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All for efficiency and efficiency for all – Dispelling myths about “costly” new quality attributes in food products

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Introduction

Throughout the world, agriculture and food firms and their supply chains are being forced to change how they produce and supply their products. Driving this evolution is a combination of market forces that are mandating new attributes in food products.¹ Traceability, identity preservation, certification programs, labeling for country-of-origin and/or GMO content, and production standards for assuring animal welfare all exemplify these types of emerging food product attributes. When adopted, each of these product attributes requires firms to establish processes for creating, documenting and supporting assertions and guarantees about the existence of a specific quality attribute—all of which can have significant out-of-pocket costs for firms. Hence, a common perception is that the introduction of new quality attributes in food products creates inefficiencies in the food system.

But is the adoption of new product attributes inefficient? Does equating “costly” to “inefficient” mis-specify the problem and ignore many substantive issues? The purpose of this paper is to discuss different potential responses to emerging changes in food markets. And in so doing, the paper highlights for both economists and decision makers the implicit assumptions and value choices embedded in any discussion about the “efficiency” of these changes.

Research Question

As new quality attributes for food products emerge, what are the relative “efficiencies” of alternative market responses to changing preferences for food product attributes? In order to answer this question, the following *a priori* issues must be resolved:

- In the analysis, which costs are quantified and monetized?
- In the analysis, whose preferences are expressed in the market place?
- What level of performance is the basis for measuring “efficiency”: firms, supply chains, or the institutional environment (i.e., short-term cost minimization for a particular firm, short-term cost minimization for a particular supply-chain, adequacy of the market’s ability to meet heterogeneous preferences, the selection of a particular institutional environment which dictates the most profitable/competitive combination of inputs/firms/supply chains)?

In the following section, these *a priori* issues are briefly discussed within the context of different understandings of the term “efficiency.”

Efficiency: It’s A Matter of Perspective

Four general areas of academic pursuit treat the concept of “efficiency” somewhat differently. In the paragraphs that follow, these four perspectives are presented, and how each perspective addresses the *a priori* issues is discussed.

“Efficiency” and the business school/management field: Efficiency is perceived as cost minimization. The most efficient firm, supply chain or regulatory environment is the one that has the lowest costs for those firms directly linked to the market transaction

at hand. Thompson and Strickland, in their discussion of “driving forces,” provide an excellent example of this perspective. These authors note that, “The low cost of e-mail and fax transmission has put mounting competitive pressure on the relatively inefficient and high-cost operations of the U.S. Postal Service—sending a one-page fax is cheaper and far quicker than sending a first-class letter; sending e-mail is faster and cheaper still (p. 97).” When assessing relative efficiencies, the only costs that are quantified and monetized in the analysis is the cost of achieving a very narrowly defined desired outcome, in this case, the delivery of information from point A to point B. The only preferences that matter are those of the persons or firms who both desire the outcome and have access to the resources necessary to be able to choose among the alternatives (e.g., if a small firm does not own a fax machine, nor subscribe to an internet service, then the first class letter may be the most efficient alternative; so, does that mean the firm is inefficient?).

“Efficiency” and neoclassical economics: Efficiency is a ratio of some combination of scarce resources that are used to generate some combination of outcomes. In broad terms, the efficient outcome is the one in which the “maximum” output is generated with a fixed amount of scarce resources. Welfare economics, building upon the works of Pareto, Edgeworth, Pigou and others, is primarily concerned with questions of efficiency so defined. In theory, social welfare functions and general equilibrium analysis account for all costs and all outputs within a market setting (caveats about simplifying assumptions duly noted). As Blaug observes, the concern is with making the biggest cake possible, not with the number of slices or the size of any particular slice of the cake. Hence, issues regarding whose preferences are expressed in the market place

are largely ignored (i.e., Blaug asserts that there is an efficiency-equity trade-off but insists on “the role of the economist as the special custodian for society of the efficiency view of social and economic problems...(p. 608”).

“Efficiency” and institutional economics: As Arrow, Samuels, Schmid and others have noted, there are an infinite number of potential institutional environments, and for each institutional environment, there are different relative factor prices and hence different “efficient” outcomes. Rutherford elaborates on this point by noting that any constrained optimization exercise includes a particular system of institutions and property rights that, in turn affect transactions costs and the equilibrium position achieved. A shift in property rights will shift the equilibrium position that results, but each equilibrium will be efficient given those constraints. Rutherford then concludes that “comparisons across different institutional regimes require more than a reference to conditions of efficiency (p. 153).” Building on Blaug’s analogy, institutional economists are interested in what kind of cake gets made, as well as how the cake gets sliced and distributed. Some market agents will prefer chocolate, others lemon cake; some will prefer large pieces others small. “Who gets to chose the flavor and the distribution?” are as an important questions as “what is the biggest cake we can make given a fixed set of resources?”²

“Efficiency” and philosophy/ethics: Ethical efficiency refers to a practice or policy that optimally reflects a society’s conception of right and wrong. In addition to consumer preferences, people also display a set of moral preferences that lead them to endorse or withhold support from (usually in the form of avoidance behavior) products or actions (Sagoff). Occasionally, withholding support – especially if it means seeking alternatives – may appear to involve transaction or other kinds of costs. However, the

question is whether these are perceived as costs to the members of society who hold certain ethical values. Indeed, it may appear to a society that costs occur when practices do not optimally reflect dominant social values. Like “efficiency” in institutional economics, “ethical efficiency” is concerned with the kind of cake we are making (or allowing to be made), acknowledging that some kinds of cakes must never be made, however inexpensively or “efficiently” (in the neoclassical sense) they can be made.

Comparing Responses: How might each be “efficient”?

Different perspectives about efficiency and responses to the introduction and adoption of new product attributes are closely related issues. Based upon empirical observations and anecdotal evidence, we assert that there are four broadly conceptualized responses to the introduction of new product attributes into a market:

- Reactive--Fight
- Reactive--Begrudging compliance
- Reactive--Adaptive Opportunism
- Proactive--Anticipatory value-centric choices

In some cases, these reactions could be pursued simultaneously or in tandem. However, the following discussion treats each response independently.

Reactive—Fight: If a decision maker sees a new product attribute as nothing more than additional costs to the firm’s activities, the response will likely be “fight.” The firm chooses to invest its resources in resisting program implementation through lobbying, public relation campaigns and legal channels. The presumption is that the status quo is the more efficient market outcome, and new product attributes only add

inefficiencies. Hence, short run costs to defend the status quo will have long-term benefits resulting from the preservation of the current set of product attributes.

For example, U.S. retailers and importers demonstrated this strategy during the 2002 Farm Bill debate over country-of-origin labeling. These segments of the fresh produce and meat industries strongly lobbied against passage of this mandate as the Farm Bill was being debated in Congress. Their arguments often were based on the assertion that the programs would “add costs” without certainty about the value the labeling program would offer consumers.

Reactive—Begrudging Compliance: The firm seeks strategies to minimize the costs of implementing new product attributes and/or ways to transfer costs either to other firms within the supply chain or to end-consumers. The “efficient” response is to minimize costs for the firm, perhaps to the detriment of its supply chain relationships.

Having lost the political fight over the 2002 Farm Bill, many agri-food industry participants are speculating that retailers and importers will attempt to transfer the costs of the mandated country-of-origin labeling program to producers and shippers and/or consumers (Karst). The response is to maintain, as closely as possible, the status quo cost structure because of a belief that this maintains the most efficient alternative for retailers and importers.

Reactive—Adaptive Opportunism: The firm sees emerging new product attributes as offering market opportunities, and uses a new attribute as the basis for diversifying its product mix. New products can be developed which target emerging market niches. The “efficient” response is to find optimal solutions and supply chain relationships that are profitable in the new markets.

One example of this type of reactive strategy is what some have called the “organic-industrial complex” (Pollan). Organic food traditionally has been considered a niche market, particularly well suited for small farmers and like-minded consumers with strong concerns about the environment, health effects of pesticides, and the social structure of rural America. Organic farming has been seen by some as a more natural way of farming as well as a more natural way of life.

But with the growing market volume and share of organic foods, large-scale agri-food companies have entered the niche market. One of these large-scale companies is Horizon Organic, a publicly held corporation that has consolidated many small-scale regional organic food companies and now has a nation-wide market presence with nationally branded products. Niche marketing is giving way to mass marketing, with critics like Pollan accusing large scale companies of co-opting the organic market. Yet, through economies of scale, companies like Horizon Organic are able to lower production costs, and hence, by certain measures, they have become the “efficient” producers (assuming that such traits as being produced on “small” farms are not essential for products to be “organic”).

Pro-active—Anticipatory value-centric choices: The firm anticipates changes in the market and the underlying widespread changes in the ethical values of a society. Hence, the firm is in the position to strategically examine a new product attribute within a broader context of those values. All markets are embedded in a larger societal valuing system (i.e., a legal-economic nexus), and these markets only function once the value choices about “what should be” have been made or imposed. The “efficient” response here is to acknowledge that consumer preferences are dependent upon these embedded

value choices. Any firm that ignores the underlying valuing process is limited in its ability to proactively anticipate changes in market trends and may ultimately have no other choice but to employ the “fight” and/or “begrudging compliance” strategies.

One example of this type of pro-active strategy in the US food sector is Ben and Jerry’s ice cream. Ben and Jerry’s is one of the classic cases of socially responsible corporations in the US food industry. Its commitment has been exemplified by its actions as well as its commitment to monitoring the company’s social progress through social auditing. In the past, Ben and Jerry’s has produced a Social Performance Report as a counter-part to the financial reports in its annual reporting system. The Social Performance Report covers aspects including workplace conditions, diversity, socially aligned suppliers, the environment, franchise operations, marketing and consumer relations, international operations, and philanthropy. However, Ben and Jerry’s has undergone sweeping changes since it became a wholly-owned subsidiary of Unilever. It remains to be seen if the pro-active social agenda of the original founders and management will be continued under the new management team.

A second example of value-centric choices is fair trade labeled coffee such as that sold by the company Equal Exchange. In the US, fair trade labeling is conducted by TransFair USA, the only third-party certification agency for Fair Trade practices in the US.³ TransFair labeled coffee is currently available through 97 certified coffee roasters and importers at over 7,000 retail outlets as well as on the internet. Fair trade products demonstrate not only consumers’ willingness to make trade-offs between low costs and “higher-order” ethical concerns, but also the willingness of firms to pro-actively adopt business models that anticipate emerging changes in societal values.

Implications/Results

The various responses to the introduction of new quality attributes of food products noted in the previous section demonstrate two key issues. First, firms must make choices about their responses to the introduction of new product attributes. Second, firms also must make choices about which perspective of “efficiency” matters to their firm’s decision-making processes. If efficiency is perceived as cost-minimization, then a fight or begrudging compliance response is likely. If efficiency is perceived as a relative construct dependent upon the institutional setting, then a more adaptive, opportunistic response is likely. If efficiency is framed quite broadly to include ethical concerns, then a firm is likely to have anticipated the introduction of the new attributes and may have already implemented specific marketing strategies that reflect this pro-active perspective.

A second implication of these observations is that making comparisons of the “efficiency” of different market scenarios has very limited analytic merit. The critical point made by institutional economists with respect to efficiency is the normative aspect of the concept. Efficiency is a theoretical concept derived from the standard neoclassical model of constrained optimization. However, efficiency is a relative construct dependent on the assumptions and given institutional and income distributions of the model. Schmid expresses this best by asking the question, “Efficiency for whom?” This question highlights an inescapable fact: there are winners and losers in every assignment of endowments and allocation of resources, income, wealth and profits, and who gets to be a winner or loser differs in every assignment.

Modern economists are guilty of sloppy writing (or perhaps cleverly disguised advocacy) with respect to the term efficiency. Used alone what does it mean – productive efficiency, Pareto efficiency, economic efficiency? To assert that a particular outcome is “efficient” begs the question, who benefits from how this term is being defined and used? The value-laden prescriptive nature of the “efficiency construct” is unavoidable.

Conclusions

Firms must make choices about how best to respond to changing market forces and the introduction of new product attributes in food products. This requires that they resolve conflicting internal incentives, such as trade-offs between technical efficiencies and ethical efficiencies. These choices, by definition, cannot be based on a simple decision rule like, “choose the efficient option.” No such singular, uniquely specified, globally optimal option exists.

Since markets do not exist in a steady-state vacuum but emerge from complex systems in which society makes value choices, firms have strategic options when challenged by changing values and preferences. These include ignore/fight changes, begrudgingly accept changes but actively seek to transfer costs to customers and/or suppliers, observe changes and embrace them as new market opportunities, or proactively anticipate and plan for changes. How firms and supply chains conceptualize “efficiency” will influence which option is chosen.

A blind faith in cost minimization as a proxy for efficiency will ultimately undermine the long-term viability of a firm. Many presumed gains in efficiencies actually involve cost shifting and not cost savings. The question is to whom costs are

shifted. Under an adaptive opportunistic strategy, a firm may actually shift costs to the “laggards” – those that have failed to take note of emerging or potential markets, and hence will have to move quickly to adjust when those markets become reality. In the case of a proactive approach, costs may be shifted to consumers for whom these are either not costs at all, or who willingly absorb those costs for the sake of “higher order preferences,” namely, ethical values. In the final analysis, firms often face a choice: *to make a decision correctly* (i.e., focus on a narrow conceptualization of efficiency such as cost-minimization) or *to make the correct decision* (e.g., think broadly about the variety of efficiencies discussed in this paper).

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Endnotes

¹ Key market forces that are evolving include consumer preferences, government and industry regulations (both mandatory and voluntary), NGO pressure groups (e.g., environment, social justice), advertising, changing technology (including information on scientific advancement, e.g. nutrition and health), social norms (e.g., more women working outside the home, social attitudes about health and food (verses individual attitudes included in ‘tastes and preferences’)), and media hype over these issues and events.

² The reader should note that Blaug strongly rejects this broader analysis. Quoting him, If we refuse, even in principle, to distinguish allocative efficiency from distributive equity, we must perforce reject the whole of welfare economics and with it any conventional presumption in favour of competitive markets, and indeed, in favour of the price mechanism as a method of allocating scarce resources. Arguments for coordinating economic activity by markets would then have to be expressed in terms of political philosophy – for example, that markets diffuse economic power – and economics would in consequence have to become a totally different subject (p. 608).

Most institutional economists would probably agree with Blaug about the consequence of rejecting the efficiency-equity assertion. But unlike Blaug, they probably would celebrate economics becoming a totally different subject.

³TransFair USA is one of 17 members of the international umbrella organization, the Fair Trade Labeling Organization (FLO). The FLO sets and monitors fair trade standards for a number of products including coffee, tea, bananas, chocolate, honey, vanilla, orange juice, and others.