Journal of Agricultural and Applied Economics, 46,3(August 2014):341–346

Marketing by Design

John P. Nichols

The Southern Agricultural Economics Association has made great contributions to our profession. In doing so, it has provided a platform for its members to conduct research, teaching, and Extension education that contributed significantly to the economic growth and success of Southern agriculture and rural communities. I am humbled by the honor received through this Lifetime Achievement Award and want to thank the association and the many colleagues across the profession and in my department at Texas A&M University for their partnership and support over the years. I also want to thank my wife and family for the contributions they have made to my professional career. Their interest and understanding helped me see through some of the difficult choices and times; and they were there for the celebrations as well. In this article, I have chosen a theme that, to me, has defined much of my professional career. We all have stories or life narratives. This is one of mine.

How can farmers engage in, or influence, downstream marketing activities in a way that increases returns for what would otherwise be a simple sale of a commodity at the market price? The idea of design in the context of marketing decisions of farmers evolved in my mind as the result of early experience on the farm and exposure in college to ideas that have influenced my career ever since.

Growing up on a fruit farm in far western New York State, I observed my father as he made "selling" decisions, mostly when the fruit was ripe and he had few options. Price-taking was firmly embedded in the market and certainly was accepted by most farmers as the nature of the business world. Yes, he could negotiate a bit on quality factors but had little leverage once the size of the crop was known. Forming cooperative processing or storage facilities allowed farmers to extend their ownership of processed fruit for a few months, but this was limited by the need for cash. Along with these operational strategies, my father was a believer in organizing marketing efforts to try to influence demand at the consumer level. Through state and federal marketing orders, they collected funds and invested them in promotion and advertising, often guided by marketing research studies.

Selling or Marketing

Farmers, in general, focus on optimizing the production management operations on their farm and typically do not have a desire to examine in detail the workings of the market, especially when facing a long value chain to the consumer. The first outreach presentation that I ever gave was to the International Apple Institute and was entitled "The Farmer in the Marketplace; By Accident or Design." It was an early effort to organize my thoughts about marketing as a managerial activity that farmers should care about. As my career evolved, I now realize that much if it has revolved around this simple idea. Through applied marketing research and outreach efforts, I strived to help producers focus more attention on marketing decisions. Pricing strategies are fundamental, but a good marketing plan begins with choices about varieties planted, managing quality in production, and storage. However, it goes well

John P. Nichols is Professor Emeritus at the Department of Agricultural Economics, College Station, Texas.

beyond to include strategic decisions about how far to invest downstream, including retained ownership and taking leadership in collective marketing efforts such as forming marketing cooperatives or commodity checkoff programs.

My early professional mentor as I developed these ideas was the Chair of my dissertation committee at Cornell, Professor Max Brunk. His focus was on applied business marketing and, while in the Agricultural Economics Department, he spent much of his time with downstream agribusiness entities. He pursued the idea that marketing activities of the firm were investments that could return a profit and spent much of his time trying to convince producers that marketing was more than selling and did not have to be a "zero-sum game" with buyers. He was a pioneer in the area of field experimentation in grocery stores to test merchandising tactics such as packaging, pricing and advertising. With Walter Federer of the Biometrics unit at Cornell, he applied complex Latin Square and other experimental designs allowing for the effects of these tactics to be measured in terms of product sales.

The American Marketing Association provides a definition of marketing, which I adopted to guide my thinking: Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. This approach to marketing emphasizes an active, managerial view of the market(s) facing producers. My position has always been that, even in a commodity-oriented, price-taking market, farmers can have some influence regarding the terms of trade and long-run sustainability of their business enterprise and the value chain of which they are a part.

With the observation of my father's interest in collective marketing organizations and the training in economics and marketing experimentation at Cornell, I found a perfect place to apply these ideas through the newly created Texas Agricultural Market Research and Development Center at Texas A&M University. Professor Robert Branson was another mentor along the lines of Max Brunk inclined to look at big picture issues and with an interest in marketing research. With Tom Sporleder and other colleagues, we initiated a long series of practical studies focused on market development opportunities for producers of most of the significant Texas commodities: citrus, rice, cotton, peanuts, dairy products, shrimp, lamb, and beef. A common theme of many of these studies was to understand the marketing channel and recommend ways for producers to engage in development activities that could yield higher returns for them individually, but equally important to "grow the pie" for the industry as a whole. Motivating farmers to engage in collective action is often a "hard sell" given the free market and independent culture of agriculture. Hard evidence is required to show that there are collective benefits from developing (and defending) the market for agricultural products. It is not always easy to demonstrate that the individual will gain from collective industry-wide market development sufficient to warrant the investment in a checkoff or marketing order program.

Collective Action/Collective Goods

At about the time I entered graduate school, new ideas were being developed that eventually enriched my understanding of farmer marketing problems. Mancur Olson's *The Logic of Collective Action: Public Goods and the Theory of Groups*, published in 1965, provided a foundation for thinking about checkoff programs as producers of "collective goods." That is, creating value by advertising unique attributes of commodities such as pork ("the other white meat"), cotton, beef, or milk, a differentiated value that could be captured, in part at least, in the form of higher market returns for producers.

The Farm Foundation in association with the U.S. Department of Agriculture organized a Conference in 1985 to examine issues related to the growing use of checkoff programs to fund commodity promotion and advertising. A direct product of this initial conference was the establishment of the Regional Research Committee on Commodity Promotion Programs (NEC-63), which provided a rich and sustained flow of research and outreach conferences and

workshops for over 20 years. Launched by Olan Forker, Ron Ward, and Walt Armbruster, and joined by Henry Kinnucan, Harry Kaiser, and a host of other academics and practitioners, NEC-63 was a platform for exploring theory, methods, and application of checkoff programs and similar collective marketing and promotion efforts. A key element of this work was to focus on quantifying the effectiveness of generic advertising and promotion in terms changing consumer demand and improving market conditions for the producers who provided the funding.

The evolution of this line of research carried out over two decades demonstrated that, for the most part, producers collectively could expect to receive a positive and significant net return on their investment. Estimates ranged from two or three dollars per dollar invested at the low end to as high $20 or more (Williams and Nichols, 1998). Interestingly, it was noted that many studies seemed to identify the return to be approximately four dollars per dollar invested. This outcome occurred often enough for some to begin to think there was some kind of "law of returns to generic advertising" at work. John Crespi and Richard Sexton (2013) provide a review of generic promotion and advertising for those who wish to explore recent developments.

The real difficulty in communicating these results comes from the perception of producers that if the price did not increase in association with the promotion, then they did not receive a benefit. Prices are paramount in the producers marketing calculation and evidence of a positive return from checkoff programs was not believable to them if there was not an obvious increase in market prices. A good example of this problem occurred when we did a study of the National Pork Board's promotion programs from inception in 1987–1998 (Davis et al., 2001). The study concluded that the returns to pork producers were $4.79 per dollar invested. Furthermore, there was a positive and significant returns to producers from the funding the Pork Board invested in downstream product and process development to enhance processor and consumer use of pork products. However, at the same time, the market cycle caused a severe downturn in prices such that producers were losing more than $100 per hog for a period of time. As we discussed this with the Board leadership and producers, we emphasized the fact that the benefits from the program were derived from the increased size of the market over the period of time studied and that, collectively, the industry had gained substantially as a result of efforts to shift domestic and foreign demand. The outward shift in the demand curve was significant but, as often happens, the supply response was significant so that price increases were moderated or an economic downturn reduced demand in the short run and profits were drained away. Another approach is to illustrate how much prices would have dropped from a supply increase if the market demand had not expanded as a result of checkoff development efforts. Pork promotion efforts are strategic in the sense that they are investments in the long-run viability of the industry and allow producers to grow their individual hog enterprises as long as they could sustain themselves through the periodic down cycles in profitability inherent in most commodity production systems.

Some have argued that generic promotion cannot work unless a supply control scheme is in place. However, if one of the main purposes of the market development efforts of the checkoff program is to help differentiate the product in the consumers' mind, then it is possible to gain from the demand for what is now seen to be a product with unique attributes (flavor, nutrition, convenience). Developing and executing a complex marketing program to identify opportunities, influence downstream processing and merchandising, and communicate these benefits is the challenge. To sustain those differentiable characteristics over time is an even greater challenge.

The Science of Design

When I was first thinking about the idea of conscious design, it was in the sense of farmers designing their marketing plan and integrating it with farm management decisions and more strategically with their longer term enterprise selection and investment plans. However, the broader ideas of design came through loud and

clear when we examined the issues associated with creating successful checkoff programs. Inherent problems of the free rider, balancing individual freedom against the potential gains from collective cooperation in business ventures, the use of the power of the state to force producer participation, and the level of consent needed to form a checkoff program all need to be addressed in designing the enabling legislation and commodity-specific applications.

So how do we think about design? Design is defined in the dictionary as "to plan and make something for a specific use or purpose." Rob King (2012) provides a very useful and more in-depth insight on the design issue in "The Science of Design," his presidential address to the Agricultural and Applied Economics Association (AAEA) in 2011. Drawing on work of Herbert Simon, King defines design as "the process of conceptualizing or inventing new artifacts—the process of devising new ways for people to better adapt to or use the natural world around them." More specifically he refers to economic artifacts such as markets, contracts, organizational structures, and policies as the result of the process of economic design. Economic design is a practical part of our professional work that goes beyond economic analysis. It is motivated by a problem or opportunity and focuses on what "can or ought to be" regarding desirable outcomes. Sorting out messy goals and objectives is the starting point, but proving efficacy is also a tall order. In the case of commodity promotion programs, the early voluntary efforts highlighted the free rider problem; generic advertising produces a public good (or more correctly a collective good) that is nonrival in consumption and no producer could be excluded from the benefits. Thus, the incentive is to become a free rider and let others pay into the program while you still accrue the benefits.

The answer to this problem was to create a mandatory checkoff program as a policy statement of government and use the police power of the state to enforce participation and provide oversight. Although this worked, a consequence was resistance from some producers who either did not see the benefits or who argued that their free speech rights were fundamentally infringed by being forced to contribute to advertising efforts. Some design adjustments over the years included more narrowly tailoring the definition of producers included by exempting smaller producers, requiring a referendum early in the process or periodically, and providing opt-out provisions or rebates to producers after the collection was completed. After numerous court challenges, the primary issue was boiled down to freedom of speech. In the Supreme Court's final ruling, they held that the speech involved in the advertising of commodities was "government speech" because it was clearly authorized by Congress and served the intent of addressing farm marketing problems Congress considered important. Therefore, the challenges by individual producers on the ground of infringement of their speech were denied. Design issues are still central to the development of effective checkoff programs and some have failed as a result of significant design flaws. However, in the main, these collective marketing efforts have matured and remain a significant part of the portfolio of market development tools that can improve economic outcomes for producers.

Through the profession, and in particular through work of agricultural economists and industry practitioners under the NEC-63 umbrella, the design of checkoff programs has improved. Numerous studies have given guidance to best practices and estimated economic returns (Williams, Davis, and Nichols, 2001). This body of work stands as a good example of our profession's contribution to the design of economic artifacts. Checkoff and other collective marketing efforts are a significant part of the commodity marketing landscape. Producers continue to support them through periodic referenda and realize that such producer-funded programs have been a tool in marketing efforts to engage processors, retailers, and consumers, thus expanding value-added market opportunities.

Some Concluding Thoughts

Reflecting on this particular stream of my professional life, a few insights and ideas are apparent. My observations are certainly not unique nor will they change the profession. I have learned more than I will ever be able to give back and my professional experiences are

unique to my own life and circumstances. However, I think we all draw ideas and conclusions that may be helpful to others who are considering how to approach problems or where to spend their professional efforts. I offer these reflections in that spirit.

Teamwork

One overarching observation is that there is immense power in team approaches to applied economic research and outreach. Throughout my career I have been involved with teams of professionals who each brought a unique set of skills, but each of us had blind spots and limitations as well. Some great economists have been successful because of their ability to focus and think deeply about difficult theoretical and methodological problems and make groundbreaking individual contributions. For the majority of us, however, we benefit greatly from sharing professional efforts and sharing in the benefits of jointly building a body of professional knowledge.

Differentiated Products

Farmers need to think more about how to successfully differentiate the products of their farm in the marketplace. Escaping from the price-taking circumstances of commodity agriculture can be a way to gain market power and capture downstream value. The ideas of marketing management as taught in business curricula need to be incorporated into our thinking when addressing agricultural commodity and industry problems. Producers need to adopt a strategic approach to marketing that goes beyond the use of futures and options, government programs, and crop insurance to fix or hedge their price and returns for the year. I have seen an evolution across producer organizations to adopt industry-wide strategic plans. More is needed.

Value Chain and Consumers

I have often thought that one of the biggest benefits of commodity checkoff programs is the challenge it provides for producers to study and learn more about their downstream partners. Processors and retailers are not the farmers' adversaries in a zero-sum game. Partnerships are critical and it is important to study and understand their business models. If you are a member of the checkoff board with the responsibility of investing millions of dollars a year in market development, promotion, and advertising, you better be a quick study in marketing. Investment in marketing research becomes more relevant when you have spending authority and little personal experience. Checkoff programs have provided significant insights into consumer and market trends and helped to develop more sophisticated producer ideas about their long-run opportunities. Even where mistakes are made, learning occurs.

Collective Goods

The nature of public and collective goods has been much discussed and is obvious to most who live in a functioning society with good governance and a well-defined public sector. Extending these ideas into collective action among farmers who value independence and a free market ideal requires thoughtful evaluation, design, and education. The ultimate outcome of a checkoff program is in its ability to efficiently and effectively produce collective value that can be measured and understood as an economic benefit for producers and their industry. I believe we have made significant progress in identifying where collective goods can usefully be achieved in agriculture and designing institutions that can harvest those gains for both individual producers, for the industry, and even to the benefit of the entire value chain from farm to fork.

Synthesis for Design

Agricultural economics as a profession correctly place high value on the ability to conduct economic analysis. The ability to integrate analytical results into coherent actionable recommendation to managers or policymakers is an art form that does not always come easily and often receives little reward, yet our relevance as applied economists rests on our ability to provide options to producers and others as they work to achieve their goals, whether it is at the

farm level, across the industry, or in the realm of public policy. Like King discussed in his AAEA Presidential address, analysis is only one part of our professional role. The design of relevant economic artifacts is the other half. Synthesis of what we and others have learned is an important part of that design work. In keeping with King's call for the explicit teaching of design in applied economics courses, we have seen case study analysis become more common in our profession as well as the integration of team projects as a learning strategy. Extension and outreach educators are often very accomplished in synthesis as are applied economists working as consultants. They are close to the user and the problems, and their rewards are most directly linked to successfully providing answers to those who are making the operating and investment decisions. As I have learned, the domain of farmer marketing offers many of these same challenges and rewards.

References

Crespi, J.M., and R.J. Sexton. "U.S. Generic Advertising and Promotion Programs" in Armbruster and Knutson, eds. *U.S. Programs Affecting Food and Agricultural Marketing*. New York, NY: Springer, 2013.

Davis, G.C., O. Capps Jr., D.A. Bessler, J.H. Leigh, J.P. Nichols, and E. Goddard. *An Economic Evaluation of the Pork Checkoff Program*. Texas A&M University. Texas Agricultural Experiment Station. Departmental Technical Report (January 2001) No. 01-1.

King, R.P. "The Science of Design." *American Journal of Agricultural Economics* 94,2(2012): 275–84.

Olson, M. [1965]. *The Logic of Collective Action: Public Goods and the Theory of Groups* (Revised edition ed.). Boston, MA: Harvard University Press, 1971.

Williams, G.W., and P.J. Nichols. *Effectiveness of Commodity Promotion*, Texas A&M University. Texas Agricultural Market Research and Development Center, Information Report P 1-98. 1998.

Williams, G.W., G. Davis, and J.P. Nichols. *Checkoff Program Evaluation: Why, What, How, When and Who?* Texas Agricultural Market Research and Development Center, Commodity Market Research Report No. CM 2-00. September 2000.