

# **Response to Undertakings Issued to Friends of Canadian Broadcasting**

**Notice of Consultation CRTC 2015-421**

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## Near Term Prospects for Local TV in Canada

*a. The study assumes that conventional TV revenue declines will accelerate from now to 2020. It is, however, unclear how this assumption leads to the projected station closures.*

*i. Please provide the rationale behind this assumption, and its possible effects on station closures.*

Answer:

- Conventional TV declines were projected to 2020, but such declines were not “accelerating.”
  - The change from a peak of \$3.483 billion in 2011 to 2015 forecast (4 years) to \$2.865 billion is **\$618M** (\$3,483M–\$2,865M=618M)
  - The forecast change from 2015 to 2020 is only **\$321M** (\$2,865M–\$2,544M=\$321M);
  - In fact, the rate of loss in contrast to the previous period could be said to be “decelerating.”
- It is expected that stations will not be closed by their owners except as a last resort. We assume that station owners are resourceful and will try everything to bring the stations back to profitability.
- However, on average the stations are not profitable now. As noted by the remarks of station owners – both integrated and independent – the current level of losses is not sustainable. When average PBIT is a -13% (e.g. SMITS average for 2015), and is not perceived as merely cyclical, no business will sustain such losses.
- As noted by various announcements, local broadcasters are already cutting back on staff, and cutting original hours of local programming, mainly news. Even if they did manage to downsize to meet the declining ad revenues, the service would be greatly depreciated.
- Since conventional TV revenues are expected to continue their decline, the profit margins will worsen. Stations will cut their expenditures in large part by laying off staff, as they seem to be doing now. By cutting staff, they are cutting local service and local programming.
- At some point businesses in a continuous loss position will close their doors. We reviewed five categories of stations, namely:
  - small/medium market stations which are not vertically integrated;
  - Bell CTV -2 station small/medium markets;
  - CTV and CBC affiliates which are small-medium market size;
  - Shaw small/medium market stations; and
  - Quebec independent stations.
- We estimated closure potentials for each group and arrived at close to 50% of such local TV stations closing by 2020. (The actual figures of 29 out of 56 stations were used in the analysis) That level of specificity is about as far as we can go, since we cannot possibly know the

calculus of individual business decisions over the next 5 years.

***ii. Given that 2014 was the only year where the decline in private conventional revenues accelerated, how would station closures, GDP and employment be affected if this acceleration did not materialize?***

Answer:

- The direct answer to this question is that if the acceleration did not materialize, fewer stations would close and GDP/employment impact would be less. However, we do not anticipate such an outcome for several reasons, as follows.
- First there is early evidence that private conventional continued to decline in 2015. As cited on p. 8 of the report, early data from SMITS stations shows a revenue decline from \$102M in 2011 to some \$80M in 2015. Aggregate revenue from 2014 to 2015 was down \$7.5M (almost 9%), and PBIT forecast to have reached -13%.
- Second, there is some perspective that is necessary to take into account. We have observed that the severe economic recession of 2008-09 had a substantial impact on TV advertising for a year, and that was initially reversed. The trough of that decline was some \$150M, and then back to “normal.” At this time there is no similar severity in economic conditions, yet revenues have declined twice as much over the last 4 years as they did after the 2008-09 severe recessionary period.
- Third, TV ad revenues are softening for television as a result of the dynamics of advertising and marketing generally in the economy. Digital advertising has grown rapidly and is expected to continue that growth for the next several years. While it does not only displace TV advertising, it will continue to have a major impact on all advertising in Canada. While the impact may not be of the same severity as newspapers, for example, it amounts to a structural impact. TV advertising will continue, but the downturn in the last couple of years is structural – not cyclical.
- An illustration of this point is the behaviour of advertisers in terms of placing ads on local TV, especially in small markets. Advertisers tend to buy around the local stations, if they can, and depend on spill from distant signals or specialty-TV services. They do not see returning to previous eras where local TV was a more important medium.

***b. Please elaborate on why it is not possible to identify which stations are the most vulnerable to closures.***

Answer:

We actually went quite far in segmenting the stations, as explained above. With so many variables affecting a decision (profitability, allocation of costs, number of stations in a group, etc.) it would require a station-by-station evaluation, which was not the point of the exercise. Moreover, we do not have access to station specific data. However, this line of analysis could be carried out by the CRTC.

**c. The study, on page 19, considers indirect and induced impacts but does not include explanations on how they were calculated. Please explain:**

**i. How these impacts were calculated?**

Answer:

We developed a consumer price index (CPI) deflator based on our forecast on CPI inflation (which itself was based on forecasts by the Bank of Canada) (Table 1).

**Table 1 CPI deflator**

	2014	2015F	2016F	2017F	2018F	2019F	2020F
CPI	125.2	126.6	129.0	131.6	134.1	136.7	139.4
CPI deflator	1.000	0.989	0.971	0.952	0.933	0.916	0.898

Source: Statistics Canada and authors calculations

This CPI deflator was used to convert our forecast of revenue in the conventional TV segment into real 2014 dollars. This real-dollar forecast was used to calculate the cumulative revenue loss in the conventional TV segment in real dollar terms (Table 2).

**Table 2 Forecast of cumulative revenue losses in conventional TV, nominal and real dollars**

	2014	2015F	2016F	2017F	2018F	2019F	2020F
Conventional TV revenue (private and public) (\$M)	3,131.8	2,865.4	2,792.7	2,688.6	2,623.8	2,578.1	2,544.4
CPI deflator	1.000	0.989	0.971	0.952	0.933	0.916	0.898
Conventional TV revenue (private and public) (real 2014 \$M)	3,131.8	2,834.3	2,710.8	2,558.6	2,449.2	2,360.5	2,285.0
<b>Cumulative revenue loss (real 2014 \$M)</b>	<b>0</b>	<b>297.5</b>	<b>421.0</b>	<b>573.2</b>	<b>682.6</b>	<b>771.3</b>	<b>846.8</b>

Source: Statistics Canada and authors calculations

We assumed that 40% of this revenue loss would be taken out of production budgets<sup>1</sup> and that 60% would come out of broadcasters' operations expenses (Table 3).

**Table 3 Portion of revenue loss allocated to broadcasters' operations expenses**

	2015F	2016F	2017F	2018F	2019F	2020F
Cumulative revenue loss (real 2014 \$M)	297.5	421.0	573.2	682.6	771.3	846.8
Production spend (40%)	118.7	168.4	231.4	279.9	318.4	349.8
<b>Allocation of revenue loss to broadcasters' operations expenses (60%)</b>	<b>178.1</b>	<b>252.6</b>	<b>347.1</b>	<b>419.8</b>	<b>477.7</b>	<b>524.6</b>

Source: CRTC, Statistics Canada and authors calculations

<sup>1</sup> This amount was removed because the economic impact and employment effects would be experienced in production sector rather than broadcasting sector, per se.

To estimate the portion of the broadcasters' operations expenses paid to broadcasting industry workers (Table 4), we built on two other data points - our estimate of employment losses and average salary statistics (published by the CRTC).

**Table 4 Estimate of broadcaster employee wages**

	2015F	2016F	2017F	2018F	2019F	2020F
Employment losses	960	1480	2080	2660	3120	3490
Average salary (\$)	90,181	90,181	90,181	90,181	90,181	90,181
Total wages (\$M)	86.6	133.5	187.6	239.9	281.4	314.7

Source: CRTC, Statistics Canada and authors calculations

These estimates of total wages were deducted to arrive at an estimate of the reduction on non-labour operations expenses that would accompany the decline in revenues (Table 5).

**Table 5 Estimate of non-labour expenses at broadcasters**

	2015F	2016F	2017F	2018F	2019F	2020F
Decrease in broadcasters' operations expenses	178.1	252.6	347.1	419.8	477.7	524.6
Portion of decreases attributed to employees' wages	86.6	133.5	187.6	239.9	281.4	314.7
<b>Estimate of non-labour expenses</b>	<b>91.5</b>	<b>119.2</b>	<b>159.6</b>	<b>180.0</b>	<b>196.3</b>	<b>209.9</b>

Source: CRTC, Statistics Canada and authors calculations

Data from Statistics Canada's input-output tables were used to allocate these non-labour expenses across various commodity categories (Table 6).

**Table 6 Allocation table for non-labour expenses in the broadcasting sector**

Input commodity	Share of non-labour expenses
Crop and animal production	0.0%
Forestry and logging	0.0%
Fishing, hunting and trapping	0.0%
Support activities for agriculture and forestry	0.0%
Mining, quarrying, and oil and gas extraction	0.2%
Utilities	1.3%
Residential construction	0.0%
Non-residential building construction	0.0%
Engineering construction	0.0%
Repair construction	5.4%
Other activities of the construction industry	0.0%
Manufacturing	7.5%
Wholesale trade	0.8%
Retail trade	1.3%
Transportation and warehousing	2.2%
Information and cultural industries	21.0%
Finance, insurance, real estate, rental and leasing and holding companies	8.5%

<b>Input commodity</b>	<b>Share of non-labour expenses</b>
Owner occupied dwellings	0.0%
Professional, scientific and technical services	15.3%
Administrative and support, waste management and remediation services	11.2%
Educational services	0.0%
Health care and social assistance	0.0%
Arts, entertainment and recreation	0.0%
Accommodation and food services	7.7%
Other services (except public administration)	1.6%
Repair, maintenance and operating and office supplies	0.0%
Advertising, promotion, meals, entertainment, and travel	15.1%
Transportation margins	0.1%
Non-profit institutions serving households	0.0%
Government education services	0.0%
Government health services	0.0%
Other federal government services	0.7%
Other provincial and territorial government services	0.0%
Other municipal government services	0.0%
Other aboriginal government services	0.0%
<b>Total</b>	<b>100.0%</b>

Source: Authors' calculations based on data from Statistics Canada

The resulting profile of non-labour expenses was then fed into Nordicity's MyEIA economic impact model (see description in c. ii, below) to generate estimates of the indirect and induced impacts, which were combined and presented as spin-off impacts in Figure 6 in *Near Term Prospects*.

***ii. If the calculations are based on a model, please explain the model and its underlying assumptions***

Answer:

As noted above (in the response to e. i) the estimates of indirect and induced (i.e. the spin-off) impact were generated by Nordicity's MyEIA economic impact model. This model utilizes Statistics Canada's input-output (I-O) tables and other economic data (e.g. average wages) to derive estimates of indirect and induced impacts in terms of wages, GDP and employment.

- **Indirect impacts:** This refers to the changes in wages, GDP and employment experienced by Canadian-resident suppliers to the broadcasting industry as well as suppliers to those suppliers.
- **Induced impact:** This refers to the changes in wages, GDP and employment experienced across the Canadian economy on account of the re-spending of wages by broadcasting industry workers and workers in the supply chain.

Indirect impact:

The MyEIA Model utilizes the following steps and assumptions to estimate indirect impacts.

1. Non-labour expenditures are multiplied by the provincial supply ratios to estimate provincial supply.
2. The estimates of provincial supply are mapped to the 35 industries in Statistics Canada I-O tables to yield a 35x1 shock vector,  $g^E$ .
3. The I-O tables published by Statistics Canada are used to construct the following 35x35 indirect impact matrix.

$$[I-D'(I-\hat{u})B]^{-1} \cdot$$

Where:

I is a 35x35 identity matrix

D' is the transpose of matrix D, which is a 66x35 matrix of each industry's ( $j$ ) share of the production of commodity  $i$ . Derived from the output tables.

$\hat{u}$  is a 66x66 diagonalized matrix of each commodity ( $i$ ) import intensity. Derived from the final demand table.

B is a 66x35 matrix of each input's share of each industry's ( $j$ ) intermediate inputs ( $i$ ). The value-added components of the input table are excluded.

4. This indirect impact matrix is multiplied by the shock vector,  $g^E$ , to arrive at estimates of indirect output in each of the 35 industries, as represented by the 35x1 matrix,  $g^*$ .

$$g^* = [I-D'(I-\hat{u})B]^{-1} \cdot g^E$$

5. The  $g^*$  matrix is multiplied by the wage and GDP ratios in Statistics Canada's I-O tables to derive estimates of the indirect impact labour income and GDP in each industry.
6. To estimate indirect impact employment (in terms of FTEs), indirect labour income is summed across all 35 industries ( $i = 1$  to 35) and divided by the average full-time salary in each province.

$$FTEs = (\sum \text{labour income}_i) \div \text{average full-time salary}$$

Induced impact:

The Type II and Type I economic multipliers published by Statistics Canada (catalogue no. 15F0046XDB) are used to deduce induced-impact ratios for each of the 35 industries in the I-O tables. These ratios are applied to the estimates of direct and indirect labour income generated by the model to arrive at an estimate of the increase in induced impact output in each of the 35 industries. The wage and GDP ratios from the I-O tables are then used to convert these estimate of increased output into estimates of induced impact labour income and GDP. The average salary across all industries are then used to convert the estimate of induced impact labour income into an estimate of induced impact FTEs.

***d. Please detail all calculations resulting in the decline in revenues shown in figure 4, page 19, of the***

**study**
**Answer:**

Figure 4 incorporates a baseline forecast of revenue in the conventional television segment which assumes no station closures. The data, assumptions and calculations for this baseline forecast can be found in *Canadian Television 2020: Technological and Regulatory Impacts* ("Canadian Television 2020") at paragraphs 112 to 184.

The net revenue impact associated with station closures has been effectively layered on top of the baseline forecast. As a result, the revenue forecast for the private conventional TV segment has been reduced in the following manner.

**Table 7 Forecast of total revenue in the private conventional TV segment**

	2015F	2016F	2017F	2018F	2019F	2020F
Baseline forecast	1,661	1,600	1,550	1,534	1,522	1,507
Impact of station closures	0	(3)	(47)	(96)	(128)	(143)
Net impact	1,661	1,596	1,502	1,439	1,394	1,364

Source: Authors calculations

Note: Totals may not sum due to rounding.

As noted on page 17 of the study, *Near Term Prospects for Local TV in Canada* (the "Local TV Study"), we estimated that small/medium market stations had going-in employment of 2,090 full-time equivalent workers (FTEs) and revenue of \$350 million. Based on assumptions for the annual number of station closures and average size of small/medium market stations, we derived the following forecast of jobs losses due to station closures.

**Table 8 Average station size and forecast of station closures**

	2015F	2016F	2017F	2018F	2019F	2020F
<b>Small market stations</b>						
Average station size (number of employees)	25	25	25	25	25	25
Annual number of station closures	0	1	5	10	5	2
<b>Medium market stations</b>						
Average station size (number of employees)	55	55	55	55	55	55
Annual number of station closures	0	0	1	2	2	1
<b>Small + Medium market stations</b>						
Annual job losses	0	25	180	360	235	105

Source: Authors calculations

These annual job losses were then expressed as a percentage of the going-in level of employment (2,090 FTEs) in order to gauge the impact of station closures on a percentage basis.

**Table 9 Annual job losses as a share of going-in employment level**



	2015F	2016F	2017F	2018F	2019F	2020F
Annual job losses	0	25	180	360	235	105
Share of going-in employment (2,090 FTEs)	0%	1%	9%	17%	11%	5%

Source: Authors calculations

These annual percentages were then effectively multiplied by the going-in revenue level of \$350 million to estimate the cumulative revenue losses due to station closures during the forecast period. For example, in 2020, annual revenue losses were estimated to be \$18 million or approximately 5% of \$350M. The estimate of the annual revenue losses was converted to cumulative revenue losses.

**Table 10 Forecast of cumulative revenue impact from station closures**

	2015F	2016F	2017F	2018F	2019F	2020F
Share of going-in employment (2,090 FTEs)	0%	1%	9%	17%	11%	5%
Going-in revenue at small/medium market stations (\$M)	350	350	350	350	350	350
Annual revenue impact from station closures (\$M)	0	4	30	60	39	18
Cumulative revenue impact from station closures (\$M)	0	4	34	95	134	152

Source: Authors calculations

To take account of the 20% of ad revenue losses at closed stations that would be captured by other broadcasters, we multiplied the gross estimate of the cumulative revenue impact from station closures by 80%. We then added the value of the loss of ad revenue due to the elimination of simultaneous substitution (i.e. \$21 million in 2020) to arrive at an estimate of the **overall incremental loss of revenue in private conventional TV industry due to station closures and elimination of simultaneous substitution**. This amount was used to layer on these impacts to the baseline forecast of revenue in the conventional TV segment found in Table 1.

**Table 11 Forecast of incremental revenue losses in the private conventional TV segment**

	2015F	2016F	2017F	2018F	2019F	2020F
Cumulative revenue impact from station closures (\$M)	0	4	34	95	134	152
Share of advertising revenue lost from broadcasting system	80%	80%	80%	80%	80%	80%
Net revenue loss (\$M)	0	3	27	76	107	122
Loss of ad revenue due to elimination of simultaneous substitution (\$M)	0	0	20	20	21	21
<b>Overall estimate of incremental loss of revenue in private conventional TV industry due to station closures and elimination of simultaneous substitution (\$M)</b>	<b>0</b>	<b>3</b>	<b>47</b>	<b>96</b>	<b>128</b>	<b>143</b>

Source: Authors calculations

***e. Given the revenue projections in figure 4 and the assumptions concerning employment ratios, please detail the calculations surrounding the projected loss of employment due to losses in revenue.***

Answer:

The baseline forecast of revenue in the conventional TV segment was converted from nominal dollars to real 2014 dollars on the basis of our forecast for consumer price index (CPI) inflation. This conversion was done by multiplying the nominal-dollar amounts by a CPI deflator (Table 12).

**Table 12 Forecast of revenue in conventional TV segment, nominal and real 2014 dollars**

	2014	2015F	2016F	2017F	2018F	2019F	2020F
<b>Nominal dollars (\$M)</b>							
Private	1,803.7	1,660.5	1,599.8	1,549.8	1,534.7	1,521.8	1,506.7
CBC/SRC	1,328.1	1,204.9	1,196.2	1,186.3	1,185.2	1,184.4	1,180.2
<b>Total</b>	<b>3,131.8</b>	<b>2,865.4</b>	<b>2,796.0</b>	<b>2,736.1</b>	<b>2,719.9</b>	<b>2,706.1</b>	<b>2,686.8</b>
<b>CPI deflator</b>							
CPI	125.2	126.6	129.0	131.6	134.1	136.7	139.4
Deflator	1.000	0.989	0.971	0.952	0.933	0.916	0.898
<b>Real 2014 dollars</b>							
Private	1,803.7	1,642.5	1,552.9	1,474.9	1,432.6	1,393.3	1,353.1
CBC/SRC	1,328.1	1,191.8	1,161.1	1,128.9	1,106.3	1,084.4	1,059.9
<b>Total</b>	<b>3,131.8</b>	<b>2,834.3</b>	<b>2,714.0</b>	<b>2,603.8</b>	<b>2,538.9</b>	<b>2,477.7</b>	<b>2,413.0</b>

Source: CRTC, Statistics Canada and authors calculations

A similar approach was used to convert the historical time series for revenue in the conventional TV segment. In this case, the CPI deflator was based on the historical CPI published by Statistics Canada (Table 13)

**Table 13 Historical revenue in conventional TV segment, nominal and real 2014 dollars**

	2010	2011	2012	2013	2014
<b>Nominal dollars (\$M)</b>					
Private	2,141.7	2,144.3	2,038.1	1,944.3	1,803.7
CBC/SRC	1,243.3	1,338.8	1,369.2	1,246.9	1,328.1
<b>Total</b>	<b>3,385.0</b>	<b>3,483.1</b>	<b>3,407.3</b>	<b>3,191.2</b>	<b>3,131.8</b>
<b>CPI deflator</b>					
CPI	116.5	119.9	121.7	122.8	125.2

Deflator	1.075	1.044	1.029	1.020	1.000
<b>Real 2014 dollars</b>					
Private	2,301.7	2,239.1	2,096.7	1,982.3	1,803.7
CBC/SRC	1,336.1	1,398.0	1,408.5	1,271.3	1,328.1
<b>Total</b>	<b>3,637.8</b>	<b>3,637.1</b>	<b>3,505.3</b>	<b>3,253.6</b>	<b>3,131.8</b>

Source: CRTC, Statistics Canada and authors calculations

This historical time series for real 2014 revenue was related to historical statistics for employment in the conventional TV segment to derive employment-to-revenue ratios (Table 14).

**Table 14 Derivation of employment ratios**

	2010	2011	2012	2013	2014
<b>Revenue, real 2014 dollars (\$M)</b>					
Private	2,301.7	2,239.1	2,096.7	1,982.3	1,803.7
CBC/SRC	1,336.1	1,398.0	1,408.5	1,271.3	1,328.1
<b>Total</b>	<b>3,637.8</b>	<b>3,637.1</b>	<b>3,505.3</b>	<b>3,253.6</b>	<b>3,131.8</b>
<b>Employment (FTEs)</b>					
Private	6,363	6,325	6,343	6,083	5,961
CBC/SRC	6,227	6,214	6,320	6,137	5,843
<b>Total</b>	<b>12,590</b>	<b>12,539</b>	<b>12,663</b>	<b>12,220</b>	<b>11,804</b>
<b>Employment ratio (FTEs per \$1M real 2014 revenue)</b>					
Private	2.76	2.82	3.03	3.07	3.30
CBC/SRC	4.66	4.44	4.49	4.83	4.40

Source: CRTC, Statistics Canada and authors calculations

By 2014, private conventional TV broadcasters had seen their productivity fall to 3.30 FTEs per \$1 million. We assumed that they would improve their productivity from this five-year nadir by 0.02 FTEs per million dollars per year, so that by 2020, the employment ratio would have fallen to 3.18. This is an improvement over 2014, but still well above the employment ratios achieved as recently as 2013 and earlier.

For CBC/SRC, we set the 2015 employment ratio as the average of the 2010-2014 period. From that point, we assumed that CBC/SRC would realize productivity gains of 0.02 FTEs per million dollars per years, so that by 2020, its employment ratio will have fallen from 4.56 to 4.46 (Table 15).

**Table 15 Forecast of employment ratios (FTEs per \$1 million revenue [real 2014 dollars])**

	2014	2015F	2016F	2017F	2018F	2019F	2020F
Private	3.30	3.28	3.26	3.24	3.22	3.20	3.18
CBC/SRC	4.40	4.56	4.54	4.52	4.50	4.48	4.46

Source: CRTC, Statistics Canada and authors calculations

These forecast employment ratios were multiplied by the annual revenue levels (in real 2014 dollars) in order to derive forecasts of the new annual employment levels (Table 16).

**Table 16 Forecast of employment**

	2015F	2016F	2017F	2018F	2019F	2020F
<b>Revenue (real 2014 \$M)</b>						
Private	1,642.5	1,552.9	1,474.9	1,432.6	1,393.3	1,353.1
CBC/SRC	1,191.8	1,161.1	1,128.9	1,106.3	1,084.4	1,059.9
<b>Total</b>	<b>2,834.3</b>	<b>2,714.0</b>	<b>2,603.8</b>	<b>2,538.9</b>	<b>2,477.7</b>	<b>2,413.0</b>
<b>Employment ratios(FTEs per \$M real revenue)</b>						
Private	3.28	3.26	3.24	3.22	3.20	3.18
CBC/SRC	4.56	4.54	4.52	4.50	4.48	4.46
<b>Employment (FTEs)</b>						
Private	5,395	5,070	4,786	4,620	4,465	4,310
CBC/SRC	5,439	5,276	5,107	4,983	4,862	4,731
<b>Total</b>	<b>10,834</b>	<b>10,346</b>	<b>9,893</b>	<b>9,603</b>	<b>9,328</b>	<b>9,041</b>

Source: CRTC, Statistics Canada and authors calculations

These new annual employment levels were compared to the 2014 employment level to derive estimates of the cumulative net loss in jobs during the forecast period (Table 17).

**Table 17 Forecast of employment losses in the conventional TV segment**

	2014	2015F	2016F	2017F	2018F	2019F	2020F
<b>Employment (FTEs)</b>							
Private	5,961	5,395	5,070	4,786	4,620	4,465	4,310
CBC/SRC	5,843	5,439	5,276	5,107	4,983	4,862	4,731
<b>Total</b>	<b>11,804</b>	<b>10,834</b>	<b>10,346</b>	<b>9,893</b>	<b>9,603</b>	<b>9,328</b>	<b>9,041</b>
<b>Loss in employment (compared to 2014) (FTEs)</b>							
Private	--	566	891	1,175	1,341	1,496	1,651
CBC/SRC	--	404	567	736	860	981	1,112
<b>Total</b>	<b>--</b>	<b>970</b>	<b>1,458</b>	<b>1,911</b>	<b>2,201</b>	<b>2,476</b>	<b>2,763</b>

Source: CRTC, Statistics Canada and authors calculations

The forecast of job losses in the private conventional TV segment were adjusted to account for the fact that 20% of revenue, economic activity and employment lost due to station closures would be absorbed by surviving conventional television stations (Table 18).

**Table 18 Adjustment to employment losses in private conventional TV segment**

	2015F	2016F	2017F	2018F	2019F	2020F
<b>Calculation of 20% adjustment</b>						
Job losses due to station closures	0	25	205	565	800	905
Adjustment factor	20%	20%	20%	20%	20%	20%
Number of jobs absorbed elsewhere in conventional TV segment	0	5	41	113	160	181
<b>Calculation of net losses in employment in private conventional TV (FTEs)</b>						
Private conventional TV (gross [rounded])	570	890	1,180	1,340	1,500	1,650
Less: adjustment factor (i.e. number of jobs absorbed elsewhere in conventional TV segment)	(0)	(5)	(41)	(113)	(160)	(181)
<b>Private conventional TV (after 20% adjustment)</b>	<b>570</b>	<b>890</b>	<b>1,130</b>	<b>1,230</b>	<b>1,340</b>	<b>1,470</b>

Source: CRTC, Statistics Canada and authors calculations

Note: Some totals may not sum due to rounding

This adjusted forecast of employment losses in private conventional TV (on account of declines in revenue) was combined with the forecast of employment losses at CBC/SRC and due to station closures to arrive at a forecast of overall employment losses (Table 19).

**Table 19 Overall forecast of employment losses in private conventional TV segment**

	2015F	2016F	2017F	2018F	2019F	2020F
Reductions at private conventional stations and networks	570	890	1,130	1,230	1,340	1,470
CBC/SRC conventional stations and networks	400	570	740	860	980	1,110
Closures of small/medium market stations (private conventional)	0	30	210	570	800	910
<b>Total</b>	<b>970</b>	<b>1,490</b>	<b>2,080</b>	<b>2,660</b>	<b>3,120</b>	<b>3,490</b>

Source: CRTC, Statistics Canada and authors calculations

Note: Some totals may not sum due to rounding

Since the 2015 broadcast year was nearly complete at the time of writing, we restricted the time series to begin at 2016 and relabelled the column as "2015/16F."

**Table 20 Forecast of employment losses in conventional TV segment due to revenue reductions and station closures**

	2015/16F	2017F	2018F	2019F	2020F
Reductions at conventional networks and stations (all market sizes)	1,450	1,870	2,090	2,320	2,580
Closures of small/medium market stations (private conventional)	30	210	570	800	910
<b>Total</b>	<b>1,480</b>	<b>2,080</b>	<b>2,660</b>	<b>3,120</b>	<b>3,490</b>

Source: CRTC, Statistics Canada and authors calculations

Note: Some totals may not sum due to rounding

This forecast of employment losses was the basis of the statistics presented in Figures 1 and 3 of *Near Term Prospects*.

***f. The study states on page 17 that "20% of the ad revenue (and associated employment) lost due to closures of stations of private small and medium market stations would be absorbed by surviving conventional broadcasters; 80% of the losses would escape from the broadcasting system to other advertising media ..." This statement does not appear to be taken into consideration in the estimated impacts on GDP***

Answer:

**The 20% assumption:**

The 20% ad-spending-recovery rate referenced in the statement above was taken into account in the estimate of the employment impacts (and thereby the GDP impact). In each year of the forecast, we calculated 20% of the cumulative employment losses at small/medium market stations and then deducted that amount from our forecast of the overall employment losses expected in the private conventional television segment during the forecast period.

For example, in our baseline forecast we forecast that by 2020, the cumulative job losses in the private conventional TV segment would be 1,651 jobs. In our analysis of the local TV impacts, we forecast that cumulative employment impact in 2020 on account of station closures would be 905 jobs.<sup>2</sup> We calculated 20% of the 905 jobs, or 181 jobs, and deducted this from our forecast of 1,651 jobs, yielding a net impact of 1,470 lost jobs in private conventional TV.

In effect, this approach depicted a situation under which the private conventional TV stations within or adjacent to markets that experienced station closures captured some of the orphaned advertising spend, thereby, stemming any baseline losses in revenue and reemployment.

Since no further adjustment was made to the forecast of 905 jobs at the small/medium market stations, the net effect would be that the employment losses and GDP losses across the entire private conventional TV segment would reflect a scenario under which the private conventional TV stations that remained open did indeed capture some of the orphaned advertising media spend.

**The 80% assumption:**

The economic impact only considers the losses in employment and GDP arising from reduced economic activity within the broadcasting sector, among its supplier industries and across other sectors on account of induced impacts. If some portion of the 80% in advertising revenue that escapes from the broadcasting sector was captured by the radio, print or outdoor media sectors, then there would be some offset to the employment and GDP impacts calculated in the report.

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<sup>2</sup> This figure of 905 jobs was subsequently rounded to 910 jobs, so that all employment impacts could be presented as rounded to the nearest 10 jobs.

However, as demonstrated in *Canadian Television 2020: Technological and Regulatory Impacts*, the Internet is the fastest growing platform for advertising media. Many of the most popular web and social media platforms for advertising (e.g. Facebook and Google) are controlled from outside Canada so there is much less scope for advertising expenditures to be retained in Canada, and spent on wages for Canadian workers and purchases of supplies and services from Canadian-resident business. For this reason, we believe our modelling of the economic impacts provides a very close approximation of the overall employment and GDP effects in the short term, which would accompany the closure of local TV stations and leakage of advertising spend.

***i. If this statement was not taken into consideration, please elaborate on how this assumption would affect the estimations of GDP?***

Answer:

As noted above, the 20% ad-spend-recovery was taken into account in the estimates of employment and GDP.

Also, as noted above, our modelling essentially assumed that all of the 80% in lost advertising spend would be lost from both the Canadian broadcasting system and the Canadian media sector. Should any other segments of Canadian media sector recover part of this lost advertising spend, then the total amount of employment and GDP lost within the Canadian economy would be lower. However, the fact the foreign-controlled web and social media platforms are likely to capture a significant share of the orphaned media spend means that any recovery of this leakage is also likely to be limited. And even if the Canadian branches of global web and social media platforms capture some this media spend, the employment impacts within Canada would be much less intense than if the leakage was captured by Canadian-owned radio, print or outdoor media outlets.

***ii. If this statement was taken into consideration, please elaborate on how it was integrated into, and how it affected, the estimates?***

Answer:

Please see answer to f (above).

***iii. Given this statement, would it not be more appropriate to say that the projected losses are to private conventional television rather than to the economy?***

Answer:

Yes, it would be accurate to say that the employment and GDP impacts reflect those that would be lost in the private conventional television (and its supplier industries) rather than the Canadian economy, per se.

However, as noted in f and f(i) through (ii), we believe that a significant share of the orphaned advertising spend (i.e. 80% of advertising revenue losses at closed stations) will not only be lost from Canada's private conventional TV industry, but also from the Canadian media industry. This is due to the fact that a significant share of the lost advertising revenue is likely to migrate to non-Canadian

web and social media platforms.

Certainly, if one assumes that the television workforce is perfectly mobile then all the lost jobs would get absorbed in other industries in the Canadian economy. However, the realities of the labour market mean that such a 100% absorption is very unlikely in the short term and limited in the longer term.

By definition, small/medium market stations exist in areas that likely lack TV or audiovisual clusters. Likely, there will be few news jobs, for example, so even if they worked on a freelance basis, these employees would be making less. So TV industry workers would have to move to find new employment. Family or social connections may discourage this in the short-term. Furthermore, older workers may elect to simply exit the labour force, i.e. stop looking for new employment.

In the longer term, TV industry workers can re-train or move, however, if we assume that TV industry workers are rational, and therefore maximizing their income by working in the TV industry, then the implication is that re-employed TV workers will invariably be earning lower wages in the future.

In summary, our estimates of economic impact provide a very indicative picture of the short-term effects within the conventional TV industry, among its supplier industries and throughout the Canadian economy; although we acknowledge that in the longer-term – once workers retrain and/or move – these effects would be mitigated.

***iv. How does this assumption affect indirect and induced?***

Answer:

The indirect and induced impact will, by and large, be proportional to the scale of the direct impacts.<sup>3</sup> As noted above, the economic impact estimates do take into account the 20% of ad-spend that is recovered. And the economic impact arising from the 80% leakage is very indicative of short-term economic impact.

***g. Throughout the study, adjustments to the expenses of private conventional TV stations are ignored.***

***i. Why were these adjustments not considered in the study?***

Answer:

The adjustments were not ignored at all. We assumed that the costs would shrink proportionately to revenues.

***ii. Please explain how expenses would be affected by the decline in revenues projected in the study***

Answer:

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<sup>3</sup> It is possible that employment and GDP in supplier industries could recover faster than the overall economy, if these industries more quickly find substitute markets. However, this requires the assumption that the firms in these industries are not currently maximising their profits for some reason.



It was assumed that expenses would decline in proportion to sales. We did not conduct a cost accounting exercise or similar analysis that would second guess how stations would be pared back. The study did not require that calculation. As well, only those running the stations would have the perspective as to where and how to cut costs.

***iii. Please explain how adjustments in expenses would affect the losses to GDP and to employment.***

Answer:

If the expenses were lower or higher, it would carry through to GDP and to employment. We believe they couldn't go higher, because they would make the stations even more unprofitable. Nor could they go much lower, or service standards would be impossible to maintain.

It is difficult to prepare an accurate assessment of the effects on employment and GDP associated with expense reduction, since it would depend on which expenses were actually reduced. This is due to the fact that different expenses generate different rates of employment and GDP on a per-dollar basis.

In general, if expenses were to be reduced faster than revenues, thereby, increasing the profits (or reducing the losses) at small/medium market stations, then employment and GDP would likely fall at an even faster rate. Lower expenses would have to be achieved through lower wages, which will either mean fewer jobs or lower incomes to spend within the local, provincial and national economies.

The higher profits (or reduced losses) under this scenario would mean that direct GDP would be higher than under a scenario of proportional reduction. However, this higher GDP in the broadcasting industry would be offset by lower GDP in supplier industries (affected by the expense reductions) and among industries that benefit from employees' consumption (i.e. the induced impact). With regard to the latter, lower employment and/or wages in the broadcasting industry (i.e. direct employment) and in supplier industries (i.e. indirect employment) would mean that workers would have less to spend on household goods and services, thereby leading to even greater reductions in output, employment and GDP in the industries that supply those goods and services.

***h. The Government committed to an incremental \$150 million in annual payments to CBC/SRC. Because of this commitment, the CBC was ignored in the revenue gap analysis on page 23 (footnote 50) but not from the remainder of the study. Should this commitment materialize, how would the projections regarding GDP and employment be affected?***

Answer:

Such an increase in the Parliamentary appropriation to CBC would certainly have a positive economic impact in conventional television, likely very much including local television, and also likely in small/medium stations. However, there is no way to know how much of that \$150M would be allocated by the CBC to local TV stations.

The CBC was not consulted in this study, nor to our knowledge has the CBC publicly stated where it would restore/beef up service. One could speculate from CBC's strategic plan that some of the strategic ambitions about local TV service could be realized, but at this point it is all quite hypothetical.

\*\*\* End of document

