Evaluating the Economic Benefits from the Canadian Beef Check-Off: Inclusion of Levies on Imports

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James Rude
University of Alberta
8554 89th Street
Edmonton, Alberta

Check-Off Revenue and Investment in Marketing and Research

The approach used in this study follows that used in the 2016 study. The same equations are employed as in the original model and nothing has been re-estimated. The data set has been up-dated until 2017:Q4. While the simulations were conducted over the period 2015:Q1 to 2017:Q4 the shocks to the exogenous expenditure levels begin in 2012:Q1-2017Q4 to account for lagged values in the model. This research can be considered a small extension to the 2016 study.

Although an import levy on beef cattle, beef and beef products was announced on July 30, 2013, the levy was not effective until January 1, 2014. The levy is equivalent to $1 per head or carcass equivalent. The funds from the levy are applied to domestic marketing and promotion activities (promoting the healthfulness, nutritional benefits and safety of beef). The objective of this up-date study is to determine the returns, and the associated cost benefit ratio, from the incremental investment resulting from the import levy.

The average benefit-cost ratio is calculated as the difference between market level producer benefits in the baseline (business as usual) and counterfactual scenarios, divided by the value of the check-off funds removed in the counterfactual. I consider two counterfactuals:
(S1) – Addition1 of check-off funds from marketing and research activities excluding the effects of removing the funds from the import levy[1]
(S2) –Addition of check-off funds from marketing and research activities including the removal of the funds from the import levy.

The incremental benefit-cost ratio associated with the import levy is then calculated as the difference between (S2) and (S1). The funds from the import levy are assumed to apply only to domestic promotion (i.e. in the domestic demand equation). The gross annual funds from the import levy are described in table 1:

Table 1. Funds from import levy

Year	Total Funds
2014	181,807
2015	911,737
2016	918,401
2017	937,469

Not all funds collected with the levy are allocated to domestic marketing. Cranfield (2010) faced the same problem to allocate CBI, expenditures that are only attributable to the check-off, he assumed "that the percentage reduction in the division's revenue, arising from the simulated removal of check-off funds, is the same percentage reduction in that division's investment in their respective marketing or research activities." I used the same approach that was applied in the 2016 study and used it to allocate the import levy. So the addition of levy funds only increases investment in domestic marketing activities by 48.7 per cent.

[1] The model is actually solved by reducing investment funds in order to introduce the shock for the scenario. However, these scenarios are described as increases in this document to add in the interpretation of the results.

The average BCR from investment of check-off and import levy funds in marketing and research activities is shown in the table below. I have not broken the results down into individual expenditures (e.g. research alone and marketing alone). The purpose of this exercise is to isolate the incremental impact, of the activities associated with the import levy, on the average BCR. Table 2 shows the reduction in investment in marketing and research activities on the change in producer benefits associated with the two counterfactual scenarios. In all periods considered, the increase in benefits exceeded the increase in investment. So the benefits of the check-off exceeded the costs for producers.

Table 2. Impact of addition of check-off fund investment in marketing and research

	Change in Investment	Increase in Benefits	Average BCR
(S1) Addition of Check-off funds ***excluding*** funds from the import levy			
FY14/15	$5,994,981	$ 126,410,455	21.09
FY15/16	$6,027,247	$ 110,313,865	18.30
FY16/17	$6,154,150	$ 103,098,431	16.75
NPV	$17,647,553	$ 330,691,454	18.74
(S2) Addition of check-off funds ***including*** funds from the import levy			
FY14/15	$6,851,120	$ 160,482,312	23.42
FY15/16	$6,930,476	$ 176,166,095	25.42
FY16/17	$7,081,344	$ 188,908,748	26.68
NPV	$ 20,254,583	$ 509,581,968	25.16
Incremental impact of import levy			
FY14/15			2.34
FY15/16			7.15
FY16/17			9.92
Average			6.42

The BCR of the import levy is measured as the incremental impact of a scenario which includes the import levy and a scenario which excludes it. Over the simulation period this BCR averaged 6:1; or every import levy check-off dollar invested in domestic marketing activities earned $6 dollars for Canadian cattle producers. The higher BCR from this note (25:1 for all activities with all available funds) are larger than the BCRs in the original Cranfield study (i.e. (9:1). This follows because the relative share of investments in production research has increased considerably over time. Returns to on-farm research are typically higher than returns to marketing activities.