude of spend as well as the higher programming related multipliers for TV in comparison to Radio²⁶. English and French TV GVA were estimated at \$1.4 billion and \$1.2 billion respectively. Table 10 and Table 11 below show the different categories of expenditure, the relevant multipliers and our estimates of the GVA.

Table 10: Expenditure, multiplier and GVA of English TV by category of expenditure

English TV	Programming	Transmission	Sales & promotion	Admin & general expenses²⁷	Total
Expenditure (\$m)	449	46	72	116	683
GVA (\$m)	966	78	148	240	1,431

Source: CBC/Radio-Canada data, Deloitte analysis

²⁴ Financial Results and Comparison of Conventional Television Competitors 2010 Update prepared by CBC/Radio-Canada based on CRTC return data

²⁵ Financial Results and Comparison of Conventional Television Competitors 2010 Update prepared by CBC/Radio-Canada based on CRTC return data

²⁶ Refer to section 4.2.1

²⁷ Admin and general expenses include amortisation.

Table 11: Expenditure, multiplier and GVA of French TV by category of expenditure

French TV	Programming	Transmission	Sales & promotion	Admin & general expenses	Total
Expenditure (\$m)	328	52	39	127	547
GVA (\$m)	760	92	86	279	1,217

Source: CBC/Radio-Canada data, Deloitte analysis

For both the English and French TV GVA, programming contributes the bulk of the overall GVA, accounting for about two-thirds. The higher English TV GVA reflects the higher expenditure on English TV compared to French TV.

4.3.3 CBC/Radio-Canada Radio expenditure and GVA

CBC/Radio-Canada Radio expenditure

CBC/Radio-Canada expended \$374 million on Radio in 2010 on supporting the operations of its 37 stations in 53 locations²⁸. \$222 million of this expenditure was incurred on English language services while \$152 million was spent on French language services. A significant proportion of the expenditure, approximately \$243 million representing 65% of the total, was expended in Quebec and Ontario. While the majority of expenditure was in Quebec and Ontario, significant CBC/Radio-Canada radio spend was also recorded in all Canadian provinces reflecting its geographical distribution of services. French spend outside Quebec was worth about \$40 million spread across eight provinces, as shown in Table 12 below.

²⁸ CBC/Radio-Canada CRTC return data.

Table 12: CBC/Radio-Canada radio expenditure reported by language and province / territory

Province / Territory	English (\$'m)	French (\$'m)	Total (\$'m)
Newfoundland	11	-	11
Nova Scotia	13	2	15
Prince Edward Island	3	1	4
New Brunswick	7	7	14
Quebec	14	114	128
Ontario	100	15	115
Manitoba	11	4	15
Saskatchewan	8	3	11
Alberta	15	3	18
British Columbia	24	5	29
Yukon	3	-	3
North West Territories	8	-	8
Nunavut	5	-	5
Total	222	152	374

Source: CBC/Radio-Canada data

Radio programming expenditure accounts for 62% of the total CBC/Radio-Canada radio outlay. The remaining 38% of CBC/Radio-Canada's radio expenditure is made up of spend on transmission, promotion, administrative and amortisation expenditure. In addition, CBC/Radio-Canada spends half of its radio expenditure on remuneration of its employees, reflecting the nature of radio production and broadcasting. Table 13 and Table 14 below show the breakdown of CBC/Radio-Canada's radio expenditure into different high level activities.

CBC/Radio-Canada Radio GVA

We estimated CBC/Radio-Canada Radio GVA for 2010 as \$752 million, English services accounted for \$437 million while French services accounted for \$314 million. This is smaller in comparison to TV GVA as a result of much smaller absolute level of expenditure as well as the smaller multiplier applied to Radio²⁹. Table 13 (English language) and Table 14 (French language) show the GVA of Radio split into English and French services and further distributed into GVA of each expenditure category.

²⁹ Refer to 4.2.1 – multiplier analysis

Table 13: Expenditure, multiplier and GVA of English Radio by category of expenditure

English Radio	Programming	Transmission	Promotion	Admin & other expenses	Total
Expenditure (\$m)	135	25	7	54	222
GVA (\$m)	267	42	15	114	438

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

Table 14: Expenditure, multiplier and GVA of French Radio by category of expenditure

French Radio	Programming	Transmission	Promotion	Admin & other expenses	Total
Expenditure (\$m)	95	14	7	36	152
GVA (\$m)	197	24	15	78	314

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

4.3.4 CBC/Radio-Canada Specialty Services expenditure and GVA

CBC/Radio-Canada Specialty Services expenditure

CBC/Radio-Canada incurred \$123 million in running Specialty Services. The expenditure has been allocated for our purposes to provinces where it occurs³⁰. In relation to total CBC/Radio-Canada expenditure, Specialty Services accounts for 10% of total spend. Programming and production accounts for 84% of this expenditure, with the outstanding 16% (\$20 million) distributed between transmission, sales & promotion and administrative expenses. We note that CBC/Radio-Canada Specialty Services budget is independent of CBC/Radio-Canada's public funding and not subsidised or funded through the public funds.

CBC/Radio-Canada Specialty Services GVA

Our estimate of CBC/Radio-Canada's GVA from Specialty Services for 2010 was \$263 million. In estimating the GVA of Specialty Services we adopted the TV multipliers because Specialty Services are more closely aligned to TV. Table 15 below shows the GVA reported by expenditure category.

³⁰ CBC/Radio-Canada does not normally report this expenditure by province. For the purposes of our GVA estimation, CBC/Radio-Canada agreed to allocate the expenditure to provinces using a reasonable driver. Approximately \$2 million of this was spent on imports, and therefore excluded from our GVA estimation.

Table 15: Expenditure, multiplier and GVA of Specialty Services by category of expenditure

Specialty Services	Programming	Transmission	Sales & promotion	Admin & other expenses	Total
Expenditure (\$m)	101	7	9	4	121
GVA (\$m)	224	12	19	8	263

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

4.3.5 “Within Province” GVA

The “within province” GVA measures the impact the level of expenditure in each province has on the local provincial economy after taking into account leakages and inflows to and from other Canadian provinces. In all cases, the “within province” multipliers tend to be lower than the Canada wide multipliers as these capture the Canadian wide effects.

Larger “within province” multipliers are associated with a strong presence of supporting industries, a deeper supply chain and fewer leakages outside those regions. The impacts of clustering also contribute to the expenditure creating a greater impact per dollar on the economy than it otherwise would have.

Our estimates for the provincial GVA of CBC/Radio-Canada’s activities are shown in Table 16 below.

Table 16: “Within province” GVA of CBC/Radio-Canada

Province / Territory	Expenditure (\$m)	Provincial GVA (\$m)
Newfoundland	25	41
Nova Scotia	42	75
Prince Edward Island	10	16
New Brunswick	42	71
Quebec	654	1,319
Ontario	731	1,424
Manitoba	39	65
Saskatchewan	29	47
Alberta	61	106
British Columbia	68	129
Yukon	3	5
North West Territories	17	28
Nunavut	5	8
Total	1,724	3,335

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

5 CBC/Radio-Canada's Net Value Added

5.1 Summary

In order to estimate the net economic impact of CBC/Radio-Canada, we compare the difference in economic impacts between the current government funding model of CBC/Radio-Canada and our counterfactual scenario where CBC/Radio-Canada is commercially funded. Therefore, our NVA analysis evaluates the impact of the government funding foregone in the counterfactual.

The key underpinning assumptions of the counterfactual used in our analysis are that the counterfactual CBC/Radio-Canada does not have its current public service mandate or public funding. It is therefore a fully commercially funded broadcaster, and makes commercially motivated decisions regarding its content, target audience, regional presence and other aspects of its service and activities. The absence of government funding in particular has substantial effect on the size of the counterfactual CBC/Radio-Canada which is reliant on commercial revenues only.

We estimate a "narrow" NVA of CBC/Radio-Canada, arising from the differences between the current and the counterfactual CBC/Radio-Canada, to be \$2.5 billion. This is due to lower absolute levels of expenditure and a higher leakage proportion of foreign spend in the programming budgets. We assume a notable shift in content towards imported programs in the counterfactual. The counterfactual CBC/Radio-Canada is also likely to have a significantly different program mix in TV and radio, focused on more profitable program types. Spend on journalistic activities and original news and information programming are likely to be among the areas that are most affected.

We estimate the overall NVA of CBC/Radio-Canada to be \$1.3 billion, which takes into account the economic value of the alternative use of CBC/Radio-Canada's public funding and the effects of the counterfactual CBC/Radio-Canada on the wider media sector. This estimated positive net contribution to the Canadian economy is driven particularly by lower value of assumed alternative use of government funding and higher counterfactual expenditure on foreign content.

This NVA is driven in part by the impact of crowding out that a counterfactual CBC/Radio-Canada would have on the broadcasting industry and the wider media industry. A counterfactual CBC/Radio-Canada, according to our estimates, will crowd out revenues currently attributable to private TV and radio broadcasters. We have estimated the crowding out to be around \$89 million for TV and \$79 million for Radio broadcasters. This occurs through an expanded presence in the advertising markets for CBC/Radio-Canada.

5.2 CBC/Radio-Canada counterfactual GVA

Comparing CBC/Radio-Canada's current GVA impact with the GVA impact under the counterfactual allows us to estimate the *net* value added impact of CBC/Radio-Canada. Net impacts are important as gross impacts ignore the possible alternative uses of resources that would occur in the absence of CBC/Radio-Canada.

This section sets out how we have defined the counterfactual CBC/Radio-Canada, and the GVA estimated for it. Comparing this counterfactual GVA to current GVA produces a narrow measure of CBC/Radio-Canada's net economic impact. The counterfactual will also have impacts on the wider

broadcasting and media sectors in Canada and the wider economy through possible alternative use of the current government funding given to CBC/Radio-Canada. These effects have to be considered to determine the wider net economic impact of CBC/Radio-Canada.

5.2.1 The counterfactual CBC/Radio-Canada

The definition of the counterfactual is important as it directly affects the estimated net impact of CBC/Radio-Canada. However, there is no one “right” counterfactual – it is possible to define almost a limitless number of variations of what the hypothetical comparison should look like. In order to keep the analysis tractable, and to focus on the key questions of interest about CBC/Radio-Canada’s impact, we have defined the counterfactual with respect to some key parameters. These are set out below:

- **Purpose.** We assume that the counterfactual CBC/Radio-Canada is a national TV and radio broadcaster, but without its current public service mandate. This implies that the spectrum used by CBC/Radio-Canada currently continues to be used for over the air broadcasting. The obligations it faces are broadly those faced by the current private broadcasters. This focuses our analysis on the key question of interest: the incremental effect of the public service aspects of CBC/Radio-Canada. It also means that the counterfactual CBC/Radio-Canada is free to focus on audiences and revenues without current considerations towards its mandate.
- **Funding model.** We assume that the counterfactual CBC/Radio-Canada is commercially funded through advertising, subscription and other commercial revenues. The counterfactual CBC/Radio-Canada is therefore only commercially motivated. This has implications for the revenues available to other commercial broadcasters and the media sector more widely in the counterfactual. Any further commercial revenues to the counterfactual CBC/Radio-Canada compared to the factual are likely to crowd out revenues that would otherwise be available to existing media companies (discussed below). We also need to assume what use, if any, would be made of the government funds that CBC/Radio-Canada receives currently.
- **Size and location.** The purely commercial funding model is likely to have implications for the size of the counterfactual CBC/Radio-Canada as well as the locations it chooses to operate in.
- **Content and activities.** The counterfactual CBC/Radio-Canada decisions about content and activities are assumed to be commercially motivated with the primary aim to maximise profit. We assume that the counterfactual CBC/Radio-Canada content profile is consistent with the private broadcasters’ average in terms of genres of content and balance of Canadian and foreign (particularly U.S.) content. This has potential implications for the value of advertising minutes on CBC/Radio-Canada broadcasts (discussed below), as well as having wider effects on the media sector and economy in general (discussed in Part II.)

Overall, the counterfactual CBC/Radio-Canada we have defined would be much like a typical existing private broadcaster. The detailed assumptions and their basis regarding the above changes are discussed further in the following sections.

5.2.2 Funding and revenues of the counterfactual CBC/Radio-Canada

Consistent with the absence of the public service mandate, we assume that the counterfactual CBC/Radio-Canada does not receive any direct government funding³¹. It is therefore funded almost exclusively from commercial revenues, namely from advertising revenues, subscription revenues and other commercial revenues.

Counterfactual CBC/Radio-Canada conventional TV revenues

The counterfactual CBC/Radio-Canada has two main revenue sources available to it, subscription and advertising revenues. The substantial majority of CBC/Radio-Canada's subscription revenues come from CBC/Radio-Canada's Specialty Services. Information from CBC/Radio-Canada indicates that these services are broadly successful, and at least the two main services of CBC News Network and RDI would be viable under fully commercial operation. We therefore assume that the overall size and form of Specialty Services would be the same in the counterfactual as currently. Hence, we have assumed that CBC/Radio-Canada's subscription revenues would be the same in the counterfactual as they are currently. This assumption also avoids an unnecessary complication in the context of our analysis, by allowing us to focus on impacts through potential changes in CBC/Radio-Canada's advertising revenues.³²

CBC/Radio-Canada already has an incentive to maximise the TV advertising revenues it earns. However, the public service mandate and ethos of CBC/Radio-Canada places certain constraints on its willingness and ability to earn advertising revenues compared to its private sector comparators. CBC/Radio-Canada aims to maximise its advertising revenues within its public service mandate. The counterfactual CBC/Radio-Canada has three main levers to earn higher advertising revenues, driven by a shift towards more commercially motivated content:

- Viewing share – any changes in viewing shares would likely lead to a re-allocation of existing revenues between broadcasters;
- Minutes of advertising shown per hour of broadcast – any changes in minutes of advertising would likely lead to a re-allocation of existing revenues between broadcasters and to changes in total TV Net Advertising Revenues (“NAR”) ³³ available to all broadcasters.
- Value per minute of advertising – any changes in value per minute of CBC/Radio-Canada's advertising would likely lead to a re-allocation of existing revenues between broadcasters.

³¹ We note that there are indirect government support mechanisms available to all Canadian broadcasters, for example through tax credits and the Canadian Media Fund.

³² The expected court decision on carriage fees could change the revenue models of all broadcasters to rely more on subscription. Our analysis, however, is based on a comparison of the current situation with a hypothetical state of the Canadian creative sector at a point in time (2010). Changes in revenue models would not change the general lessons from this study, although subsequent analysis may find it appropriate to consider effects on both subscription and advertising revenues.

³³ Advertising revenues received net of any commissions paid to agencies.

We assume that the total money spent on advertising in all media in Canada does not change between the factual and counterfactual so that any change in overall TV NAR would affect the revenues available to other media.

We assume that the counterfactual CBC/Radio-Canada viewing share is the same as the factual viewing share. CBC/Radio-Canada currently has 7.5% viewing share of all TV viewing in Canada across both English and French language markets.³⁴ It already strives to have high viewing shares and broad reach among Canadians, but has to do so within its mandate. Among other things, this has led to CBC/Radio-Canada viewing demographic having a higher concentration of older (over 50) audiences than the industry average, and a lower concentration of 18-34 as well as 34-49 audience age brackets.³⁵ It might be argued that the counterfactual CBC/Radio-Canada would have higher appeal among younger audiences, leading to different demographic reach contributing to a higher viewing share. However, the different content could also lead to a loss of some of the current audience. Further, BBM Canada data suggests that weekly TV viewing hours of older people, particularly people over 55, are higher than the weekly viewing hours in the 18-49 age bracket. An argument could therefore be made for both a lower and higher counterfactual viewing share. We have therefore assumed that CBC/Radio-Canada's viewing share does not change in the counterfactual.

Table 17 below shows an example audience profiles for the major television networks during prime time.

Table 17: Demographic distribution of prime time viewing shares for English TV

Demographic profile	CBC	CTV	Global	City TV
2-17	10%	12%	11%	12%
18-34	16%	18%	23%	26%
35-49	19%	23%	23%	24%
50-64	26%	28%	28%	24%
65+	29%	20%	20%	14%

Source: CBC Research Toronto on BBM data 2009/10 regular season weeks 5-32

We assume that the counterfactual CBC/Radio-Canada advertising minutes would increase. CBC/Radio-Canada currently averages approximately 12 minutes of advertising per hour of broadcast. It expects that if only commercially motivated, it would carry an average of 14 minutes, which is more in line with the private broadcasters (an increase of 17%).³⁶ This implies an increase of 1.3% of TV advertising impacts in Canada as a whole. This increase in supply of advertising space has an effect on TV NAR for the market, but also has a crowding out effect on revenues available to other TV broadcasters as the average market price responds to the increased supply. The effect on TV NAR depends on the price elasticity of demand for TV advertising. We assume that the average price of advertising responds less than proportionately to the increase in supply of impacts, so that TV NAR increases by half the increase in minutes. The effect on counterfactual CBC/Radio-Canada advertising revenues is \$50 million, increasing the TV NAR for the market by

³⁴ CRTC Communications Monitoring Report 2010

³⁵ CBC Research Toronto on BBM data

³⁶ Sourced from interviews with CBC/Radio-Canada staff

\$25 million, and crowding out revenues of other broadcasters by \$25 million. The increase in TV NAR for the market would come from current advertising revenue available for the wider media sector (discussed below).

We assume that the counterfactual CBC/Radio-Canada obtains higher value per minute of advertising than in the factual. Data provided to us by CBC/Radio-Canada shows that, other than for its hockey coverage, on average its programming achieves substantially lower value of advertising per minute compared to CTV and Global for programs of the same audience sizes as measured by average minute audiences (“AMA”). For programs with smaller AMAs, this difference in cost per million viewers (“CPM”) can be more than 50%. We therefore assume that the counterfactual CBC/Radio-Canada would achieve CPMs closer to those currently achieved by private conventional broadcasters. The counterfactual CBC/Radio-Canada’s CPMs are higher due to the different (more valuable) advertising demographic reached by the counterfactual CBC/Radio-Canada programming. This, however, means that there is more competition in supply of advertising space for those audiences, which would affect the CPMs that the other broadcasters can achieve. We therefore assume that there is a compensating fall in other broadcasters CPMs, such that the average market price of advertising, and therefore the overall TV NAR, does not change due to this effect. These assumptions lead to \$64 million increase in counterfactual CBC/Radio-Canada advertising revenue, crowding out revenues available to other broadcasters by the same amount.

In summary, the counterfactual CBC/Radio-Canada TV advertising revenues are \$386 million compared to \$297 million in the factual for 2010.

Counterfactual CBC/Radio-Canada radio revenues

Unlike in TV, CBC/Radio-Canada does not carry advertising on its radio broadcasts. It currently has a 13% listening share overall in Canada³⁷. Operated on a commercial basis, the counterfactual CBC/Radio-Canada radio would have a significant impact on the radio advertising market in Canada:

- Total advertising minutes available on radio would increase substantially; and
- The counterfactual CBC/Radio-Canada would compete against private commercial broadcasters for available radio advertising revenues.

Further, there would be a significant change in the content provided by CBC/Radio-Canada radio, as much of the existing content would not be commercially viable³⁸. As discussed in Section 2, CBC/Radio-Canada radio is unique in Canada in the content that it provides both in terms of music and talk radio. Further, branding research undertaken on behalf of CBC Radio One indicates that

³⁷ CRTC Communications Monitoring Report 2010

³⁸ Interviews with CBC/Radio-Canada staff

CBC/Radio-Canada Radio listeners are very loyal³⁹. For example, 20% of CBC Radio One news and talk radio listeners tune exclusively to CBC/Radio-Canada for their news and talk radio needs.

It is therefore likely that some of CBC/Radio-Canada radio audience would be lost in the counterfactual, leading to a fall in total radio listening hours of CBC/Radio-Canada's radio stations, and therefore in Canada as a whole. On the other hand, the counterfactual CBC/Radio-Canada may gain some more of the existing commercial radio audiences. We assume that the net effect of the above changes is reflected in the counterfactual CBC/Radio-Canada radio listening share falling to the commercial radio average. This means that the overall listening hours in Canada fall by 2%, and that the counterfactual CBC/Radio-Canada listening share is 11% of the lower total listening hours.

Despite the fall in total radio listening hours in Canada, the available radio advertising minutes would increase due to the counterfactual CBC/Radio-Canada radio being fully commercial. We assume that the increase in radio advertising minutes in the counterfactual would be 12%, driven by introduction of advertising on the counterfactual CBC/Radio-Canada listening share of 11% ($11/89 = 12$). This increase in the supply of radio advertising time, in other words an increase in available advertising impacts, is likely to induce a somewhat higher spend in radio advertising overall. However, the price of radio advertising would also be lower due to the higher supply. The effect on radio NAR depends on the price elasticity of demand for radio advertising. This is likely to vary between different local radio advertising markets⁴⁰.

We assume that the average price of advertising responds less than proportionately to the increase in the supply of advertising minutes, so that the overall radio NAR increases by roughly half the increase in the minutes. That is, we assume the overall radio NAR increases by 6%, whereas the minutes increase by 12%. The increase in overall radio NAR for the market would come from current advertising revenue available for the wider media sector.

We assume that the available radio NAR is allocated to the different broadcasters according to listening share. The result is a counterfactual CBC/Radio-Canada's radio NAR estimate of \$169 million.

Counterfactual CBC/Radio-Canada's Specialty Services subscription revenues

We assume that these remain constant.

Counterfactual other income

CBC/Radio-Canada generates other income from activities such as rentals of some of its buildings and facilities, retransmission rights, program and commercial sales, and foreign exchange gains etc. We assume that in the counterfactual, some of this additional income would still accrue to CBC/Radio-Canada.

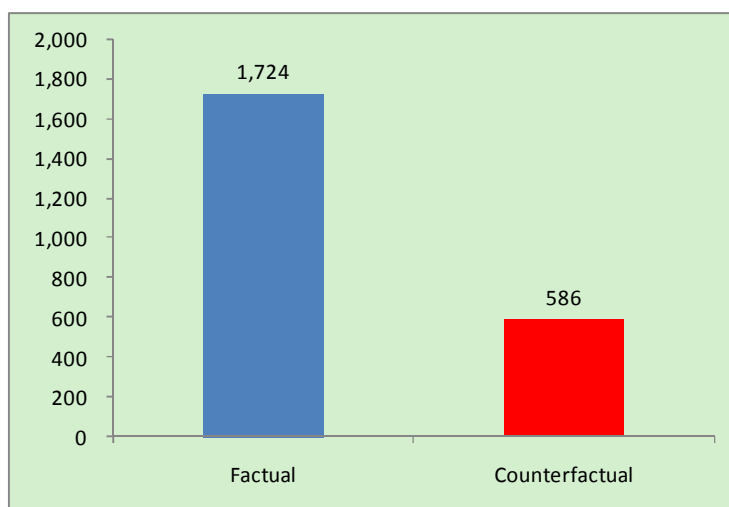
³⁹ CBC Radio One Branding Study, Commissioned by CBC/Radio-Canada and conducted by TNS Global Market Research

⁴⁰ For example, interviews with CBC/Radio-Canada staff indicated that 10 separate local radio advertising markets exist for the French language radio services alone.

In order to determine the magnitude of the other income in the counterfactual, we assume that these change in proportion to the ratio of the size of CBC/Radio-Canada in the counterfactual (measured by the counterfactual revenues) to the size of CBC/Radio-Canada in the factual (measured by current expenditure level). The counterfactual other income is \$40 million compared to \$107 million in the factual. We allocate the other income to TV and Radio in the ratio of the revenues they generate in the counterfactual.

Figure 10 below compares the scale of CBC/Radio-Canada in the factual and counterfactual.

Figure 10: CBC/Radio-Canada total expenditure (\$'m) – Factual and Counterfactual



Source: Deloitte analysis, CBC/Radio-Canada data

5.2.3 Expenditure of the counterfactual CBC/Radio-Canada

We have estimated the total counterfactual CBC/Radio-Canada expenditure on TV and radio according to the commercial revenues available⁴¹. We assume that expenditure on Specialty Services amounting to \$123 million is the same in the counterfactual as it obtains in the factual.

We have considered the counterfactual break down of these overall expenditures further between:

- English and French language TV;
- English and French language radio;
- Different provinces of Canada for English and French TV and radio; and
- Canadian content and imported content for English and French TV.

⁴¹ We assume that expenditure equals available revenues, abstracting from any profit margin that might be earned. This assumption does not have material effect on the results.

English and French language services

The current CBC/Radio-Canada expenditure ratio between English and French services, influenced by the public service mandate, is roughly 60% to 40%. This implies a stronger focus on French language services than would be implied by measures of the relative commercial market opportunity between English and French language groups in Canada. We assume that the counterfactual CBC/Radio-Canada would allocate its funds according to the commercial opportunity in each language market as defined by the existing market size and the extent of competition in the counterfactual.

For television, we observe that:

- The current TV NAR for the market as a whole is split 81% to English and 19% to French language markets. This is a direct measure of the existing commercial opportunity. However, this split could be affected by the relatively stronger current presence of CBC/Radio-Canada in the French language market.
- The total viewing hours are split 76% to English and 24% to French language markets. This is an alternative measure of the market potential in the different markets, and would be less affected by a relatively stronger CBC/Radio-Canada presence in the French language market.
- There is less competition overall in the French language market, and therefore the counterfactual CBC/Radio-Canada may aim to have a stronger presence there.

To reflect the assumption that the counterfactual CBC/Radio-Canada would face less competition in the French language market, we have assumed a split guided by viewing hours rather than the NAR alone. We assume that the counterfactual CBC/Radio-Canada's TV expenditure share will be 75% to English market and 25% to the French market.

For radio expenditure, similarly to TV, we use the current share of total listening hours in the English and French language markets, leading to 84% of expenditure on English and 16% of expenditure on French language services.

Expenditure in different provinces

CBC/Radio-Canada's public service mandate requires it to provide TV and radio services in regions of Canada that would be difficult to justify on a commercial basis, particularly for French TV and English and French radio services. We assume that the counterfactual CBC/Radio-Canada would focus its presence on key national markets. As the analysis is conducted at provincial level, we assume that for the counterfactual CBC/Radio-Canada:

- English TV activities would no longer lead to expenditures in the Canadian North, but otherwise follow the factual regional profile as a high proportion of the expenditure already take place in Ontario.
- French TV activities and spend would cease outside of Quebec other than in the Ottawa-Gatineau region.

- French radio activities would cease outside of Quebec other than in the Ottawa-Gatineau region.⁴²
- English radio's regional profile would become more concentrated to key markets. In order to quantify this effect for our analysis, we assume that the English radio regional profile would match the counterfactual English TV regional profile.

Expenditure on Canadian content

Key part of CBC/Radio-Canada's public service mandate relates to the production and broadcasting of Canadian content. Accordingly, over 90% of CBC/Radio-Canada's programming expenditure is spent on Canadian content. In contrast, on average 60% of the private broadcasters programming spend on is on foreign shows in the English language markets. The figure is 15% in the French language markets.⁴³

We assume that the counterfactual CBC/Radio-Canada's programming content would reflect the average of the private broadcasters. This means that 60% of English and 15% of French TV counterfactual CBC/Radio-Canada programming expenditure would be international leakage that does not contribute towards the counterfactual GVA.

5.2.4 Wider counterfactual considerations for NVA analysis

The assumptions we have made in respect of CBC/Radio-Canada in the counterfactual will have impacts beyond the counterfactual CBC/Radio-Canada itself, which need to be considered in order to analyse the overall net economic impact of CBC/Radio-Canada. These wider impacts are discussed below.

Other broadcasters and media

Other broadcasters and media would be affected by the counterfactual CBC/Radio-Canada potentially crowding out some of their existing revenue base. These effects are anchored in our assumption that the total NAR for all media in Canada does not vary between the factual and counterfactual. In other words, we assume that the overall advertising demand in Canada is currently met by the existing media sector, and the changes to CBC/Radio-Canada in the counterfactual should not affect that. What might change is the allocation of revenues between the different types of media, and between CBC/Radio-Canada and other broadcasters.

We assume that any change in overall TV or Radio NAR crowds out the advertising revenues available to other media in a direct one-to-one proportion. Further, any change in the counterfactual CBC/Radio-Canada share of the total TV NAR or radio NAR that does not result in

⁴² French TV content would be available outside Quebec via cable or satellite platforms. However, French language CBC Radio content would be only available online and through mobile devices.

⁴³ CBC/Radio-Canada research based on companies annual CRTC returns. Spend on Canadian content by the other conventional broadcasters in 2010 may be higher than usual due to the Vancouver Winter Olympic Games. This data may therefore underestimate the difference between CBC/Radio-Canada and private broadcasters.

an increase in overall TV or radio NAR crowds out revenues available to other broadcasters in direct one-to-one proportion.

We assume in the counterfactual that the TV NAR increases by half the increase in available advertising minutes, which accrues to the counterfactual CBC/Radio-Canada – roughly 1%. This means that the revenues available to other media (other than radio) decrease by the same amount. In addition, crowding-out of other commercial broadcasters TV revenues is estimated to be \$89 million. This entire amount is assumed to accrue to the counterfactual CBC/Radio-Canada.⁴⁴

We also assume that the radio NAR increases by 6%, which leads to a decrease in revenues available to other media by the same amount. In addition to this, due to its 11% listening share of now fully commercial radio audience, the counterfactual CBC/Radio-Canada crowds out the revenues available to competing radio broadcasters by \$79 million.

Alternative use of government funding

The government funding currently given to CBC/Radio-Canada would be used for other purposes in the counterfactual. It has to be accounted for in order to estimate the net impact of using it on CBC/Radio-Canada in the factual. We assume that the funding is used according to the current spending profile of the federal government, shown in Table 18 below⁴⁵.

⁴⁴ There could be other impacts on private broadcasters not quantified here, such as price of the secondary rights to more popular U.S. programs increasing.

⁴⁵ In particular, as we are interested in the incremental effect of the CBC/Radio-Canada's funding and mandate, we do not assume that these funds would be re-directed towards the creative industries through some other means.

Table 18: Canadian government expenditure profile

Categories	Percentage of spend
General government services	4%
Protection of persons and property	12%
Transportation and communications	1%
Health	11%
Social services	30%
Education	2%
Resource conservation and industrial development	4%
Environment	1%
Recreation and culture	2%
Labour, employment and immigration	1%
Housing	1%
Foreign affairs and international assistance	3%
Regional planning and development	1%
Research establishments	2%
General purpose transfers	12%
Debt charges	12%
Other expenditures	0%
Total	100%

Source: Statistics Canada

Not all of the federal government expenditure items go towards a productive use in the Canadian economy. About 15% of the expenditure goes towards “foreign affairs and international assistance” and “debt charges”. Foreign affairs and international assistance would typically be directed on spend outside the Canadian economy. It is therefore classified as leakage from the economy for GVA analysis. Debt charges also do not enter the economic impact and multiplier framework of analysis, as they do not directly generate any production. The GVA analysis considers production in a specific year, and not a fluctuation in assets and liabilities. They are for example not included in Statistics Canada output multiplier estimates⁴⁶.

5.2.5 The gross value added in the counterfactual

Following from our assumptions on the size, activities and geographical spread of the counterfactual, we estimate the GVA of the counterfactual CBC/Radio-Canada. This section sets out the assumptions underpinning each service of a counterfactual CBC/Radio-Canada, the size (revenues) and the consequent GVA.

⁴⁶ This is not to say that debt charges paid have no economic effects. Government debt levels, repayments and interest charges affect the money supply, interest rates, aggregate savings and level of investment in the economy. These have dynamic effects in future periods that are outside of the framework of analysis here.

Counterfactual CBC/Radio-Canada GVA

The counterfactual GVA of a commercially funded CBC/Radio-Canada is \$1.17 billion.

Table 19: Counterfactual CBC/Radio-Canada GVA

Service / (Figures in \$ m)	Revenue	Other Income ⁴⁷ Allocation	Total Expenditure	GVA
Television	361	28	389	530
Radio	169	13	182	365
Specialty Services	121		121	263
Total	652	40	692	1,158

Source: Deloitte analysis, CBC/Radio-Canada data

The TV GVA generated by the counterfactual CBC/Radio-Canada is \$530 million from an expenditure of \$389 million. This low GVA to NAR ratio is as a result of foreign leakage of programming related expenditure in the counterfactual. Approximately, 60% and 15% of English and French programming are spent on imported content, based on the weight of Canadian content in current private conventional broadcasters programming spend.

In contrast, Radio GVA in the counterfactual reports a higher GVA to NAR ratio, generating \$365 million GVA from a total radio expenditure of \$182 million. We have assumed no leakages on Radio. Specialty Services generate a GVA of \$263 million as in the factual.

⁴⁷ See section 5.2.2 – counterfactual other income.

Table 20: Comparison of provincial GVA – Factual and counterfactual

Province	Factual GVA (\$m)	Counterfactual GVA (\$m)	NVA (\$m)
Newfoundland	51	26	25
Nova Scotia	93	40	53
Prince Edward Island	20	7	13
New Brunswick	90	18	73
Quebec	1,449	355	1,094
Ontario	1,499	554	944
Manitoba	78	29	50
Saskatchewan	60	20	40
Alberta	127	48	78
British Columbia	147	61	86
Yukon	6	0	6
North West Territories	34	0	34
Nunavut	10	0	10
Unallocated	0	0	0
Total	3,663	1,158	2,505

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data

Table 20 above shows the economic value added lost for each province in the counterfactual. Quebec and Ontario show the highest loss, reflecting the higher activity levels in those provinces. In addition to the reduced provincial expenditures shown by our quantitative analysis, the counterfactual CBC/Radio-Canada presence in the provinces would likely to be more concentrated around the key media markets within those provinces. This is an important additional implication for most provinces that currently have local CBC/Radio-Canada presence outside of the main media market of the province.

Other media and other commercial broadcasters' counterfactual value added

The factual and the counterfactual other media and other broadcasters' NAR and GVA are set out below.

Table 21: GVA from the NAR of other commercial broadcasters and other media

Figures in \$ m	Factual		Counterfactual	
	NAR	GVA	NAR	GVA
Other commercial broadcasters	4,312	7,145	4,144	6,853
Online and other media	9,191	19,630	9,076	19,384

Source: Deloitte analysis, CRTC data

We have estimated the size of the commercial broadcasters as well as other media.

- Other commercial broadcasters GVA in the counterfactual is almost \$300 million lower than in the factual. This is due to the crowding out effect of the counterfactual CBC/Radio-Canada.

- Other media in GVA in the counterfactual is roughly \$250 million lower than in the factual due to the crowding out effect.

Value added from alternative use of government funding

The GVA that we estimate would be generated from the alternative use of government funding is \$1.79 billion. We derive this by applying average government expenditure multipliers to current public expenditure profile after adjusting for leakages discussed above.

5.3 CBC/Radio-Canada's NVA

We define CBC/Radio-Canada's narrow NVA as the difference between CBC/Radio-Canada's GVA and the GVA of the counterfactual CBC/Radio-Canada. The narrow NVA of CBC/Radio-Canada was estimated at \$2.5 billion. This takes into consideration the impact the scaled down activities of a counterfactual CBC/Radio-Canada and its economic impact to the Canadian economy through the output multipliers.

In addition to considering the direct impact of a counterfactual CBC/Radio-Canada, we derive a NVA by including the impact of the alternative use of CBC/Radio-Canada's public funding, the contraction of the value generated by other Canadian broadcasters and the reduction in the value generated by other advertising media. The NVA of CBC/Radio-Canada is estimated at \$1.3 billion. Table 22 and Figure 11 below illustrate the composition of the NVA and the net impacts of CBC/Radio-Canada on the rest of the media industry as well as on the alternative use of CBC/Radio-Canada's public funding.

This NVA estimate represents the economic impact of CBC/Radio-Canada in financial terms, capturing the economic value added differences between the factual and counterfactual CBC/Radio-Canada expenditure levels. Underlying and included in this estimate are some fundamental differences in the activities and type of content broadcast by the counterfactual CBC/Radio-Canada. We highlighted above the higher prominence of foreign (particularly U.S.) content, and the need for a full commercial focus in program choices. This implies a lower diversity of programming, and particularly less spend on original radio programming as the focus changes from relatively labour intensive (and costly) journalism towards more profitable formats.

Among the main areas of differences would be CBC/Radio-Canada spend on journalistic activities and original news and information programming. This includes local news programming, as the focus shifts towards profitable main media markets. According to CBC/Radio-Canada research, CBC TV (English services) spends 50% more on news and information content than private conventional TV broadcasters on average. Télévision de Radio-Canada spends over three times as much on news and information as the private broadcasters TVA and V. This illustrates some of the substantial wider qualitative impacts underlying the estimated net contribution by CBC/Radio-Canada in economic value added terms.

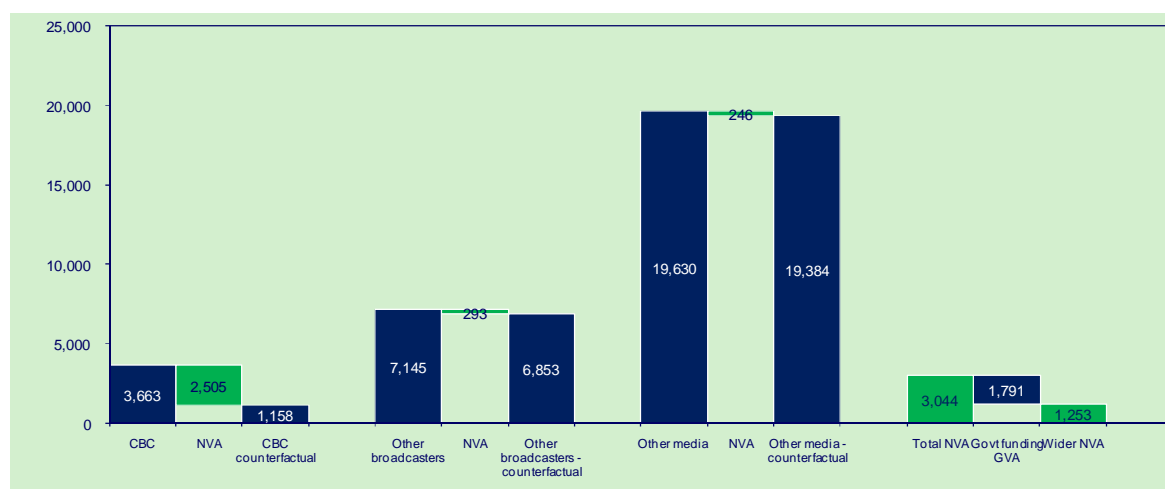
Table 22: CBC/Radio-Canada NVA

Components of economic impact	GVA			Total
	TV	Radio	Specialty Services	
CBC/Radio-Canada factual GVA	2,648	752	263	3,663
<i>Less</i>				
CBC/Radio-Canada counterfactual GVA	(530)	(365)	(263)	(1,158)
CBC/Radio-Canada Narrow NVA (a)				2,505
<i>Plus</i>				
Impact on other broadcasters GVA (b)	126	168		293
<i>Plus</i>				
Impact on online and other media GVA (c)				246
<i>Less</i>				
GVA of alternative use of government funding (d)				(1,791)
<i>Equals</i>				
Overall CBC/Radio-Canada NVA: (a)+(b)+(c)-(d)				1,253

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada data

Figure 11 below illustrates the breakdown of CBC/Radio-Canada's NVA. The estimated NVA consists primarily of a "narrow" NVA of \$2.5 billion due to the reduction in the scale of spending in the counterfactual CBC/Radio-Canada. This is increased by the impact of crowding out of private broadcasters and other media that would occur in the counterfactual. It is substantially reduced by the GVA that would arise in the counterfactual from the alternative use of the government funding of CBC/Radio-Canada. Crowding out of other private broadcasters and other media is responsible for a GVA loss of \$293 million and \$246 million respectively. Finally, the alternative use of government funding after adjusting for leakages contributes a counterfactual GVA of \$1.8 billion, which is subtracted to obtain the NVA estimate of \$1.3 billion.

Figure 11: CBC/Radio-Canada NVA diagrammatic representation



Source: Deloitte analysis of CBC/Radio-Canada data

Part II: Spill over effects

6 CBC/Radio-Canada's Impact on the Independent Production Sector

6.1 Summary

The Canadian independent production sector is a major source of economic activity in Canada supporting thousands of jobs. This is underscored by the independent television production volume in Canada which was worth \$2 billion in 2010⁴⁸. CBC/Radio-Canada contributes to the development and sustainability of this sector and impacts on the independent production sector in Canada in a number of ways:

Total Spend

- The scale of CBC/Radio-Canada spending is a crucial source of income to this sector. CBC/Radio-Canada expenditure on independent production for 2010 was \$151 million⁴⁹; this compares to the magnitude of spend in our counterfactual scenario of \$32 million. This difference in magnitude of spend is exacerbated by heavier reliance on U.S. and other foreign content expected in the counterfactual scenario. This, and loss of some leveraged funds from tax credits in addition to CBC/Radio-Canada's direct spend, result in an estimated loss in economic value added to the independent sector of some \$500 million. Part of this is captured in the NVA impact estimate above – the additional loss of economic value purely from the spill-over effect is \$249 million.

Consistent funding

- CBC/Radio-Canada's relatively consistent funding of the independent production sector enables independent production companies to make long term investment decisions which would aid their development and international competitiveness.

Diversity of commissions

- CBC/Radio-Canada's strong presence in a number of genres contributes to the diversity of the sector, commissioning a large number of independent production companies in both the English and French language segments. This diversity indicates that CBC/Radio-Canada is able to commission programs from a wide variety of producers further helping to deepen its supply chain.

⁴⁸ An economic report on the screen based production industry in Canada – CMPA Profile 2010

⁴⁹ These data relate to the fiscal year 2010, recorded on basis of when the funds were committed to independent productions.

Enhancing international competitiveness

- CBC/Radio-Canada continues to support a healthy and competitive market for the exploitation of Canadian television content, enabling independent producers to showcase Canadian content and compete in international markets.

6.2 Introduction

Historically, CBC/Radio-Canada's support through financial backing and transfer of know-how has been valuable to the development of the independent production sector as it exists in Canada. Today, in addition to making facilities available for producers to use and creative guidance on programs produced, CBC/Radio-Canada continues to play a key role in the funding of independent TV production in Canada, both on the English and French language sides. The key ways in which CBC/Radio-Canada contributes to the sector are⁵⁰:

- Direct funding of independent productions;
- Triggering, either with direct funding or through its commitment to air the Canadian content produced, additional funds from tax credits, the Canadian Media Fund ("CMF") and other sources;
- Commissioning varied independent productions across genres, leading to high value productions as well as contributing towards a deep and diverse sector in Canada; and
- Providing an opportunity for independent production companies to exploit secondary and international markets and derive enhanced revenues.

We first explore CBC/Radio-Canada's interaction with the independent production sector, assessing the gross value added that arises from the funding provided and triggered by CBC/Radio-Canada. We then analyse how these would be affected by the counterfactual set out above in order to isolate the incremental economic benefits, additional to those assessed in Section 5.

The analysis and discussion in this section draws on analysis of data provided to us by CBC/Radio-Canada and interviews with CBC/Radio-Canada staff. In addition, we have discussed CBC/Radio-Canada's role in the independent sector with senior CMF and other industry representatives. These discussions were used to inform and test our analysis. The reader should note that the CMF and other industry representatives, however, have no responsibility for the assumptions used or analyses carried out.

⁵⁰ Our analysis considers independent productions as classified by the CBC/Radio-Canada, CMPA and CMF in accordance with the relevant CRTC and CMF rules.

6.3 CBC/Radio-Canada's interaction with the independent production sector

6.3.1 CBC/Radio-Canada's funding of the independent production sector

CBC/Radio-Canada contributes to the funding of independent production companies in two main ways. First, it directly commissions programs from the independent production sector contributing to the original financing of productions. This accounts for the great majority of CBC/Radio-Canada's interaction with the sector. Second, it acquires broadcast rights to shows that have already been produced.

The main quantifiable spill-over effect from CBC/Radio-Canada's interaction arises due to the financing structure of typical independent productions in Canada, which leverages the funding committed by the broadcasters and producers through additional financing available, mainly through tax credits and the CMF. The overall financing profile of CBC/Radio-Canada commissioned productions is approximately:

- 30% of CBC/Radio-Canada direct pre-licensing funding;
- 30% of CMF funding;
- 27% of provincial and federal tax credits; and
- 13% of other funding including distribution advances.

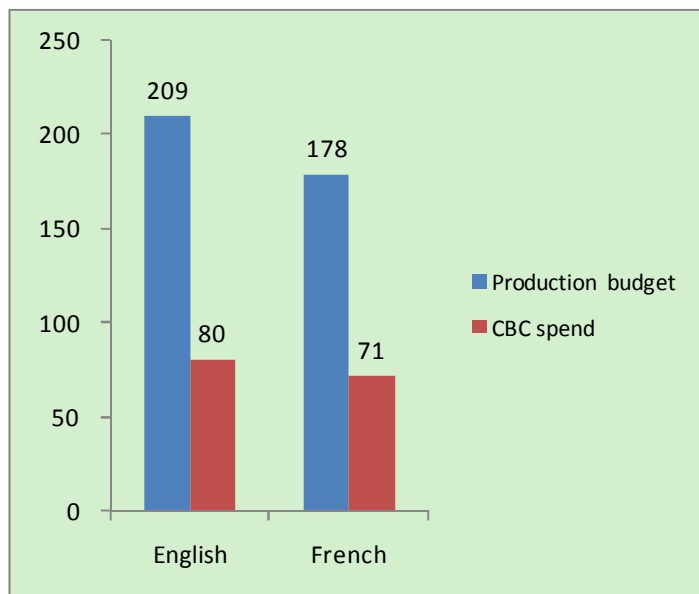
This illustrates how CBC/Radio-Canada funding to the independent production sector is leveraged up several times due to the other funding that becomes available following CBC/Radio-Canada's commitment to a production – 30% of the funding provided by CBC/Radio-Canada on average arguably enables the full 100% of the budget to be realised for the independent production. This also illustrates the good value for money CBC/Radio-Canada is able to obtain by using the independent production sector to produce Canadian content.

In aggregate, CBC/Radio-Canada directly provides 9% of the independent production sector's total TV revenues, a significant proportion on its own, and when compared to the 18% provided by all (conventional and specialty) private broadcasters (according to CMPA data)⁵¹. In other words, CBC/Radio-Canada provides one third of all direct funding towards the independent sector from Canadian broadcasters. The above leverage effect means, however, that the direct impact of productions commissioned by CBC/Radio-Canada goes well beyond CBC/Radio-Canada's direct funding – the relevant metric are the full budgets of CBC/Radio-Canada sponsored productions.

Figure 12 below shows CBC/Radio-Canada's spend and total budgets of the productions by language.

⁵¹ An economic report on the screen based production industry in Canada – CMPA Profile 2010

Figure 12: CBC/Radio-Canada's spend with the independent production sector and total independent production budgets of CBC/Radio-Canada projects 2010 in \$m.



Source: CBC/Radio-Canada data on funds committed in fiscal year 2010, Deloitte analysis

The overall spend within the Canadian independent production sector due to the budgets of CBC/Radio-Canada commissioned productions would have similar second round indirect and induced effects throughout the economy as CBC/Radio-Canada's direct spend. We have applied the relevant output multipliers to assess the impact on the Canadian economy as a whole. This gives us the economic impact arising from the full budgets of independent productions linked to CBC/Radio-Canada in 2010 which we have estimated as \$1,142 million.

6.3.2 Incremental spill-over effect of CBC/Radio-Canada's funding

The gross contribution of CBC/Radio-Canada to the independent production sector needs to be compared against a counterfactual scenario in order to isolate the incremental impact of the publicly funded CBC/Radio-Canada.

The sources of funding that can be affected by the counterfactual are:

- CBC/Radio-Canada's own spend with the independent production sector;
- Funds from other private broadcasters (due to crowding out of revenues by the counterfactual CBC/Radio-Canada);
- Tax credits triggered by broadcaster funding;
- CMF funding triggered by broadcaster funding; and
- Other funding enabled by broadcaster funding.

We have used a counterfactual that is consistent with that used for the NVA analysis. This enables identification of the incremental economic impact from funds available to the sector over and above that already assessed in Section 5 (see below).

The counterfactual CBC/Radio-Canada's direct spend on independent production commissions was derived from the counterfactual used in the NVA analysis in Section 5. The overall spend by counterfactual CBC/Radio-Canada on programming is \$266 million. Due to the heavier reliance on U.S. and other foreign content in program scheduling, the total counterfactual spend on *Canadian* programming is estimated to be \$134 million for the counterfactual CBC/Radio-Canada. This takes into account the leakage due to higher imports of foreign programming.

This spend on Canadian content is split between in-house and independent production. We assume that the counterfactual CBC/Radio-Canada's ratio of in-house and independent production programming spend is the same as under the factual, an average ratio of 76% to 24%. This results in counterfactual direct spend within the independent sector of \$32 million.⁵²

We assume that the funding available from the CMF to the independent sector is the same in the counterfactual as in the factual. Given the current excess demand for CMF funding, we assume that even with reduced CBC/Radio-Canada spending in the counterfactual the full CMF funding would be utilised. This could take place through private broadcasters being able to obtain CMF funding for their current independent sector commissions that do not currently receive CMF funding due to limited supply (thereby alleviating some of the current excess demand).

While the counterfactual CBC/Radio-Canada crowds out revenues available to other broadcasters (according to the analysis in Section 5), we nevertheless assume that the other broadcasters' spend with the independent sector would not fall in the counterfactual due to this crowding out. This is due to the current excess demand for CMF funding.

We also assume that the other funding available for the independent sector is not affected overall. To the extent that this other funding represents secondary revenues from content, this is a conservative assumption in the context of our analysis.

In contrast to the CMF funding, we assume that the counterfactual tax credits available to fund independent productions fall overall in the same proportion to CBC/Radio-Canada spend. This carries the assumption, supported by interviews carried out, that the tax credits created by private broadcasters' commissions from the independent sector would not increase overall. This is supported by the fact that roughly half of the current independent productions do not receive CMF

⁵² It might be argued that the counterfactual CBC/Radio-Canada would rely more heavily on the independent production section sector given the leverage effect. However, we note that even though the factual CBC/Radio-Canada has a financial incentive to obtain as much content as possible through the independent sector, most of CBC/Radio-Canada's programming spend is on in-house production. Further, the types of shows commissioned from a smaller number of potentially lower value productions commissioned compared to the current level of independent production independent production companies – drama, comedy, variety and documentaries – are also the types that would more readily be imported. News and current affairs programs are typically produced in-house, both in the factual and counterfactual. The opposite argument could therefore be made – that the increased imports substitute mainly for independent production.

funding. Further, private broadcasters have appealed for their Canadian content requirements to be reduced (as discussed Section 2.2), indicating a continuing preference for imported foreign content. Therefore the larger share of the CMF funds being allocated to them in the counterfactual is unlikely to lead to additional independent sector productions tax credits for independent producers. Instead, the higher allocation of CMF funds to private broadcasters' commissions represents a transfer from non-CMF funded productions to CMF funded productions. The loss of tax credits associated with lower direct CBC/Radio-Canada funding is therefore a net loss of funding for the independent sector.

This approach implies that the impact of the counterfactual on the budgets of the independent production sector is \$227 million, leading to a net economic impact of \$500 million on the independent sector GVA after application of the appropriate multipliers. Table 23 below shows the contribution of the different components to the estimated net economic impact due to reduction in CBC/Radio-Canada funding. As discussed above, we have made the conservative assumptions that CMF and "Other" funding available to the private sector, associated with CBC/Radio-Canada commissions in the factual scenario, would not be affected (a proportion of them would be transferred to private sector commissions instead).

Table 23: The impact on independent production sector GVA/NVA

Factual (\$m)	CBC/SRC	CMF	Tax Credits	Other	Total
French	80	52	61	44	
English	71	100	85	28	
Expenditure Total	151	152	146	72	522
GVA					1,123
Counterfactual (\$m)					
French	26	52	20	44	
English	11	100	13	28	
Expenditure Total	37	152	33	72	293
Counterfactual GVA					631
NVA (\$m)					
NVA					492

Source: Deloitte analysis of CBC/Radio-Canada and Statistics Canada multiplier data (figures may not add due to rounding)

6.4 CBC/Radio-Canada's wider contributions to the independent production sector

The importance of CBC/Radio-Canada in the NVA of the independent production sector does not capture the full extent of CBC/Radio-Canada's support towards the Canadian independent production sector relative to private broadcasters.

6.4.1 Diversity of and depth of the sector

CBC/Radio-Canada has an important role in sustaining and developing the Canadian independent production sector beyond the overall financial impacts discussed above. The type and number of

producers and genres CBC/Radio-Canada is involved with, and CBC/Radio-Canada's involvement in the project development, substantially contribute to the diversity and depth of the overall sector.

Variety of genres and independent producers supported

According to the CMF annual report, CBC/Radio-Canada exhibits strong presence in all four genres co-funded by the CMF. We distinguish CBC/Radio-Canada's position from the rest of the conventional broadcasters who are mainly strong in Drama only, relative to the other genres.

CBC/Radio-Canada has demonstrated that their system of funding alongside their obligations can result in the production of high quality diverse programming. CBC/Radio-Canada produces a variety of programming across its channels, and continues to provide Canada with the most diverse programming amongst conventional broadcasters. Via CBC/Radio-Canada, Canadians are able to access a consistent choice of high quality programming across genres such as drama, children, documentaries and variety and performing arts ("VAPA"). This is evident in the magnitude of spend in the genres with the independent producers.

Table 24 and Table 25 below show the genre distribution of CBC/Radio-Canada, the other conventional broadcasters and the Specialty/Pay TV funding for CMF co-funded productions. Across all genres, CBC/Radio-Canada outspends the other conventional broadcasters on CMF co-funded productions.

Table 24: English language genre distribution

2010 (\$m)	Children and Youth	Documentary	Drama	VAPA
CBC/Radio-Canada	6.2	6.0	51.2	2.5
Conventional broadcasters	3.1	2.4	17.1	1.0
Specialty/Pay	27.9	28.8	42.7	2.5
Total (includes other funding sources)	153.6	119.8	426.6	15.9

Source: Canadian Television Fund annual report 2010

Table 25: French language genre distribution

2010 (\$ million)	Children and Youth	Documentary	Drama	VAPA
CBC/Radio-Canada	5.3	6.9	31.0	9.8
Conventional broadcasters	0.5	1.5	24.1	7.4
Specialty/Pay	4.7	9.2	1.7	3.3
Total (includes other funding sources)	52.5	76.3	172	46.5

Source: Canadian Television Fund annual report 2010

In addition to contributing a significant proportion of the overall independent production sector revenues, CBC/Radio-Canada's diversity of programming across genres means a large number of independent production companies benefit from CBC/Radio-Canada's production budget. In 2010, CBC/Radio-Canada engaged 54 companies for English programming and 75 independent

production companies on the French side⁵³. Based on the number of CMPA members, the majority of the independent producers in Canada have worked on a CBC/Radio-Canada project within the past three years. Spreading their independent commissions across a wide range of independent production companies contributes to sustaining creativity and diversity in the sector and may lower barriers to entry into the sector.

In addition, CBC/Radio-Canada contributes twice as much as the other conventional broadcasters to CMF co-funded projects. CBC/Radio-Canada spends just under \$120 million on CMF co-funded productions. That is in contrast to \$57 million spent by the other conventional broadcasters combined. Though influenced by historical guaranteed funding envelopes by the CMF, this demonstrates that CBC/Radio-Canada is at the forefront of supporting diversity of Canadian independent TV production.

CBC/Radio-Canada development activity

CBC/Radio-Canada has been a cornerstone of Canadian broadcasting, providing audiences with Canadian content and showcasing Canadian talent. CBC/Radio-Canada has also contributed to the sector through spending on program development, contributing to building capabilities in Canada, enabling entry of Canadian writers and actors, musicians and authors, and sustaining a wider and deeper independent sector. CBC/Radio-Canada also provides creative guidance and input provided to the programs in development and produced. This supports creativity and arguably leads to higher quality of programming in the sector and potentially higher secondary revenues from productions.

CBC/Radio-Canada's development spend on French language productions was \$4.8 million while \$3 million was spent on English language production development in 2010. Contrasting this with the \$9.8 million⁵⁴ spent by the CMF on development funding, it is clear that alongside the CMF, CBC/Radio-Canada makes a significant contribution to development of new projects in the sector.

To further demonstrate CBC/Radio-Canada's commitment to program development, in the French market CBC/Radio-Canada was responsible for 39 out of a total of 61 development projects the CMF was involved in 2010. In drama the proportion is 17 out of the 30 development projects involving the CMF were CBC/Radio-Canada supported.

Secondary export revenues

CBC/Radio-Canada contributes to the success of the independent production sector by supporting the creation of high quality Canadian content and continually supporting a healthy and competitive independent production sector. As a result, CBC/Radio-Canada is indirectly helping to drive export growth. CBC/Radio-Canada is able to do this by concentrating much of its programming on local Canadian content which could be subsequently commercially exploited through foreign licensing and DVD sales by the independent production companies. A number of CBC/Radio-Canada programs produced with contribution from CMF funding have won recognition through awards and have been airing on foreign networks. Examples include *Being Erica* and *Heartland*. Also six out

⁵³ Data supplied by the CBC/Radio-Canada

⁵⁴ Canadian Television Fund annual report 2009/10

of the nine French drama projects that were successful to get an airing abroad were dramas supported by SRC. They include *Belle-Baie*, *C.A. la Galère*, *les Invincibles*, *Minuit le soir* and *les Parent*.

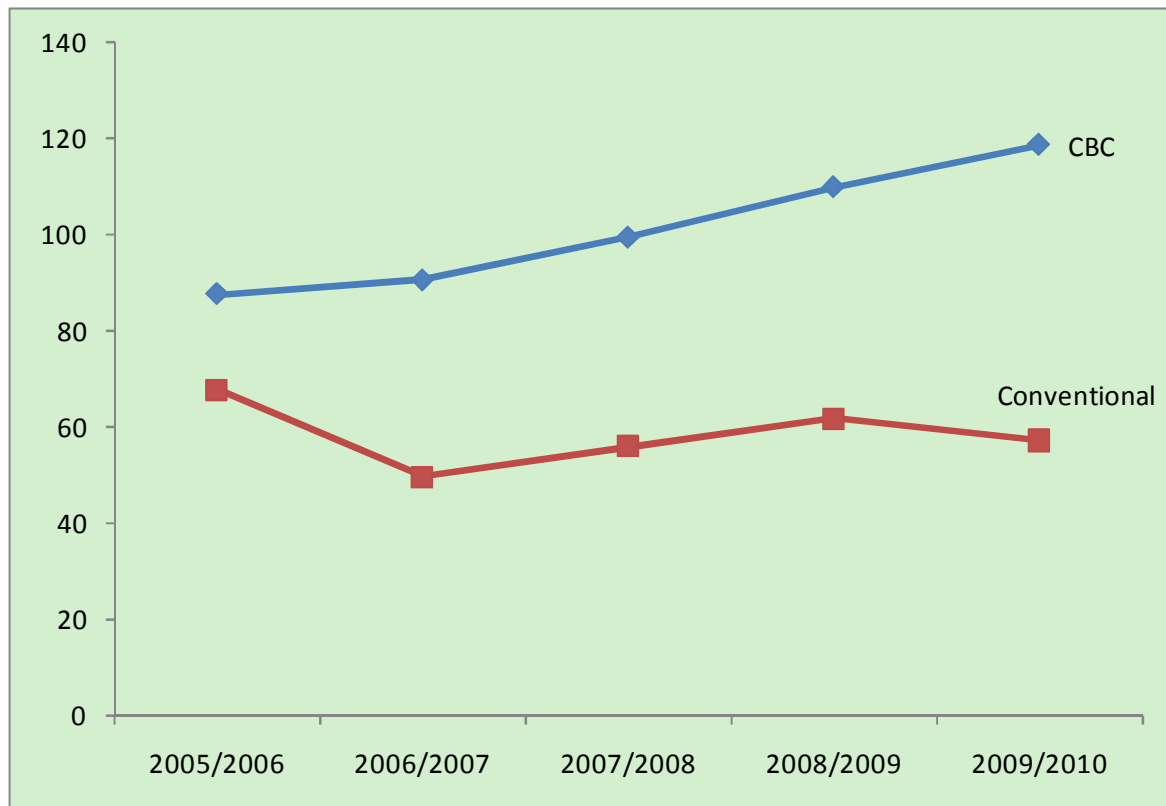
6.4.2 Consistent funding base

CBC/Radio-Canada has over the years provided a consistent demand for Canadian programming from the independent sector. Figure 13 below shows the relative consistency and growth of CBC/Radio-Canada's funding of CMF projects since 2005. The trend shown by CBC/Radio-Canada is in contrast to the lower and more volatile funding provided by the other conventional broadcasters combined. CBC/Radio-Canada's consistent funding is epitomised by its higher average growth over the last five years, reporting an average growth of 8% compared to an average of 3% for the other conventional broadcasters⁵⁵.

The consequence of CBC/Radio-Canada's funding is a more predictable source of revenue for the independent production sector, helping to drive long term sustainability in the sector.

⁵⁵ Deloitte analysis of Canadian Television Fund annual report 2009/10

Figure 13: Co-funding levels of CBC/Radio-Canada and other conventional broadcasters in \$m



Source: CMF data, Deloitte analysis

6.4.3 Regional commissions

CBC/Radio-Canada's contribution towards the development of media activity helps to spur innovation in this sector, attracting talent and investment to the provinces whilst also generating growth.

CBC/Radio-Canada in its current form spends \$155 million more outside Ontario and Quebec than it would spend in our counterfactual scenario. A loss of spend of this magnitude would shrink the size of the media sector in these areas resulting in a lost value add of \$339 million to the regional economies.

CBC/Radio-Canada's spend in provinces champions the creation of more programming outside the more known media clusters of Toronto and Montreal, and helps to attract and retain talent and investment in these provinces by stimulating independent production sector growth. One of such vehicles through which CBC/Radio-Canada does this is via the Regional Programming Development Fund ("RPF").

The Fund values regional content, collaboration with independent producers, diversity of voices and points of view, and emerging on-screen talent. The Fund is ideal for content that

*has strong links to local communities, and music, documentaries, and comedy relevant to local audiences.*⁵⁶

CBC/Radio-Canada commissions independent production from a number of provinces outside Quebec and Ontario which supports the creative sectors in these regions. These provinces include Nova Scotia, New Brunswick and Manitoba among others. In addition, CBC/Radio-Canada supports regional prime time productions via the RPDF, in Vancouver, Alberta, Saskatchewan, Manitoba, Ottawa and Newfoundland.

With regards to French language programming, over the last ten years, CBC/Radio-Canada driven production budgets for the regions totalled \$53 million with CBC/Radio-Canada contributing an average of 17% to that budget. In 2010, the regional (outside Montreal) production budget was \$33 million.

6.5 Estimated spill-over effect on independent production

The economic impact of CBC/Radio-Canada goes beyond the impacts attributable to its direct spend. CBC/Radio-Canada's direct spend is also indirectly responsible for some third party funding that flows to the independent production sector which would otherwise not have happened or would likely have only occurred on a lesser scale.

Following from our assumption that the CMF funding would have the same magnitude in the counterfactual as in the factual (discussed in section 6.3.2) we estimate an independent sector gross value add of \$1,123 million as a result of the smaller magnitude of the independent production sector funding and the consequent loss in provincial and federal tax credit funding. However, some of this is already included in our estimate of CBC/Radio-Canada GVA, namely the GVA associated with CBC/Radio-Canada's own spend with the independent sector (discussed in section 4).

Table 26: Estimation of CBC/Radio-Canada driven independent production sector Value Added

(\$ million)	CBC/SRC	CMF	Tax Credits	Other	Total
French	80	52	61	44	
English	71	100	85	28	
Expenditure Total	151	152	146	72	
GVA					1,123
NVA (net of double counting)					245

Source: Canadian Television fund annual report 2010, Debitte analysis

We therefore estimate \$500 million in CBC/Radio-Canada driven independent production sector NVA which comprises:

⁵⁶ The CBC/Radio-Canada website

- \$245 million in foregone Value Add (resulting from a loss of \$114 million tax credit funding; and
- \$247 million in foregone Value Add resulting from a reduction in the scale of independent sector CBC/Radio-Canada funding. This impact is included already in the Net Value Add estimates in section 4.

Overall we have estimated an incremental NVA of \$245 million as a result of less funding from a counterfactual CBC/Radio-Canada and a proportionally less tax credit funding.

7 Regional Spill-over Impacts of CBC/Radio-Canada’s activities

CBC/Radio-Canada has a strong presence throughout the different regions and provinces of Canada and is a significant part of regional and local creative sectors. However, the impact CBC/Radio-Canada has on different regions and localities goes beyond those arising from the money spent as captured in the GVA and NVA analysis presented in previous sections.

This section discusses the wider impacts of CBC/Radio-Canada’s activities and in particular:

- Highlights of CBC/Radio-Canada’s contributions to particular regions and cities; and
- CBC/Radio-Canada’s contribution to creative clusters in Canada.

7.1 Regional highlights

The following sections highlight several cities and regions in which CBC/Radio-Canada has significant local operations, and discuss examples of some of the distinct economic and social impacts which have resulted from CBC/Radio-Canada’s activities and presence in these regions. The cities include Toronto, Montreal, Vancouver, Calgary, Winnipeg, Halifax, Moncton, and in the Yukon Territory, Northwest Territories and Nunavut. In addition to these cities and regions, CBC/Radio-Canada has significant local production and broadcasting facilities in Ottawa and Quebec City.

7.1.1 Toronto

In 2010, CBC Toronto based expenditures totalled \$644.4 million, constituting the highest spend in any one city by CBC/Radio-Canada. CBC/Radio-Canada’s 2,800 full-time employees comprise an estimated 23% of Toronto’s radio and television broadcasting, pay TV and specialty television sector⁵⁷.

Figure 14: CBC Toronto 2010 expenditure and employment



⁵⁷ The local industry employment data relates to Statistics Canada 2006 Census industry labour data for television, radio, and pay and specialty television broadcasting. Note that for certain types of expenditures, associated CBC/Radio-Canada FTEs are shared between Toronto and Ottawa.

Centre for production and leveraged investment

Located in downtown Toronto, the 1.7 million square foot Canadian Broadcasting Centre is CBC/Radio-Canada's largest production centre. It is the broadcast headquarters for CBC/Radio-Canada's English-language television and radio services, and contains studios for local and regional French language productions. Examples of CBC/Radio-Canada popular programming produced in Toronto include the award winning *the fifth estate*, *George Stroumboulopoulos Tonight*, *Steven & Chris* and *the Rick Mercer Report*. The Centre provides a significant platform for community interaction, where Toronto residents or visitors can attend new programming previews, live tapings, concert performances, and various special events.

Additionally, the facility houses digital television and film production studio space, for rental and use by other media groups, as well as a variety of technical services. Over the 2010 fiscal year, the Centre had over 40 such clients, generating approximately \$4.5 million.

Supporting a diverse community

In September 2002, CBC/Radio-Canada launched a new version of its morning radio show *Metro Morning*, with one primary goal; "to be more relevant to more Torontonians by looking and sounding like the city it represented, in all its diversity". One year later, *Metro Morning* was the Number 1 (up from fourth) show for the first time in its history, and has been the top rated morning show in Toronto 30 times since that time⁵⁸. CBC Toronto's strategy for diversity is considered a success story, becoming a business case taught by the Ivey School of Business at the University of Western Ontario and contributing to CBC/Radio-Canada's national diversity strategy.

Additionally, CBC/Radio-Canada has partnered and sponsored a variety of ethnic festivals in Toronto, including:

- *Masala Mehndi Masti* - the largest multi-disciplinary South Asian arts festival outside of South Asia, with attendance growing from 25,000 to over 100,000 between 2001 to 2008;
- *Afrofest* – the largest annual African music event in Canada, and the largest single annual gathering for different African communities of any purpose in Toronto;
- *Salsa on St Clair* - Canada's largest Latino-themed festival, attracting over one million people since its launch in 2005; and
- *Toronto Region Immigrant Employment Council (TRIEC) Success Awards* - CBC Toronto is a partner for TRIEC, providing programming, hosting, promotion, production, etc.

7.1.2 Montreal

In 2010, CBC/Radio-Canada Montreal's based expenditures totalled \$509.2 million, forming the second largest CBC/Radio-Canada centre after Toronto. CBC/Radio-Canada Montreal's full-time

⁵⁸ Based on both BBM and PPM audience results

employees comprise an estimated 37% of Montreal's radio and television broadcasting, pay TV and specialty television sector.

Figure 15: CBC/Radio-Canada Montreal 2010 expenditure and employment



CBC/Radio-Canada Montreal is the largest investor in French programming across the organization. As such, CBC/Radio-Canada is on the front line in reaching Canada's French speaking population, and addressing their demand for French programming.

Montreal is Canada's largest language production centre, as well as CBC/Radio-Canada's largest French language production centre with the Centre of Information (CDI), the Réseau de l'information (RDI), Radio-Canada International (RCI), new media, and regional programming.

Montreal and Quebec are diverse regions, with a unique French speaking, English speaking, multicultural population, and significant creative sector. CBC/Radio-Canada contributes to the development of the cultural sector in the region through its coverage of cultural events, diffusion of artistic products, partnerships with agencies and cultural events, production and broadcast of cultural events, acquisition and dissemination of independent productions and promoting cultural activities in region. During 2006-2007, CBC/Radio-Canada covered over 600 cultural events in the region. In a 2009 national brand recognition research study, CBC/Radio-Canada ranked second among companies in the field of media and culture in Quebec, following Cirque du Soleil. Montreal's creative sector will be discussed further, in a subsequent section of this report.

7.1.3 Vancouver

CBC/Radio-Canada Vancouver is CBC/Radio-Canada affiliate for most of British Columbia. In 2010, CBC/Radio-Canada's Vancouver based expenditures totalled \$59.4 million. CBC/Radio-Canada's 380 full-time employees comprise an estimated 13% of Vancouver's radio and television broadcasting, pay TV and specialty television sector.

Figure 16: CBC/Radio-Canada Vancouver 2010 expenditure and employment



Centre for production and leveraged investment

CBC/Radio-Canada Vancouver Broadcast Centre is located in the entertainment district of downtown Vancouver, and was recently redeveloped in order to function more efficiently for CBC/Radio-Canada's operations, revitalizing the surrounding neighbourhood, and creating open spaces that would serve the arts community and engage the public.

Since its redevelopment, the CBC/Radio-Canada Vancouver Broadcast Centre has driven more investment attraction than before. The Centre was a key platform for broadcasting significant global events such as the 2010 Winter Olympic Games and the 2010 FIFA World Cup across the country. Studio, atrium, lounge and other Centre space is rented by various producers, corporations and other organizations for the filming of feature films, television series, commercials, music videos as well as to host recording sessions, rehearsals, performances, special events and corporate meetings⁵⁹. Recent clients have included Buena Vista Home Entertainment Inc. / Walt Disney Studios Home Entertainment, Microsoft Game Studios, Vancouver Opera Association and the Sarah McLachlan Entertainment Company. Subsequent to its redevelopment, the CBC/Radio-Canada Vancouver Broadcast Centre has doubled its revenue from these groups, to approximately \$650,000 annually. According to CBC/Radio-Canada Vancouver, such investment could potentially reach \$1 million, given continued economic recovery and future growth.

Community outreach

CBC/Radio-Canada Vancouver is also considered to have some of the strongest community outreach across CBC/Radio-Canada organization. Some of its notable community initiatives include:

- forming a unique agreement with the City of Vancouver, which enables the CBC/Radio-Canada Vancouver Broadcast Centre to be utilized by various non-profit organizations for ten days per month;
- providing internship opportunities to film, journalism, and broadcasting students at the University of British Columbia, Simon Fraser University, British Columbia Institute of Technology, etc;
- showcasing free summer lunch hour concerts which have drawn 300-500 people per concert;
- sponsorship of the Vancouver Chinatown Spring Festival Parade, which attracts an estimated 75,000 to 85,000 spectators annually; and
- a recent open house and food bank held at the CBC/Radio-Canada Vancouver Broadcast Centre raised \$450,000.

⁵⁹ <http://www.bcfilmcommission.com/newsletter/articles86.php>

7.1.4 Halifax

In 2010, CBC/Radio-Canada’s Halifax’s based expenditures totalled \$35.7 million. CBC/Radio-Canada’s 200 full-time employees comprise an estimated 29% of Halifax’s radio and television broadcasting, pay TV and specialty television sector.

Figure 17: CBC/Radio-Canada Halifax 2010 expenditure and employment



CBC/Radio-Canada’s Halifax Production Centre comprises a 4,800 square foot television production studio with a control room, a range of video post production services, and a host of design services are available for rental. CBC/Radio-Canada Halifax produces commissions from the local independent sector popular programming such as the Halifax Comedy Festival and “22 minutes”, the long running, original Canadian comedy series, which use services and facilities at CBC/Radio-Canada Halifax. The series has been recognized with 24 Gemini Awards and 11 Canadian Comedy Awards. CBC/Radio-Canada also produced several television specials and live reports from Halifax, covering the 2011 Canada Winter Games.

7.1.5 Winnipeg

In 2010, CBC/Radio-Canada’s Winnipeg’s based expenditures totalled \$31.9 million. CBC/Radio-Canada’s 230 full-time employees comprise an estimated 16% of Winnipeg’s radio and television broadcasting, pay TV and specialty television sector.

Figure 18: CBC/Radio-Canada Winnipeg 2010 expenditure and employment



CBC/Radio-Canada Winnipeg is consistently recognized as a leader in enterprise and investigative journalism, working with journalists across the country and sharing original stories that the local community wouldn't otherwise hear. Over the years, the stories have led to significant policy changes and new legislation in Manitoba. In the last few months, CBC/Radio-Canada Winnipeg has led cross-Canada investigations that have found: Canadian charities spending more than three quarters of a billion dollars on external fundraisers; thousands of violations of American trucking regulations by Canadian companies, many of them relating to driver fatigue; thousands of cars being sold across Canada each year with open, unfixed safety recalls; and the dangers of identity theft and breaches of security as a result of photocopier hard drives retaining sensitive information.

7.1.6 Moncton

In 2010, CBC/Radio-Canada's Moncton's based expenditures totalled \$27.9 million. CBC/Radio-Canada's 200 full-time employees comprise an estimated 77% of Moncton's radio and television broadcasting, pay TV and specialty television sector, making CBC/Radio-Canada the pre-eminent provider of local television and radio to Moncton.

Figure 19: CBC/Radio-Canada Moncton 2010 expenditure and employment



Moncton is a unique Canadian market for CBC/Radio-Canada, given its large French speaking population; according to Statistics Canada's 2006 Census, over 50% of the City's population speaks French. CBC/Radio-Canada Moncton is home to CBAFT, or Télévision de Radio-Canada Acadie, CBC/Radio-Canada's television service in Atlantic Canada, serving Acadians in the Maritimes and Franco-Newfoundlanders in Newfoundland and Labrador. Not only is CBC/Radio-Canada the largest programming provider to this unique market, but it is successful in its programming. For example, Greater Moncton's morning show *Information Morning* is the number one show for the eastern half of New Brunswick from Campbellton to Cape Tormentine, and covering the cities of Moncton, Miramichi, Bathurst, Dieppe and Campbellton.

7.1.7 Calgary

Calgary is considered one of CBC/Radio-Canada's growing markets in Western Canada. In 2010, CBC/Radio-Canada's Calgary's based expenditures totaled \$27.1 million. CBC/Radio-Canada's

150 full-time employees comprise an estimated 10% of Calgary's radio and television broadcasting, pay TV and specialty television sector.

Figure 20: CBC/Radio-Canada Calgary 2010 expenditure and employment



7.1.8 Yellowknife, Whitehorse and Iqaluit

CBC North is CBC/Radio-Canada's radio and television service in the Canadian Arctic region. The primary CBC North television production centre is in Yellowknife, with smaller production centres in Whitehorse and Iqaluit. CBC North Radio carries programming in English, French and eight aboriginal languages, providing a vital service to Northern Canada's population of over 100,000, for whom English is not a first language.

In 2010, CBC North's based expenditures totalled \$21.8 million, with 150 full-time employees comprising an estimated 55% of the collective Yukon, Northwest Territories and Nunavut radio and television broadcasting, pay TV and specialty television sector.

Figure 21: CBC North 2010 expenditure and employment



CBC/Radio-Canada's full-time employees make up 100% of Yellowknife's radio and television broadcasting, pay TV and specialty television sector, indicating that there is no locally based competition from other Yellowknife-based broadcasters. Additionally, CBC/Radio-Canada's operations comprise 25% of Whitehorse's radio and television broadcasting, pay TV and specialty television sector; and 28% of Nunavut's radio and television broadcasting, pay TV and specialty television sector.⁶⁰

Preserving and promoting Aboriginal culture

In 2010, CBC/Radio-Canada commissioned a qualitative research study⁶¹ on aboriginal communities across Canada, in order to inform and guide its programming for these groups. The

⁶⁰ Statistics Canada 2006 Census labor data is unavailable for Iqaluit.

⁶¹ Qualitative Research study prepared by Environics Research Group.

resulting study showed a strong demand for a variety of radio and television programming catering for Aboriginal audiences, including entertainment, informational and educational programming.

Additionally, Aboriginal communities have a strong interest in preserving their elders' experiences and knowledge of traditional stories and ways of life for the education of future generations. Aboriginal culturally relevant programming is expected to support the preservation of Aboriginal languages and cultures by providing non-speakers with opportunities to learn their people's language, to provide the Canadian public with positive media representations of Aboriginal people and cultures, and to educate Canadians about the Aboriginal peoples of Canada (including their history, achievements, traditions, arts and culture).

- According to Aboriginal communities,⁶² CBC/Radio-Canada is seen as an important network to provide Aboriginal programming, given that:
 - as a government-funded public network, CBC/Radio-Canada is mandated to serve all Canadians;
 - CBC/Radio-Canada is often the only broadcast network available in many communities and in remote locations; and
 - CBC/Radio-Canada has a Canadian heritage and image dating back to a time when it was the only network people watched, which gives it a high level of credibility.

7.2 Economic clusters

CBC/Radio-Canada's regional or city-based presence in a number of locations may add economic value through a "clustering effect". "Economic clusters" may be defined as "geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field"⁶³. There are significant economic impacts associated with clusters, and consequently CBC/Radio-Canada's activities within economic clusters across the country are important. These impacts are only one aspect of CBC/Radio-Canada's impact on regional economies. Research by the Harvard-based Institute for Strategy and Competitiveness has helped to define economic clusters in the modern era and provide insight into their advantages and their important role within an economy⁶⁴.

7.2.1 Key components and advantages of a cluster

An economic cluster may begin as a result of various factors, including access to firms and suppliers within a particular industry, employees with specialized skills, a university research

⁶² As surveyed in the Qualitative Research study prepared by Environics Research Group.

⁶³ <http://www.isc.hbs.edu/econ-clusters.htm>

⁶⁴ Porter, Michael E. (2000). Location, Competition, and Economic Development: Local Clusters in a Global Economy.

centre, advantageous physical location, and well-developed infrastructure⁶⁵. There are also many factors that come into play which may determine how successful an economic cluster is. The Harvard Business School, notes that firms and organizations in a particular cluster share four critical characteristics, including⁶⁶.

- **proximity** - organizations need to be sufficiently close in space to allow any positive spill-over effects and the sharing of common resources;
- **linkages** - the activities of the organizations need to share a common goal;
- **interactions** - there should be a certain level of interaction amongst the organizations; and
- **critical mass** - there needs to be a sufficient number of participants present.

A cluster is important because it may improve productivity, attract new investment, encourage local expansion, and stimulate entrepreneurship and innovation⁶⁷. Clusters also provide benefits to organizations within a cluster such as synergies amongst participants, knowledge sharing through close interaction, increased productivity and efficiency, innovation, increased business formation and access to human and capital resources.

7.3 CBC/Radio-Canada clusters

7.3.1 Identifying CBC/Radio-Canada clusters

CBC/Radio-Canada is present in a number of markets across the country, many of which house large creative clusters, or concentrations in media, technology, arts, and cultural activity. This includes Toronto, Vancouver and Montreal where CBC/Radio-Canada can be expected to play an important role locally, in the development and utilization of talent, driving vendor and supplier businesses and forming valuable partnerships with other organizations within the cluster.

Evidence of a cluster can be identified using a Location Quotient ("LQ"). This is a summary statistic that is often used to measure the level of employment of a particular sector within a particular spatial area (such as a city or region) compared to the economy as a whole. An LQ that is greater than 1 in value supports evidence of a cluster. The tables below display LQ statistics at city levels, calculated across various dimensions. First, the relative density of CBC/Radio-Canada staff compared to TV & Radio employment, second the density of CBC/Radio-Canada staff compared to total employment and, finally, TV & Radio employment compared to total employment. The regions that contain clusters have high concentrations across all dimensions. When focusing down to the city-level, as expected, we find support for a number of clusters in almost every city examined, in which CBC/Radio-Canada has significant operations.

⁶⁵ <http://www.photonicsclusters.org/whatisacluster.html>

⁶⁶ "European Clusters", Christian Ketels, Harvard Business School, 2004

⁶⁷ <http://www.business-sa.com/Content.aspx?p=58>

Table 27: City Level Location Quotients (2006)

Cities	LQ (CBC/SRC vs TV)	LQ (CBC/SRC vs Total)	LQ (TV vs Total Canada)
St. John's	1.37	2.11	1.54
Halifax	1.39	2.07	1.49
Charlottetown	1.70	2.24	1.32
Moncton	1.98	3.66	1.85
Montreal	1.26	1.69	1.34
Toronto	1.38	2.10	1.52
Winnipeg	1.12	1.41	1.27
Regina	2.69	4.61	1.71
Calgary	0.99	1.28	1.29
Vancouver	1.41	1.76	1.24
Whitehorse	1.02	1.27	1.25
Yellowknife	1.11	1.85	1.66
Nunavut	N/A	N/A	N/A

Source: Based on Statistics Canada 2006 Census labour data

For the purpose of examining CBC/Radio-Canada's cluster activity, we will focus on its activities in Montreal as an example, given the scope of CBC/Radio-Canada Montreal's activity and the size of Montreal, relative to other centres. CBC/Radio-Canada arguably has played a particularly significant role in the creative sector in Montreal.

7.3.2 Montreal creative sector

In order to understand the economic impact associated with CBC/Radio-Canada's cluster activity, we will look at Montreal, as an illustration of the contribution CBC/Radio-Canada makes to clusters.

In comparison to the other cities that we find to have economic cluster activity, Montreal is a significant case study to examine for the following reasons:

- CBC/Radio-Canada has significant operations in Montreal, with over \$509 million in spending in 2010, a large full-time employment population of 2,940 and significant production activity;
- CBC/Radio-Canada's mandate of French language focused programming has driven its extensive activities in Montreal, and has potentially helped to create the creative cluster in Montreal; and
- While CBC/Radio-Canada has likely contributed to other clusters in Canada, it is possible that these other clusters would exist in the counterfactual, whereas Montreal's creative cluster likely wouldn't exist at the scale that it does today.

Montreal is home to a sizeable and growing creative and multimedia cluster, which encompasses a number of fields, including arts, culture, technology and innovation. Key Montreal attributes that support a creative economic cluster include⁶⁸:

- second largest city in Canada; ranks third in population density in North America;
- ranks as fourth dense high-tech sector in North America;
- over 450,000 creative sector workers;
- concentration of artists is approximately 1.5 times the Canadian average;
- approximately 35,000 direct jobs and 500 companies involved in production and distribution;
- greatest square footage of set and sound stages in North America;
- over 60 years as a major filmmaking centre servicing Canadian and foreign film producers; and
- nearly 40 universities, colleges and affiliated schools contributing to a talented labour pool.

7.3.3 Quantifying the effects of CBC/Radio-Canada's activities in Montreal

Our approach to quantifying the effects of CBC/Radio-Canada driven clusters is as follows:

- Obtaining an estimate of cluster productivity impact;
- Applying Quebec GVA and counterfactual GVA estimates proportionally to Montreal expenditures in order to estimate the counterfactual employment change in Montreal;
- Adjusting productivity impacts to reflect the change to Montreal's television / radio production sector (by employment);
- Applying the adjusted cluster productivity impact to Montreal's counterfactual GVA.

There is little empirical evidence on the quantitative importance of clusters to productivity. In part, this is because the benefits of clusters build up gradually over a long period of time; it is also difficult to assess what would have happened to the economic structure of a region or city in the absence of a cluster forming. A recent study for the Manchester Independent Economic Review, Overman et al (2009) explains firm level productivity in terms of levels of labour and capital inputs, skills levels, access to key transport infrastructure and the degree of urbanisation, as well as cluster (or localisation externality) effects. Overman et al (2009) find that there are distinct cluster effects on productivity, but the magnitudes of these effects are small. More specifically, the paper concludes that the creative sector is one of only seven of the 24 sectors with a statistically

⁶⁸ City of Montreal / "Montréal's Capacity for Creative Connectivity: Outlook & Opportunities", Kevin Stolarick, Richard Florida, Louis Musante. January 2005.

significant cluster effect, in the order of 0.035. This implies that a doubling of the size of the cluster would increase the productivity of the firms in the cluster by 3.5%.

We have used data provided by CBC/Radio-Canada on its current employment at the provincial and city-level, as well as Statistics Canada data focusing on radio and television activities, to proxy the change in Montreal’s cluster, through an estimated percentage change in employment.

7.3.4 Results

The table below shows our results. We first present the impact on employment of the reduced clustering in the counterfactual. The change in employment has a direct impact on local GVA and a consequential impact on the productivity of the remaining cluster due to its reduced size. These results suggest that CBC/Radio-Canada reducing its presence in Montreal would have an impact on the employment and GVA.

In practice, the assumed reductions in employment and productivity would take several years to unfold, since firms would only gradually relocate, or make changes to their operations. This highlights the difficulties of precisely quantifying cluster and other spatial effects, since location decisions play out over many years and it becomes difficult to isolate the impact of one factor separately from many other changing circumstances.

Table 28: Montreal cluster effects

Total change in area employment	Change in GVA due to staff reduction \$ million's	Change in GVA due to productivity \$ million's	Change in productivity	Total change in Montreal's GVA including cluster effects \$ million's
-1,154	-\$51.9	-\$0.5	-0.2%	-\$52.4

The resulting total change in Montreal's GVA including cluster effects is estimated to be some \$52.4 million. Our estimates do not allow for any (regional) ‘distributional weighting’. This would apply to the extent that an extra job or dollar of GVA generated was ‘worth’ more in relatively deprived areas than in prosperous areas.

Finally, we note that the productivity effects due to clusters are partially captured in our GVA estimates. The impact of clusters on the productivity of CBC/Radio-Canada’s own staff, and on the productivity associated with activity in the sector resulting from CBC/Radio-Canada spend with its supply chain should be reflected in the multiplier estimates used to calculate CBC/Radio-Canada’s overall GVA impact.

Some part of the sector’s value added in respect of non-CBC/Radio-Canada driven activity is due to cluster effects, and some part of that is due to CBC/Radio-Canada’s location and investment decisions (over a long period of time). The spill-over effect from clustering relative to the counterfactual CBC/Radio-Canada is likely to be associated with the change in GVA due to

productivity impact. As the productivity difference represents a permanent rather than one-off impact, it is appropriate to estimate the net present value (“NPV”) of the effect. Using a discount rate of 3.5%, the NPV value of the change in GVA due to productivity over twenty years is roughly \$7.4 million.

8 Creating Value for Others

8.1 Summary

We use this section to highlight some further ways in which CBC/Radio-Canada as a publicly funded and mandated broadcaster creates value for others in the Canadian creative sectors and the economy. The areas we comment on are:

- The benefits for other broadcasters and the Canadian economy from CBC/Radio-Canada's role in testing and implementing new production and broadcasting technologies;
- The benefits from CBC/Radio-Canada's activities that promote and facilitate production and distribution of digital content; and
- CBC/Radio-Canada's role, particularly that of CBC/Radio-Canada radio, in promoting and supporting Canadian music, artists and writers.

We assess the above primarily in qualitative terms. However, we quantify the impact in particular examples to illustrate the potential scale of the overall effects.

8.2 Implementing new technologies

8.2.1 CBC/Radio-Canada in leading role on technologies

CBC/Radio-Canada is seen as a leader in evaluating and implementing new technologies for production and broadcast in Canada. Technology choices made by it often set the trend for others in the industry, and it has often been the first or among the first to try out and implement emerging technologies in a broadcasting environment. There are several reasons why CBC/Radio-Canada has been able to assume this role, more so than it would have done in the counterfactual that has been set out in this report.

First, its mandate and public service role, particularly its need for original Canadian content of various genres, in English and in French, mean that CBC/Radio-Canada has experience with and exposure to more productions and wider variety of production circumstances than private broadcasters. This creates both an opportunity and need towards implementation of emerging technologies. This is evident from some of the examples discussed below, where CBC/Radio-Canada has had cause to implement new technologies in order to facilitate efficient local news production, or broadcasting in Canada of major international sport events such as the Olympic Games. It could also be need more technical staff on its payroll due to this exposure, further contributing to awareness and ability to test and implement technologies.

Second, although part-commercial, CBC/Radio-Canada funding is underpinned by the government, which means that its cost of capital is at nearly the government risk free bond rate.⁶⁹ This means that it has a significantly lower hurdle rate of return for investments made – it only has to cover little more than the government bond rate for investments to break even. It is therefore able to accept

⁶⁹ Information sourced from discussions with CBC/Radio-Canada.

higher risks and higher degree of uncertainty for the same expected payout of new investments, or lower pay back periods of investment (or both). This can be a crucial differentiator in CBC/Radio-Canada's ability and willingness, as a publicly financed and mandated entity, to experiment with implementation of new technologies.

Following the discovery and development of new technologies, it is rational for broadcasters to want to "wait and see" until various uncertainties about its practical implementation in broadcasting or about its benefits in context of broadcasting become better resolved. This is reflected in so called "real option value" of investing later: After resolution of a key uncertainty about a project – such as practical feasibility, implementation cost, or accruing benefits – the cost/pay-off ratio either changes or becomes less uncertain. There can therefore be value in the option to wait for someone else to go try out technologies first.⁷⁰ Purely profit motivated broadcasters are more sensitive to the risks and uncertainties, and therefore would not as eager to be the first one to experiment with new technologies compared to CBC/Radio-Canada.

We next look at some of the examples of CBC/Radio-Canada's technological contributions to the industry provided to us.

8.2.2 Examples of CBC/Radio-Canada's contributions

CBC/Radio-Canada has been at the forefront of technology implementation in the Canadian broadcasting industry for many decades. This has been evident across a broad spectrum of technologies, applications and platforms. We have been provided with some key examples of where CBC/Radio-Canada has lead from the front in implementing new and emerging technologies more recently:

- **Pioneering Application of Serial Digital Technology.** Coinciding with the consolidation of all CBC/Radio-Canada's Toronto operations into the Toronto broadcast centre, CBC/Radio-Canada selected newly available Serial Digital Technology for the internal distribution of signals throughout CBC/Radio-Canada Television production and presentation facilities. This was designed to serve CBC/Radio-Canada's needs leading up to wide screen TV and future advances in television such as high definition TV. The Canadian Broadcasting Centre in Toronto opened in 1992 as the first purpose-built digital broadcasting facility in the world. These implementations were recognised in 1997 when CBC/Radio-Canada was awarded a Pioneering (U.S.) Emmy Award in the Technical/Engineering category for application of the Serial Digital Technology in TV broadcasting.
- **Distribution of TV network by satellite.** CBC/Radio-Canada was the first customer of Telesat Canada, first domestic satellite operator in the world. In particular, CBC/Radio-Canada was the first in the world to use satellite transmission for the distribution of television network programming on a regular and continuous basis. CBC/Radio-Canada's contribution to this then emerging use of satellite distribution was recognised in 1999, when

⁷⁰ This is not necessarily inconsistent with potential first mover advantage – the decision of whether or not to invest first can involve a comparison of benefits from potential first mover advantage against potential option value to wait.

it won a Pioneering (U.S.) Emmy Award in the Technical/Engineering category for first full-time distribution of TV network by satellite transmission. CBC/Radio-Canada's early participation helped establish Telesat Canada in the industry, as well as establish satellite transmission for full-time TV broadcast. Today, together with cable, satellite is in the top two TV distribution technologies in Canada.

- **Use of digital compression and encoding technologies.** CBC/Radio-Canada has played an active role in implementing new digital compression and encoding technologies (software), particularly through its participation in the broadcasting of major international sporting events. The Nagano Winter Olympic Games in 1998 was the first worldwide event that applied the digital compression (MPEG-2 Studio Profile) over satellite transmission combined with an advanced digital modulation (8PSK). These allowed the broadcasting of the two required English and French language channels over one satellite transponder out of Nagano to Toronto, severely cutting the satellite bandwidth requirements and delivering cost savings to CBC/Radio-Canada.

Following the success of Nagano, in 2000 CBC/Radio-Canada implemented the "National Satellite DVC Project", which overhauled CBC/Radio-Canada's English Television's satellite network distribution in Canada through the application of more advanced video coding and modulation techniques. In addition, CBC/Radio-Canada successfully implemented an additional statistical multiplexing system to provide higher subjective video quality at comparatively low bit rates, leading to further cost savings on satellite bandwidth. This was the first such satellite distribution system combining both technologies in operation in North America and one of the first of its kind in the world. In recognition of this project, CBC/Radio-Canada was awarded both the 2000 Gemini Award for Outstanding Technical Achievement and the 2002 National Association of Broadcasters (NAB) International Broadcasting Excellence Award.

Even more recently, with the Beijing Olympic Games in 2008, CBC/Radio-Canada was one of the first international broadcasters to use MPEG-4 compression with a studio profile (422 profile), which relayed the signal from Beijing to Montreal and Toronto. One of the first MPEG-4 codex available on the market was used for this, helping therefore to establish the use of the standard in broadcasting.

Further, the signal from Beijing was carried via undersea fibre optic cables instead of on satellite – utilising an innovative technique to create virtual editing suites, based on the use of remote servers operated over a fibre network. This was pioneered by CBC/Radio-Canada during the Athens Olympic Games in 2004. The virtual studio model had been first investigated by CBC/Radio-Canada in 2003 during an International Athletics (IAAF) event in Paris. CBC/Radio-Canada was the first North American, and one of the first international broadcasters, to use remote production. Remote production relies in particular on availability of good quality (latency and outages) fibre network connections – through its broadcasts CBC/Radio-Canada demonstrated the viability using the available fibre networks for live broadcasts across continents. The implications for cost savings are significant, the need for staff on site is eliminated apart from content gathering.

- **LED (Light Emitting Diode) lighting for studios.** In 2007, CBC/Radio-Canada created the first news studio in the world fully lit by LED lights, including those used to light on-air talent. This has created significant energy savings for running studios, as well as time savings in productions. LED lights are many times more energy efficient than tungsten, last for an estimated 50,000 hours, require substantially less power, dramatically reduce the heat generated by studio lighting, and can be adapted faster to changing program requirements and conditions. In particular, the light colours can be changed quickly as each bulb includes a mix of colours, leading to time savings during productions. The all-LED lighting in a studio was first pioneered by CBC/Radio-Canada at the Beijing Olympic Games in 2008, an example that has since been followed by other broadcasters. The conversion to LED has proved profitable and beneficial for CBC/Radio-Canada, and it is continuing LED retrofits across its studios. Apart from financial rewards to CBC/Radio-Canada (and other broadcasters who follow CBC/Radio-Canada's lead on this), the LED retrofits are an opportunity to reduce overall greenhouse gas emissions and other environmental consequences due to their lower power usage and longer life compared to tungsten.
- **Display uniformity methodology.** The uniformity of image reproduction over the entire screen is an important characteristic for studio reference monitors used during TV production. To be able to test uniformity, users have had to rely on costly specialised equipment or use a limited test coverage that can miss some important defects. In 2009, CBC/Radio-Canada developed a ground-breaking methodology using a low-cost still picture camera and a computer script to produce a low cost automated and efficient measurement of uniformity. This methodology was published by the European Broadcasting Union ("EBU") in their Tech Review Q2 2009⁷¹. The EBU is also revising its guidance on user requirements and methods of measurement of studio monitors to include what has become known as the "CBC/Radio-Canada method".
- **Journalistic IP-based tools.** In 2007, CBC/Radio-Canada was the first worldwide broadcaster to use the edges of a satellite transponder to carry the communications and coordination signals. CBC/Radio-Canada designed and tested a system that permits the use of the edges of a satellite transponder to carry over 1 Mbps of IP data in a bi-directional mode. The latter was used to improve the working conditions of Satellite News Gathering ("SNG") crews in the field, giving them access to the journalistic and coordination tools - telephones, intercom, teleprompter, email and web applications – previously only available to them at the broadcasting centre.
- **Journalistic tools for digital coding and file transfers.** In 2008, CBC/Radio-Canada developed a method that combined the latest technologies for audio/video coding and effective file transfer, which allowed journalists to improve the overall video quality of their news content, and helped deliver news stories gathered in remote areas of both Canada and the world faster and more efficiently than before. This development was quickly implemented in CBC/Radio-Canada journalist tools and has become the new conventional way to share news content.

⁷¹ http://tech.ebu.ch/webdav/site/tech/shared/techreview/trev_2009-Q2_DisplayMeasurement_CBC.pdf

- **Next generation converged network (“NGCN”).** CBC/Radio-Canada is currently undertaking one of the largest technology infrastructure projects in its history. The NGCN will replace smaller, multiple leased networks with one, high-speed network for all content. This new fibre optic, converged network will support 'real-time' (live) television and radio broadcast traffic, allow direct exchange of 'non-real-time' radio and TV files between production centres across the country, and move high-speed data traffic for corporate applications. It is expected to fundamentally change the way CBC/Radio-Canada's media employees work, allowing them to find, access, download and edit audio and video content files from CBC/Radio-Canada locations across the country onto their desktop. The NGCN is expected to be a key enabler in centralisation of radio presentation, and conversion to high definition television. It will therefore deliver benefits both through efficiency savings on working practices as well as through higher quality service. It is scheduled to be operational in May 2011.
- **Centralised presentation.** CBC/Radio-Canada is constructing a new presentation centre at the Broadcasting Centre in Toronto that will support the overall integration of Radio, TV and Digital platforms for English Services. This new presentation centre will be the first of its kind in the world, placing CBC/Radio-Canada on the leading edge of innovation in content delivery. The centre is scheduled to launch by August 2011.

Benefits for the wider industry

In all of the above cases, and elsewhere, CBC/Radio-Canada's implementation of advanced and leading-edge technologies is based on evaluation of a business case for them. The technology implementations that go ahead, therefore, are expected to lead to net benefits for CBC/Radio-Canada. The effect of these benefits to CBC/Radio-Canada will have been captured by the analysis earlier in this report.

There may be benefits to the wider industry that are not captured in the analysis. As discussed above, through its activity in the technology space, CBC/Radio-Canada can act as a test bed, reducing the uncertainty about the technologies and demonstrating their value. CBC/Radio-Canada's role could therefore lead others in the industry to implement the technologies earlier than they would have done otherwise. They therefore would also benefit from the technologies earlier, leading to net present value benefits compared to a counterfactual with later implementation.

The requirements for benefits to arise in the wider sector are that:

- CBC/Radio-Canada implemented the technologies first and doing so demonstrated their viability, benefits or clarified investment requirements and teething problems that may arise.
- Others in the sector followed CBC/Radio-Canada, implementing the technologies sooner than they would have done had CBC/Radio-Canada not lead the field.
- There was a demonstrable benefit to CBC/Radio-Canada that can be extrapolated to the wider industry, and that the benefits in the wider industry were realised earlier than they would have been without CBC/Radio-Canada's lead.

While there are grounds for expecting the above conditions to be satisfied for several of the technology implementations described above, lack of data on their industry wide adaptation following CBC/Radio-Canada lead means that robust quantification of this spill-over benefit has not been possible.

8.3 Promoting digital content and distribution

CBC/Radio-Canada plays also an active role in promoting digital content and distribution methods in Canada through its own net portals, particularly cbc.ca and tou.tv. Further, provision of Canadian content produced and commissioned by CBC/Radio-Canada to third party distributors helps show case Canadian productions, and generate additional revenues for the distributors used as well as independent producers who may take a share in online download revenues.

Value towards digital content creation and platforms

CBC/Radio-Canada is an innovator on the creation and delivery of content through digital platforms. It has been at the forefront of utilising and promoting digital distribution channels in Canada. Data from CBC/Radio-Canada research shows that 30% of English speaking audiences in Canada watch a combination of TV linear broadcasts through their television sets and online, and that 2% of audiences watch TV exclusively online.⁷²

The web portal cbc.ca was one of the first news and media websites in Canada, and remains the top ranked Canadian media content site today. Another example of CBC/Radio-Canada's innovation in this space is the highly successful tou.tv online platform for French language content. Launched in January 2010 and developed in partnership with other public service providers, it was the first service of its kind in Canada. It aims to combine all French language public service forces of television on a single web platform that is available throughout Canada, not just in Quebec.

CBC/Radio-Canada also supports online production more directly through financing of independent online productions, and providing inputs in terms of staff time and expertise. In 2010 the budgets for online spend on projects CBC/Radio-Canada contributed to were \$7.6 million, for English language productions⁷³. The web productions supported by CBC/Radio-Canada cover variety of types and genres, ranging from online content associated with TV shows, mobile applications, original online only video series, short films, or downloadable audio podcasts. In addition to financing productions, CBC/Radio-Canada has recently set up a development grant of \$15,000 for new authors to write for the online platforms, where the best contributions are produced. These illustrate how CBC/Radio-Canada actively nurtures the development of new Canadian creative talents beyond those directly employed by it.

The Canadian online content showcased by CBC/Radio-Canada on its digital platforms illustrates the importance of these channels to the emerging sector. According to CBC/Radio-Canada data, 25% of their online offering is original web-only content that has not aired on TV before. In terms of viewing share, 15% of (non-news) online viewing on CBC/Radio-Canada platforms is of shows that

⁷² CBC Research Media Technology Monitor

⁷³ These projects were also part financed by the CMF New Media Fund. 2009/10 was somewhat a bumper year: the similar budgets in 2008/09 were \$1.9 million and in 2010/11 were \$1.5 million.

have been first produced for the online platforms. Further, “online first” shows on tou.tv regularly ranked in the top ten of shows viewed on tou.tv between August 2010 and January 2011⁷⁴. There are examples of “online first” shows that, following their online success, have been subsequently produced for the TV.

Through its funding and the use of its own web platforms, CBC/Radio-Canada has a key role in promoting the creation of digital content and the viability of a new part of the media sector in Canada associated with web productions. The platforms lower the barriers to entry to the creative sector, as well as enabling a wider variety of Canadian content to have an audience.

Value to third party distributors

CBC/Radio-Canada also provides Canadian content (for a fee) to various third party digital distributors, creating value to the third parties by helping them to attract audiences to their sites. The third party distribution also contributes further revenues to CBC/Radio-Canada and, often, the independent producers of the content.

Currently, CBC/Radio-Canada provides 205 hours per month of English language content to third party platforms. The third parties include iTunes, Netflix, XBOX and Air Canada. On the French side, third party online distributors deliver approximately 200,000 streams of CBC/Radio-Canada content per month, excluding news content. The distributors benefit through audiences attracted to them as well as directly from revenues generated through downloads of CBC/Radio-Canada content. The revenue models and margins differ. The iTunes model is well known – it takes 30% of revenues of all downloads as its gross margin, the remaining 70% of the revenues being divided between CBC/Radio-Canada and independent producers (if applicable). According to information provided to us, CBC/Radio-Canada shows often rank at the top of iTunes download charts for Canada – *The Tudors* and *Being Erica* were ranked as top TV shows on iTunes in Canada above U.S. competition such as *Glee* and *The Daily Show With Jon Stewart*. This illustrates how the third party digital platforms are used to further showcase Canadian content and actors, benefitting the Canadian creative sector more generally.

The scale of the direct monetary benefits to third party distributors can be illustrated by reference to the revenues earned by CBC/Radio-Canada from third party distribution, as third parties would earn a gross margin on any revenues transferred to CBC/Radio-Canada. This is true for both subscription revenues earned by CBC/Radio-Canada on from cable and satellite distributors, as well as its earnings from syndication of content through various other distribution channels.

Combining information from CBC/Radio-Canada (confidential) revenue plan with a conservative assumption of a gross margin, we estimate that the direct monetary value per year to all third party distributors (not only digital distribution) of CBC/Radio-Canada content is in the region of \$30 million per year. However, we note that much of this value may accrue to non-Canadian third parties, particularly in the digital distribution (iTunes, Netflix and XBOX).

⁷⁴ Tou.tv download statistics

8.4 Supporting Canadian artists

The Canadian Broadcasting Act mandates the Canadian broadcasting system to display Canadian talent in entertainment programming. CBC/Radio-Canada through its commitment to Canadian content gives Canadians greater opportunity to experience high quality Canadian entertainment thereby increasing awareness in Canadian artistic and cultural works and promoting Canadian artists.

CBC/Radio-Canada has demonstrated over time through its relatively high investment in *made in Canada* content that it is a platform to nurture Canadian talent, provide opportunities for emerging artists and an outlet for established stars to showcase their skills.

The enormous reach of the internet and the proliferation of social networking sites, the internet plays a major role in creating exposure for artists. And CBC/Radio-Canada with its online presence acts as a medium through which artists can get this exposure. It should also be noted that Radio has always played a major part in creating exposure for artists. Despite celebrated instances where the internet has been credited for discovering new talent, CBC/Radio-Canada radio and other media would always remain a relevant and valuable source of support for upcoming and established artists.

Artists require airtime to sell themselves to the world. The commitment of CBC/Radio-Canada to Canadian content as well as their relative depth in diverse genres presents the best possible opportunity in the broadcasting industry to provide such visibility. This is significant in an industry where visibility is crucial to maintain relevance and patronage.

In addition, CBC/Radio-Canada has set itself a target of continuously addressing English Canada's most significant challenge which is the absence of Canadian entertainment programming particularly during prime time. Successes have been recorded in this regard.⁷⁵

CBC/Radio-Canada radio is an advertising free service which dedicates more airtime to the promotion of Canadian music and artists than any other radio broadcaster. CBC/Radio-Canada does this by⁷⁶:

- **Playing more music:** Private broadcasters dedicate between six to fifteen minutes per hour on commercials whilst CBC/Radio-Canada radio programming is not interrupted by commercials therefore freeing more time every hour to play more music. An average commercial radio station would play between 250 and 550 distinct songs/selections during the time period 6am to midnight, Monday – Friday, CBC/Radio-Canada radio typically averages 1100 distinct songs/selections during this time period.
- **Playing more new music:** CBC/Radio-Canada radio contributes to developing budding and established talents by playing more new music. Most commercial stations focus their airplay on current top 40 songs.

⁷⁵ CBC/Radio-Canada published financial statements for the period ended 31 March 2010.

⁷⁶ Information derived from interviews of CBC/Radio-Canada staff and information requests made to the CBC/Radio-Canada

- **Playing more variety:** Commercial radio is programmed in narrowly defined genres with a typical library size between 400 and 800 tracks. A conservative estimate shows CBC/Radio-Canada radio playing more than 10,000 songs by 5,000 acts during the last year in a wide variety of genres.
- **Rotating tracks more frequently:** Commercial radio will play a hit song for 20 to 75 weeks depending on the station's format (the older the target demographic, the slower the turnover) while last year, CBC/Radio-Canada radio averaged less than 6 weeks on any current track.
- **Playing more Canadian music.** While commercial radio broadcasters tend to adhere to the minimum Canadian Content requirements in their licences, between 35 and 40%, whereas CBC/Radio-Canada always exceeds 50% on their pop music formats.

Direct support for artists

CBC/Radio-Canada has a number of awards which are committed to promoting creativity. An example is CBC/Radio-Canada Canadian Reflections award which aims to recognize and develop new Canadian talent with the winning applicant awarded a cash prize which goes towards production costs of a short program.

CBC/Radio-Canada argue that concert recordings and plays on Radio have had a positive effect on musicians and venues and presenting organizations across the country. In particular, the impact is greatest on the emerging artists who are trying to build an audience beyond their city/province borders. In addition, many festivals have benefitted from the increased exposure by having CBC/Radio-Canada broadcasting them. It creates exposure, therefore increasing attendance and adding credibility to the festivals. This provides a platform for Canadian artists to be discovered.

CBC/Radio-Canada exposure has also been credited with increasing artists CD sales. A number of artists have seen their CD sales rise by as much as 185%⁷⁷ after appearing on CBC/Radio-Canada. This goes to emphasise that CBC/Radio-Canada exposure can be a key element of enhancing careers in Canada.

There is a wealth of anecdotal evidence of the impact this has had on popularity and sales of Canadian musicians.

Benefits from CBC/Radio-Canada talk radio

Also CBC/Radio-Canada talk radio channel, Radio 1, generates benefits to Canadian artists by showcasing Canadian creativity. A good example of this is the impact that CBC/Radio-Canada program Canada Reads has been shown to have on sales of featured books. "Canada Reads" is an annual book competition organised by CBC/Radio-Canada. The winning books frequently become best sellers and the program generally creates exposure for the writers.

⁷⁷ CBC/Radio-Canada data

9 Summary of key findings

We estimate that the contribution of CBC/Radio-Canada to the Canadian economy, or GVA, in 2010 was \$3.7 billion, arising from an expenditure of \$1.7 billion.

CBC/Radio-Canada's net additional contribution to the economy, or NVA, (relative to an alternative use of CBC/Radio-Canada's existing government funding) is estimated to be \$1.3 billion. This is estimated by comparing our estimate of GVA against the GVA of a hypothetical scenario where CBC/Radio-Canada is commercially funded, or a "counterfactual CBC/Radio-Canada". The main factors contributing to the NVA estimate are:

- the smaller scale of an almost exclusively commercially funded and focused counterfactual CBC/Radio-Canada;
- the higher weight that would be given to foreign content, in the absence of the current public service mandate, leading to significant leakage of programming expenditures out of Canada;
- the crowding out of private broadcasters and other media by the counterfactual CBC/Radio-Canada through increased competition for available advertising revenues; and
- the lower value to the Canadian economy from the alternative use of the current government funding of CBC/Radio-Canada.

Underlying and included in the NVA estimate are some fundamental differences in the activities and type of content broadcast by the counterfactual CBC/Radio-Canada. These include higher spend on foreign content, lower diversity of programming, and, notably, less spend on original journalistic news and information programming as the focus changes from relatively labour intensive (and costly) journalism towards more profitable formats. These changes are likely to have wider indirect impacts in Canada, not considered in this report.

We note that CBC/Radio-Canada generates additional spill-over benefits as follows:

- CBC/Radio-Canada's commissions in 2010 lead to \$1,123 million independent TV production GVA and NVA of \$492 million for the sector, of which \$245 million is additional to the NVA estimate above.
- CBC/Radio-Canada helps create diversity and depth in the Canadian independent production sector through commissioning a wide range of genres and committing substantial funds for program development.
- CBC/Radio-Canada's regional and local activities contribute to the local economies and creative clusters, particularly the creative cluster in Montreal.
- CBC/Radio-Canada creates additional economic value for other broadcasters and wider creative sector in Canada through its role in implementing new technologies, promoting digital content and third party distribution and by its support to Canadian artists.