

Determinants of Product Value

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Abstract

Marketing theory is often looked to for models and market insights that can enable the optimisation of decisions by profit-seeking economic agents. The more subtle and initially inscrutable the linkages between decision and decision outcome, the greater the potential value of such information.

Over the past forty years there appear to have been fewer instances of such useful application of marketing to decisions related to agricultural product marketing than might have been expected. Some models are assembled in this paper which, it is argued, have the capacity to draw key insights from marketing (and elsewhere) together in ways that offer more useful information than has been the case thus far.

The central construct is the optimisation of product value.

Introduction

Marketing theory, as developed since the middle of last century, has involved the postulation of some insightful and profoundly useful notions. These are discussed later but include the centrality of the customer as the (ideal) decider of the value of producer output, the stability of needs and dynamism of product preferences and the importance of a comprehensive definition of producer output. Some of these are very close to constructs in economics. Yet, to many analysts of markets and market-oriented decision making, marketing theory as presented seems conceptually shallow and highly relevant only in rare market contexts. Agricultural commodity markets commonly do not qualify.

To the extent that marketing can be argued to have evolved to satisfy micro-level decision making needs with which economics is not well-placed to deal, the question arises as to where one might look for assistance if marketing seems not to apply. That question may be premature.

There is an analogy, it could be argued, between the easy rejection of economic analysis (especially if it contradicts one's prejudices) on the basis of the ideological rejection of 'economic rationalism', and the rejection of marketing analysis because it seems shallow in practice. In both cases, perhaps second rate practitioners have much to answer for as may those teachers who believe that disciplinary wisdom is not really available to mere first-degree holders.

In this paper it is argued that marketing has a good deal of useful insight to provide for marketing decision makers dealing with agricultural commodities.

Product Value

We may define the value of a product to an acquirer as its relative fitness for purpose. Smith (1952), following Aristotle (1946), referred to two meanings of value: 'value in use' and 'value in exchange'. The first appeals to a notion of intrinsic usefulness, the second to price (grounded in the labour theory of value). The pursuit of a coherent theory of demand has led economic analysts away from the investigation of the origins of the utility of products. The result is that, as

Lancaster (1966) observed, conventional economic theory is mute on the specification of substitutes in consumption. Bread and diamonds may be substitutes.

This is most unhelpful for a decision maker who is seeking to identify meaningful opportunities to address with appropriately-defined productive capabilities, which is the essence of strategic management and marketing management. And since the intrinsic usefulness of a product may be correlated with acceptable price domains (in the context of prices of properly identified substitutes), it is possible that there is some merit in reconsidering product value.

Consider for a while the notion that 'product' is a poor description of the output of a producer. Not only are the competing terms 'goods' and 'services' problematic, no less for marketers than anyone else, the appropriateness of decomposing output at all may be doubtful. That is, the notion of product embedded in a set of related services may be unhelpful. The variety of lists of dimensions of output that marketers proffer are not normally well-founded models but they do share an important feature: they signal to decision makers that output is defined by customers and will include whatever aspect of organisational behaviour and its consequences they care to include. Output will be defined differently by different customers through the prism of their own wants.

This may seem a hopeless confusion of the constructs 'output' and 'output valuation'. It isn't. It is a central breach between economic and marketing thinking. Output can be defined explicitly, objectively and comprehensively only in terms of physical and chemical properties, as per Lancaster (1966). All social and psychological dimensions of output, being unobservable, are excluded in this approach. These dimensions are inferred, utterly subjectively, from properties and information by individuals.

It simply does not do to restrict the definition of output to the measurable and commensurable if it is known that this is incomplete. It is inconceivable that we can adequately accommodate awkward output dimensions in other parts of our models of demand having, knowingly, incompletely defined output. Price

elasticities, for example, lack predictive capacity if they are estimated over misspecified subjects of exchange.

To construct our notion of output as most of us have, as having a core of functional good/service with attendant peripheral features, is presumptuous. We presume the customer's perspective. We presume the relative importance of categories of dimensions of output to customer purpose. We model a simple, well-defined relationship between producer and customer. There is little in the real world of markets to justify this, and no particular need to persist with this approach.

Output, from a marketing perspective, is a set of solutions to needs. What those needs are for various customers and what preferences for their satisfaction customers bring to market are questions of fact. As Phillips (1968) noted, marketing makes its contribution, if at all, in the insights it provides as to where we might look for the information necessary to make efficient production decisions.

Marketing makes that contribution through its consideration of needs, consumer decision making overall and sensitivity to consumption context. It makes it, as well and more profoundly, by the insights it provides as to the linkages between customer needs and preferences and producer capability.

The oldest and best-known list of output dimensions in marketing arises from a discussion (Borden 1964) that explicitly denoted output as a mix of characteristics, the result of a recipe. The 'Four Ps' (Product, Place, Price and Promotion) were presented as a set of production decision categories any specific decision within which could modify the value of a product to a potential buyer. The categories are (probably unavoidably) a messy set. All overlap with others, and Product is a breathtakingly broad church including, for example, brand image and warranties. The inclination that, seemingly, every human being (including marketers – see most introductory marketing texts) has to attribute the notion 'good' to 'product' makes matters worse still.

Nevertheless, a profound observation is embedded in the notion of output being axiomatically multi-dimensional: since buyers define product value, any aspect of a producer's behaviour may impact thereon. It is a question of fact.

A model of intrinsic product value

The following is a qualitative model of the determinants of the value of output dimensions. Its purpose is to integrate key constructs from marketing and link them to producer decision making.

Following Muth (1966) and Lancaster (1966), it is simply a matter of practical thoroughness to model *all* items acquired by buyers, at any market level in a vertical marketing system, as inputs to productive processes employed to generate outputs. At the final consumer level those outputs are final commodities: the cognitive and sensory data that assuage, to some degree, the variety of active needs. 'Consumption' is a process of the destruction or conversion of inputs in that process.

No user of a product is capable of its utilisation without the engagement of a technology for which the product is an input. That technology implies the existence of other inputs, skills, temporal and financial resources, production risk and the need to acquire inputs. This set of characteristics comprises what is called in marketing the 'consumption context'. Here, this context will be called 'consumption process'. At all but the final level of consumption we would normally use the term 'production process'. We can use one or the other term; the notion is identical at any level of production or consumption in a marketing system. By using 'consumption process' we emphasise the seller's perspective.

Buyers move to market because they encounter, or anticipate, deficiencies in their desired outputs. This dissonance sets off consequential, or derived, wants. One class of these will be for inputs that clearly link directly to the output/commodity in question. The wants may include desires for jointly desired output characteristics (such as qualitative needs in addition to quantitative/volumetric needs). They will

certainly include desires for fit with the relevant consumption process. (See Shaw and Pirog 1997.)

The dimensions of a producer's output have, at least, two sources of intrinsic value for a buyer. They can (be perceived to) contribute inimitably to the characteristics of the output the buyer seeks and/or they can (be perceived to) fit more or less well into the consumption process into which they are an input.

Generally, the dimensions of output which are inimitable fall into the Product component of the marketing mix. Product characteristics can also relate to consumption context. The remainder of the marketing mix almost always does, composed as it is of exchange facilitators with ephemeral roles for the buyer in comparison with Product.

Considering this model, a characteristic of product value emerges which may surprise: innovation in output is rarely in inimitable characteristics of output. Most commonly, innovation is in output characteristics which change the quality of fit with consumption context. That is, a likely source of high intrinsic value (inimitable contributions to desired output) is relatively stable, and increasingly so over time. The reasons for this are that, usually, there are few inimitable characteristics and, relatedly, incentives are considerable for competing producers to find substitutes for all but the inimitable.

The intrinsic value, the need-satisfying capacity, of producer output is composed of the inimitable contributions to need satisfaction of output and the efficiency of the output as input to the customer's consumption process. The fewness of the former is important to the process of defining 'intrinsic commodity groups', 'weakly separable groups' or 'consideration sets' (depending on your disciplinary orientation) on the basis of core product for any customer.

Needs, being fundamental and usually broadly defined, are quite stable. They relate to sensory and psychological states (eg, hunger, loneliness, self-esteem). There exists greater fluidity in preferences, which we can define as relating to alternative ways of satisfying needs. Preferences are heavily influenced by extant

alternatives and by consumption process. Preferences are based on sets of output characteristics. One way to define these is as sets of inimitable characteristics and process fit characteristics. There may be trade-offs between these types of characteristic.

Customers may accept lower levels of inimitable characteristic (the taste of freshly squeezed fruit juice or freshly ground coffee) for the greater process efficiency of bottled or instant alternatives. People may pay seemingly substantial premiums to achieve characteristics that are, in the customer's eyes, practically inimitable in their consumption context (for example, collations of lettuce leaves, exotic sauces on fresh meats and trash-free bales of wool).

Market segmentation is the disaggregation of markets according to different responsiveness to output characteristics. In the context of this approach to product value, we could contemplate segments being defined on the basis of the importance attributed to inimitable characteristics (defined as the substitutability of fit characteristics for inimitable characteristics) and/or on the basis of process-based characteristics. Segments can be described, therefore, as contemplating specific subsets of producer offerings (what is available in the market) according to preferences for these different characteristics.

Given the above discussion, we would expect lower price elasticity of demand to be manifest amongst customers whose emphasis is on inimitable characteristics. This is the essence of the notion of brand loyalty, effective brand management leading to a brand becoming a relevant inimitable characteristic (as a search good signifying the presence of experience or credence goods). As well, we would expect marketing innovation to focus on process fit dimensions of output and for more successful organizations to be those with the greater understanding of customer consumption contexts.

How does this approach help?

Marketing management is decision making designed to maximise the efficiency of producer effort and to avoid price competition. The objective is to reduce price

elasticity of demand by meaningful differentiation. That is, the objective is to create product value in ways that weaken the perceived substitutability of substitutes.

To do these things the information that is required is that which allows a producer to judge how production capabilities relate to needs arising from outputs desired by customers and from the consumption context. As noted above, inimitable characteristics play an important role in defining substitutes for those customers for whom they matter. The consumption context plays an important role in defining the comparative utility (the 'product position') of offers. Innovation of value to targeted customers must relate to either or both of these sources of value.

The approach therefore helps by structuring features of the consuming environment inhabited by customers in ways that define objectives for innovation. Loose terms such as 'convenience' and 'appropriate technology' are supplanted with specific meaning for specific (groups of) customers. We know what we need to know to anticipate the possibility that an innovation will enhance value and where to look for value-enhancing possibilities.

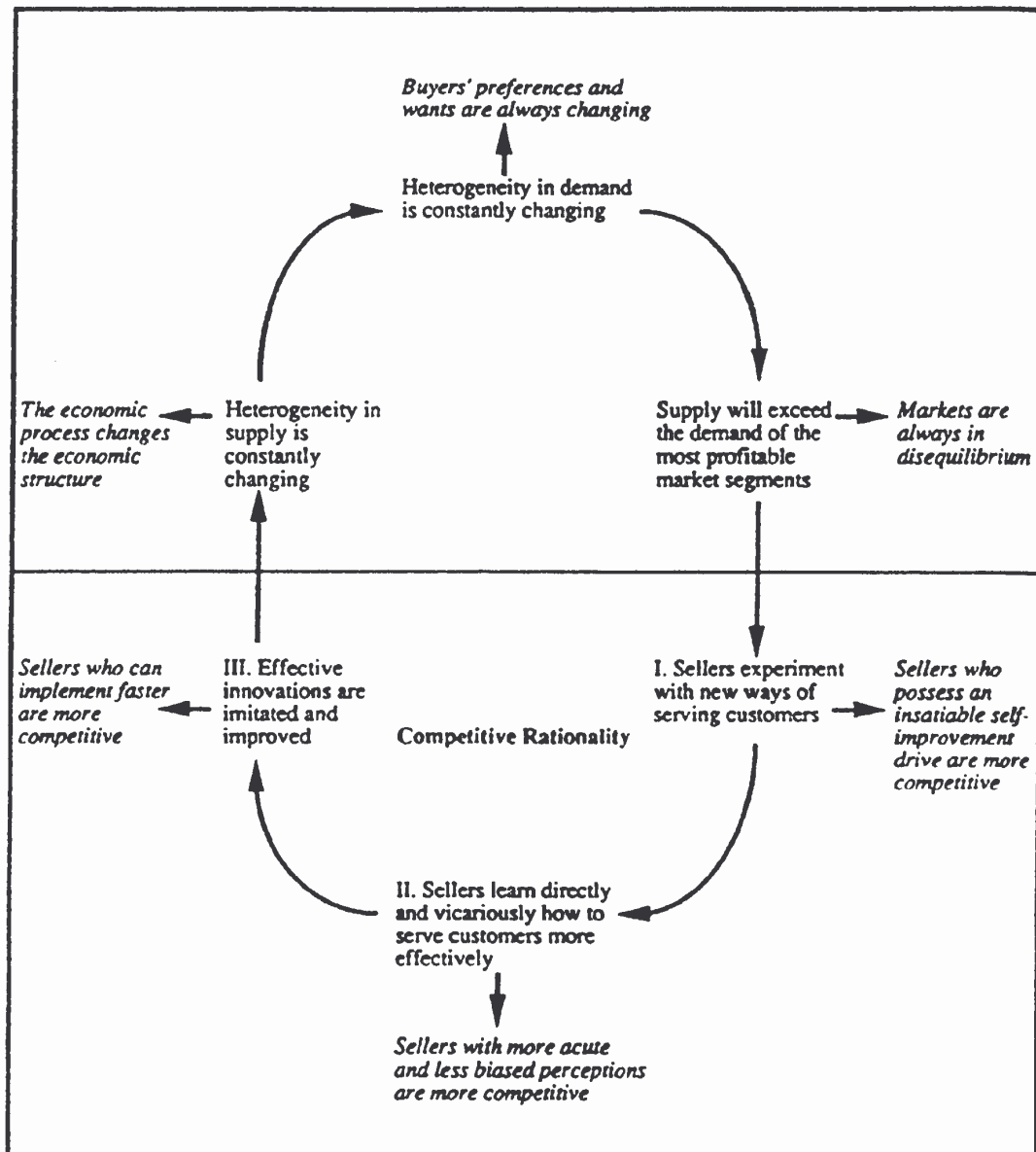
The approach also makes it possible for us to define our production capabilities specifically in terms of potential customer value.

Value in exchange

Consideration of intrinsic value may lead one to qualitative insights about potentially valuable innovation. The linkage between innovation, price and profit depends on other factors.

A very useful model developed (by Dickson, 1992 – see Figure 1) to embrace a variety of models of market evolution makes explicit the varying competitive

FIGURE 1
The Basic Premises, Propositions,
and Corollaries of a Dynamic Theory
of Competitive Rationality^a



^aThe top of the diagram represents macromarket behavior. The bottom of the diagram represents a firm's microprocedural rationality.

Source: Dickson 1992, p. 70

intensity over the cycles and changes extant in markets. What is apparent from this model is the ephemeral character of value in exchange. The pressure for producers to innovate (or imitate) is unremitting. However, it may not appear to be so if output is defined substantially in terms of ‘core’ good or service rather than the full bundle of characteristics advocated here.

This pressure implies that marketing outcomes are more reliant on strategic decisions, such as innovation, market development or new market entry, than on tactical decisions such as specific promotional campaigns. What this, in turn, leads to is close consideration of the role of individual producing entities in the marketing system, or ‘value system’, of a product.

Here, marketing theory has some evolution to undergo.

Marketing optimism

The central proposition in marketing is that long-run profit will be maximised when producers identify customer preferences and meet them. This is plainly hyperbole but has some serious problems beyond that. Chief among them are the implicit assumptions that ‘customers’ are readily defined for a producer and that (relevant) output characteristics are under control. The implicit context required for the proposition to achieve validity is one of marketing system dominance by a producer with a branded, differentiable offer which is ideally predominantly a good rather than a service. This is a comfortable place for a marketing manager but is not very common, especially in agriculture.

The most efficient way to define the management context of a producer and to contemplate the meaning of the core strategic thrust of marketing, customer orientation, is to review relevant marketing systems from the final customer’s perspective. In the terms presented earlier, this involves reviewing the sequence of outputs, from market level to market level, to identify which agent(s) in the marketing system are contributing what characteristics. That is, who is creating value for customers at which level? (See Wright, 1996.)

Intrinsic value converts into value in exchange, if at all, for those producers who are providing characteristics on which customers base their choice amongst substitutes. The level in a marketing system at which a producer's customers function is defined by the limit to value provision. Often the final customer is not a customer for producers towards the 'top' of a marketing system. If the choice criteria characteristics (or 'determinant attributes') are not under producer control (eg, fresh food prices at farm gate), 'customer orientation' is operationally meaningless.

The stability of choice criteria, their role in meeting output preferences or consumption process preferences and customer sensitivity to them (eg, price elasticity with respect to them) are questions of fact and, in the absence of knowledge about them, the valid identification of customers by market level is difficult and subsequent marketing effort therefore misguided potentially. The occasional admonition made to farmers to contemplate the wants of final level consumers is an extreme instance of analytical innocence in this domain.

A proposed strategic marketing framework

The preceding discussion leads to a number of conclusions of relevance to marketing decision makers. They imply a sequence of investigations and monitoring processes which are essential to competent marketing decision making. The first is that the information demands on managers are considerable. Marketing emphasises the core role of the customer in defining the value of organisational output. Unless the direct and indirect needs of customers (for output characteristics and consumption process fit) are known, it is not possible reliably to anticipate and optimise output value for customers. Nor is it possible thoroughly to specify substitutes and competitors.

Unless this analysis also identifies the market level, or levels, at which customers of a given producer exist, profit maximisation is not possible. Characteristics will be provided which are not valued in exchange and the possibility of providing some that will be will pass unrecognised. The experience of sponsors of GMO technology, such as Monsanto, is testimony to the dangers associated with failing

to detect the existence of new customers at new levels in the system; in this case, final level customers for farm output who are sensitive to aspects of Monsanto inputs.

The relevance of a market or customer orientation needs to be defined by contemplating the extent of control over, and realised revenue effects of, manipulations to relevant output characteristics. There are compelling reasons, known to all agricultural economists, as to why a customer orientation may well not apply to individual farmers. Note, I have specified, incidentally, what customer orientation means. It does not mean responding to relative prices and price elasticities. It means researching intrinsic value and its likely manifestation in exchange value in the competitive context and modifying output characteristics to optimise value in exchange. Relative prices and price elasticities are consequences of output decisions that define substitutability.

These are strategic issues inasmuch as tactical activity is most unlikely to counter their implications. They are strategic, also, in the sense that a strategic response may be appropriate. That is, one type of question that can be addressed following such analyses relates to possibilities for change to the role of a producer in the system such that performance may be enhanced by capturing a greater or more controlled role.

To express this point more prosaically, the payoffs to tactical effort, to the implementation of strategy, are bounded by the quality, the relevance to the operating environment, of strategy. The first step for any manager is to define the determinants of performance for their organisation and, in the case of marketing management, define customers and the organisation's capacity to meet their wants profitably by adapting output to those wants.

If this analytical effort leads to answers that imply that a customer orientation is fruitless, either the manager needs to modify the organisation's role in the marketing system or ignore customers, from a strategic management point of view, and focus on the controlled, active determinants of organisation performance.

The proper conceptualisation of output is central to strategic analysis.

The case of promotion

Very little research has appeared related to marketing management by individual farmers. The greatest amount of activity has been to do with promotion of agricultural commodities. This has normally been industry wide: generic promotion of dairy products or red meat, for example.

This industry-wide marketing activity is uncommon beyond agriculture. It is typically tactical effort. It is not meaningful to strive to analyse its effects unless the activity is properly specified. This means relating the message(s) involved to customer wants. Promotion is about information; whether it is persuasive depends on the relevance and credibility of the information.

For many customers food is a relatively 'involving' product category. This is because it is ingested and because many of its salient attributes are experience or credence goods. The perceived risk of error in food choice is higher than for many mundane items of everyday consumption. Search effort will tend to be higher in this context. Promotion may have high value.

Whether promotion is effective will depend on the salience of the information it contains to the sources of perceived risk. This mocks questions such as 'what are the returns to promotion?' Promotion is output. Its value depends on its satisfaction of wants that are active. These wants are for (credible) information. As well, being information, it modifies its target customers whenever it is effective; they learn. As noted previously, these wants are typically ephemeral. The response surface for promotional expenditure, even for the same information, is dynamic over exposures to treatment.

If there are no active wants for information, promotion is unlikely to be perceived. An assumption that sometimes seems to rest behind research into promotion of agricultural commodities (and many others), that customers persistently attend to promotional activity, has no empirical basis. The most successful model of human

behaviour in economics, psychology and marketing continues to be that which assumes that behaviour is teleological. This includes perceiving messages.

Research into agricultural product promotion has historically reflected an approach to marketing which takes some core of output as a given, well-defined component about which 'marketing services' are deployed. This is, as it happens, closer to mainstream marketing practice than many marketers might care to admit.

Nevertheless, it is an approach which fails to capitalise on the principal insight from marketing: given contestability in a marketing system, the value of all productive effort is grounded in the value placed on it by the final customer. Constructs and models that assist our understanding of the origins of product value are to be preferred.

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