Background Brief on Checkoff Programs

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Many agricultural commodities produced in the United States have collective marketing programs aimed at increasing overall market demand (both domestic and foreign) and enhancing producer revenues. These programs, which are sometimes referred to as "checkoff programs," are funded through assessments on firms in the industry. Currently, there are 17 federal programs and numerous state check-off programs in existence (over 50 in California alone). The budgets for these programs total about $1 billion annually in the agricultural sector. The assessments are usually mandatory for all firms after a majority of producers approve the checkoff in a referendum. The revenue raised by checkoff programs is invested in a variety of marketing (and sometimes research) activities, and varies by commodity. The main activity used by the majority of checkoff programs is generic media advertising. Popular examples of media campaigns include: Got milk?; Beef: it's what's for dinner; The incredible edible egg; Pork: the other white meat; Milk mustache; and the dancing raisins.

In an attempt to increase consumption of fruits and vegetables, the national fruit and vegetable industry is currently considering implementing a checkoff program for promotion and research. The proposed checkoff program would raise approximately $30 million through a 0.046% assessment collected from first handlers and importers, and would be used to promote fruit and vegetable consumption through marketing and educational programs.

The proposed fruit and vegetable checkoff has generated a lot of debate. It has also generated some important questions and issues. In this brief, I address some of the most important questions that have been raised by affected parties. As Director of the Cornell Commodity Promotion and Research Program, and Professor of Marketing, I have conducted independent research on generic advertising programs for over 23 years and have published 100's of research articles on various dimensions of the economics of these programs. It is with this background and expertise that I bring to hopefully inform the debate.

Question: Who bears the burden of the cost of the program, growers, first handlers or consumers?

Answer: Economists refer to this issue as the "incidence" of the assessment. Regardless of whether the grower or the first handler pays, who bears more of the incidence depends upon which group is most sensitive to price changes. The group that is the least sensitive to price changes will bear more of the burden. For most food products in the U.S., consumers tend to be very insensitive to price changes because food items typically compose a small percentage of their budget. First handlers and growers of fruit and vegetables are probably more sensitive to price changes than are consumers. So in general, if the entire industry pays, regardless of where the assessment occurs, the incidence of the assessment will likely be spread across the industry, with most of the assessment born by the consumer.

Question: Won't first handlers simply force growers to pay the assessment?

Answer: Not likely for reasons alluded to above. First handlers will likely push much of the assessment forward to parties buying their produce. Consumers are not very sensitive to price changes, and if the full assessment, 0.046% shows up in the form of a higher consumer price, there should be minimal negative impact on demand.

Question: Do these programs really increase consumption?

Answer: There have been hundreds of evaluation studies that have addressed this question, and the overwhelming conclusion is yes they do. Kaiser summarized the results of 21 studies that estimated "promotion elasticities" for a representative set of state and national generic promotion programs. A promotion elasticity measures the percentage change in consumer demand given a 1% change in promotion expenditures. All of 21 studies found positive and statistically significant generic promotion elasticities. The median and average elasticities from these studies are 0.045 and 0.096, respectively, i.e., a 1% increase in generic promotion expenditures results in a 0.045% and 0.096% increase in demand for the commodity when holding all other demand determinants constant. The spread in promotion elasticities in these 21 studies range from a low of 0.005 to a high of 0.428. While statistically different from zero, it is clear that the typical impact of these programs on commodity demand is quite small. Indeed, in the majority of these studies, demand factors such as price, income, and population demographics have been found to have a larger impact on demand than generic promotion. Generic promotion, however, is one the few demand factors that the industry can control. The prime reason why these programs have small impacts on demand is that the level of generic promotion is quite small. All of the mandatory generic advertising checkoffs are smaller, in some cases much smaller, than 1% of the price received by producers. Hence, it is not surprising that generic advertising has a small, but positive impact on food demand.

Question: Does the increase in consumption due to generic promotion translate into increased profits for growers and first handlers?

Answer: This question gets at the heart of a potential paradox of checkoff programs known as "rent dissipation," i.e., effective generic promotion results in a higher demand and market price, which eventually causes an increase in output by growers and first handlers, which causes market price to fall. In theory, it is possible that the expanded output could result in growers and first handlers not being any better off even with effective promotions because of this effect. However, while theoretically possible, virtually all actual evaluation studies of existing industry sponsored generic promotion programs show that this is not the case. For example, Kinnucan examined this issue for generic catfish advertising, and Kaiser has looked at this issue for numerous promotion programs for various commodities and these studies have shown only a small increase in output due to the price enhancement of promotion. The net result has been a sustainable price increase due to promotion programs.

Question: Are these programs profitable for the participants that pay for them?

Answer: This is the bottom line and most important question that first handlers and growers should ask. Here, the evidence from evaluation studies is overwhelming that the benefits of these programs exceed the cost. Economists typically measure the benefits of these programs as the incremental net revenue resulting from the increase in demand and market price due to generic promotion, while the cost is generally measured as either the cost of the promotion, or total cost of the checkoff program. Table 1 lists 14 studies that have evaluated individual generic promotion programs for fruits and vegetables in the United States. Of these 14 studies, the median average benefit-cost ratio (BCR) was 10.0, indicating the average benefits were ten times larger than the costs, and none of these studies had a BCR that was below 1.0. The average BCR was 16.0, indicating average benefits were 16.0 times larger than the costs. Also noted in Table 1 are other commodity promotion benefit-cost ratios, with a median average BCR of 5.7 and an average BCR of 6.3. Indeed, a more thorough perusal of the literature reveals very few studies that have measured a BCR that was less than 1.0 for any checkoff program.

Question: Why are the estimated BCRs for these programs so large?

Answer: The reason estimated BCRs are so large for generic promotion programs is **not** because benefits are large in an absolute sense, but rather they are large **relative** to costs. Because the costs of these programs are so tiny in relation to industry revenue (almost always well under 1%), the upshot of this is it does not take much of an increase in demand or in price to produce a high BCR. Kinnucan and Zheng presented an interesting illustration to highlight this point, using 11 federal programs encompassing over 80% of all checkoff program revenue. In their study, the authors calculated how much of a farm price increase would be necessary to yield a BCR equal to 1.0 (benefits = costs) for the 11 checkoff programs. The average increase in price to yield a BCR of 1.0 was a mere 0.94%. In other words, if the checkoff program increases price of the commodity by 0.94%, the program is breakeven in terms of costs and benefits. If the farm price increase due to generic promotion is 5%, Kinnucan and Zheng found an implied BCR of 8.2. To the extent that generic promotion could increase the farm price by 5%, which appears very plausible, the potential BCR for a $30 million fruit/vegetable campaign would be 8.2, delivering $246 million in returns to the producer.

Question: Would the proposed fruits and vegetables promotion and research checkoff program have as high of BCR as those listed in Table 1?

Answer: While it is impossible to predict with absolute certainty what the BCR for a future program would be, based on the past performance of generic promotion programs for individual fruits and vegetables, it is highly likely that the benefits of the future program would be substantially higher than the costs. Based on the median BCR from Table 1 of 10.0, this would mean that the $30 million per year investment in generic promotion of fruits and vegetables would return $300 million in additional net revenue to the producer.

Question: Would this mean that every fruit and vegetable commodity would receive the same BCR?

Answer: No. Indeed it is unlikely that a generic promotion program that promotes a broad category of fruits and vegetables would return benefits of the promotion equally among commodities. That is, if the promotional campaign for such a program was effective, then it is likely that some commodities would fare better than others. Unfortunately, there have not been a lot of studies that have looked at this type of distributional question. One study by Schmit et al. examined the impact of generic milk advertising on whole, 1%, 2%, and skim milk products, as well as generic cheese advertising on American, processed, and other cheeses. The authors found that generic milk advertising had virtually identical positive effects on the demand for fluid milk products. However, while generic cheese advertising had a positive effect on processed cheese, it had a substantially larger positive impact on American cheese demand. So it is likely that the demand impacts from a generic fruit and vegetable promotion campaign will be different for some commodities.

Question: Most checkoff programs have been commodity specific. Would a promotion program with the broad category of all fruits and vegetables be as effective?

Answer: There have not been many examples of generic promotion programs that are as broad as the fruit and vegetable category combined. However, a recent study by Global Insight, Inc. evaluated the combined impact of all of the USDA's Foreign Agricultural Service generic export promotion programs on U.S. exports. The results of this study found a BCR of about 5 for all programs combined. That is, a $1 investment in all generic export promotion returned $5 in export revenue.

Table 1. Estimated Benefit-Cost Ratios for Fruits, Vegetables, and Other Generic Promotion Programs.

Author(s)	Commodity	Benefit/Cost Ratio
Fruits and Vegetables		
Alston et al.	California Table Grapes	44.9
Alston et al.	California Dried Plums	2.7
Erickson et al.	Pears	10.4
Carter et al.	California Strawberries	44.0
Carman and Craft	California Avocados	2.2
Capps et al.	Florida Orange Juice	4.5
Kaiser	Blueberries	8.8
Kaiser	Raisins	9.5
Ward	Watermelons	10.6
Richards and Patterson	Potatoes	6.5
Costo et al.	Videlia Onions	22.5
Ward and Forker	Washington Apples	7.0
Ferguson et al.	Papayas	21.1
Van Sickle and Evans	Tomatoes	29.1
Median		10.0
Average		16.0
Other Commodities		
Crespi and Sexton (2005)	California Almonds	6.2
Schmit et al (1997)	California Eggs	6.9
Williams et al. (2004)	Florida Orange Juice	5.0
Kaiser (1997)	All Dairy Products	3.4
Ward (1996)	Beef	5.7
Davis et al (2000)	Pork	16.0
Kaiser and Schmit (1998)	Eggs	3.5
Murray et al. (2001)	Cotton	4.6
Kaiser (2005)	Walnuts	5.7
Ward (2008)	Honey	7.0
Williams (1999)	Soybeans	4.8
Median		5.7
Average		6.3