Testing the Market Forces Macroeconomic Model: Establishing the Importance of Entrepreneurship in Smaller Economies

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SALISES  Tenth Annual Conference , Cave Hill Campus, Barbados March 25 – 27, 2009.

Abstract:
The theoretical model developed earlier argues that a “utility-value” paradigm establishes the market forces macroeconomic (MFM) model. It is an economic counterpoint to the Utility Theory approach used to establish demand curve configurations and to explain market place activity. The MFM model develops a four sector description of market behaviour and argues the need for entrepreneurial production if an economy, particularly a smaller economy is to survive and grow.

The data establishes a general statement as to product expectation and the corresponding perception of worth. These define economic behavior and the correlation of these factors support the paradigm thus confirming the market place is explained as an expression of consumer behaviour.

Keywords: Market Forces, Utility-Value Paradigm, Prospect Theory, Managed Economy, Dual Economy, Behavioural Economics, Cognitive Decision-making, Buying Behaviour, Entrepreneurial Economic, Entrepreneurship, Innovation.

Introduction

The concepts of demand and consumption theory are arguably vested in utility theory that, when tested from a marketing perspective, do not withstand serious scrutiny. The recent introduction of “behavioural economics” is taken as a signal that conventional techniques based on assumptive constructs are subject to improvement. Further, the literature is divided and offers no little criticism of the application of utility and expectancy theories, probability theory, marginalism and such in regard to economic behavior and researchers have found them to be problematic at best with the market place, (Harrison et al, 2003). The introduction of behavioural economics as “the new interdisciplinary study of the interface…. between economics and psychology,” (Lea, 2001), does little to move the discipline toward a realistic tableau that better defines individual economic behaviour. The effort by Kahneman and Tversky (1979) using a single psychological variable is considered a seminal work toward resolving the ambiguities often found in prior research. But the problem is it little matters what variable is singled out for improvement of economic theory there is no one measure: preference, utility, satisfaction, desire and so on, that can effectively represent individual economic behaviour, (Foxall, 2005).

The Role of Human Behaviour and Buying Behaviour

Economic models of behaviour have a constrained allowance for the role of the individual. The marketing discipline argues that human decision-making process is not a one-dimension act but is seamed with emotions, motives, experiences as well as the cognitive dimensions of “rationality.” The assumption that a chosen single mechanism, touched by a hint of behaviour reflects the whole of human action in the acquisition of goods and services is not a tenable concept. Any account of human behaviour must
include measurement of the full scale of the human experience in choice behaviour, (Simon, 1983). “Numerous studies into human choice establish the importance of emotion and attention to the structure of individual preferences, beliefs (expectations), and rationality.”

People do not process information in a purely cognitive manner but also include emotional factors. In fact Hanson (2000) argues that “consumers do not use their cognitive and affective skills independently, rather they affect each other.” Contrary to the utilitarian desire for an ordered, rational behaviour, humans simply do not conform to that model and the expectation that economic behaviour is defined by a single postulate is not realistic. It therefore holds that no amount of tinkering or the “testing” of normative economic models will describe the market and individual behaviour in it.

Consumer Decision-Making

An individual is compelled by needs, wants and desires to improve her or his “state of satisfaction”, moderated by internal and exogenous variables such as economics, timeliness, involvement level and so on. Generically the purchasing process is expressed in five steps: (a) problem recognition, (b) search, (c) alternative evaluation, (d) choice and (e) post purchase behaviour. Within this progression Hansen (2003) states that four elements have an effect on the final buying decision. They are: price, quality, involvement and emotion; all of which are consistent with most descriptive models of consumer decision-making. There is a general overlap of personal, social and psychological variables with no clear indication that a single item is accountable as an expression of economic behaviour. Zeithaml (1988) found there was a defining relationship between price, perception and quality that establishes a consistency for buyers.

Having introduced the concepts of perception as to price or value and the expectation of some performance or utility in the buying decision, further research confirms the point. Consumer decision making is centered on two very specific contexts one in which the consumer makes a judgment or is motivated to do so on the basis of a functional, physical dimension and a second comparative dimension that conveys a notion of the value of, or compensation for the first. In the former case the buyer looks for a tangible item, one that induces or is expected to provide satisfaction of a need as in an automobile for transport, cologne for pleasant odor and social acceptance or a fine dining experience that may address both of those needs. The value one ascribes to these experiences is dependent on what must be given up or paid for. If there is a minimal expectation of physical satisfaction or utility, then the value is minimal or reduced to the level of a pure monetary exchange. If the product offers a number of advantages and/or benefits of worth to the purchaser then he or she accepts the consequence of a higher price or value that can go beyond a specific monetary amount or cost.

The decision criteria and motivations in purchasing a product or service are then seen to center on two aspects: a physical characterization that implies a promise of performance and a dimension that addresses the perceived value of the item. In the first issue the consumer has an expectation the product has the ability to function as expected to do. Will it fit comfortably if it is a dress? Will it shape steel if it is a manufacturing tool? On the one hand there is the need for an item to perform a simple utility function. On the other hand there may be a desire that the item embodies a number of features and benefits that supersede a single, parsimonious function.

The second criterion is the acknowledgement of the investment that has been made in creating the product or service and the acceptance by the buyer of having to compensate for that worth; that is to pay for the product or service. At one extreme one
can appreciate the desire to pay as little as possible, the lowest possible cost to the buyer for an item. Commensurately there is the realization that an item may embody a value that is beyond the cost level. In this there is the anticipation of accommodating needs beyond the physical plain to the more intangible level where value is a purely subjective perception, matched by a willingness to pay for that prospect at a level well beyond cost. To conclude then, there is an expectation as to a product or service in what it will provide to the buyer even as there is a perception as to the worth or value of the transaction.

Establishing the Hypotheses

The "irrational behaviour" that is noted in Kahneman and Tversky’s (1992) Prospect Theory is perceived as consumer activity that is inconsistent with their position on economic behaviour. These elements, including cues in decision making, (incomplete knowledge) judgment by heuristics (perceptions, motives, experiences) and framing, (different choices-different circumstances) are regarded as anomalies to what otherwise should be a prescriptive theory of buying behaviour. But rather than being irregularities these items are more consistent with marketing theory and as such are to be included in an accounting of consumer behaviour.

Consequently the hypotheses of this research do in fact include this theme. The first hypothesis posits the final decision criteria in product/service selection, following on the exposures to advertising, promotions, word of mouth and social communications that encourage the use of one product over another settles on two aspects; the expectations an individual has about that product/service and secondly, the perception of worth applied to the acquisition. Thus the first hypothesis is:

\[ H_1: \text{ Individual economic behaviour is defined by two variables; one representing the physical aspects of a product/service and one that defines its worth. } \]

The second hypothesis expands on the variables in the first hypothesis and posits:

\[ H_{2a}: \text{ The expectation an individual has of a product/service performance is not discrete but rather is comprised of a range from some minimal expectation to a multifaceted expectation of benefits and performance. } \]

\[ H_{2b}: \text{ The perception an individual has of a product/service worth is not set nor purely numeric but varies from real cost to a discernment of value, however that might be defined. } \]

The third hypothesis holds there is a relationship between expectations and perceptions inclusive of the gradient within each that confirms the buying behaviour economic paradigm.

\[ H_3: \text{ An individual’s perception of worth, taken as a range from parsimonious to appreciated value for a product/service is directly associated with the expectation of its performance from a purely utilitarian or utility level to one of multiple benefits. } \]
Research Method

The initial research effort developed a short eleven point questionnaire that was administered to a selection of thirty-nine staff, faculty and students at the Thompson Rivers University in Canada. The questionnaire used a general approach that included the objectives intrinsic to the stated hypotheses. (See Appendix for the questionnaire). Data was then processed using SPSS to establish frequencies and correlation output. The research is taken as a preliminary examination and the expectation is that further research will refine the inquiry and sharpen the results.

The terms in the research are couched more in a consumer behaviour context. Unlike the word ‘utility’ used as the abstract concept in economics that indicates how much ‘happiness’ a person might have from buying and owning a thing, utility in this discussion is a functional term. In addition to or service may be comprised of a number of utility functions in the form of benefits that would represent a higher order of performance to the buyer. Thus a product or service can be described as having a single worth or utility or any number of attributes, each of which ostensibly provides an advantage or number of benefits to the buyer.

The concept of value requires some discussion. It suffers a number of uses, not all of them consonant or comparable. The economist looks on value in providing an economic statement as in ‘the value of an asset deriving from its ability to generate income.’ Schumpeter (1908) states “That it is society as a whole which sets values on things …. It is evidently true, moreover, that form utility, the paper subscribes to the fact that marketing creates and provides further utility (usefulness or performance value) for the consumer. Utility is the attribute in an item that makes it capable of satisfying wants. At the opposite end of the spectrum a product, if value means "exchange-value," it is, of course, not fixed by any single individual, but only by the action of all.”

Value is found in the association of benefits and costs. In this paper it is an expression of the investment a buyer makes in time, effort and money in order to obtain a particular bundle of benefits. It is the sum of all expectations an individual has about an item and goes beyond the notion of pure monetary considerations.

Thus there are two principal dimensions that summate the motivations to purchase goods and service in the exercise of economic behaviour, a utility – benefits expression and a cost – value expression. These are the consequence of decisions arrived at through, and inclusive of personal, psychological and social issues. They are also the consequence of market influences, perceptions and experiences of the buyer. They constitute a paradigm that identifies consumer choice and forms the basis for the behavioural economic model.

Results and Findings

The research shows that individuals in their search for a product/service are directed by a number of expectations and perceptions. These were organized within the questionnaire as to develop information supporting, or not, the individual buying behaviour expressed in the theoretical paper.

As to the first hypothesis respondents were asked to declare the two most important factors guiding their selection of a product or service. The question was posed following seven prior questions that exposed them to a number of concepts and statements that comprised the general list of criteria that might constitute selection criteria.
Table 1.0 Primary Selection Criterion

<table>
<thead>
<tr>
<th>Item</th>
<th>Weighted Rank*</th>
<th>First Importance</th>
<th>Second Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Performance</td>
<td>1</td>
<td>54.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Product Cost</td>
<td>2</td>
<td>8.3%</td>
<td>58.3%</td>
</tr>
<tr>
<td>Advertised Special</td>
<td>4</td>
<td>4.2%</td>
<td></td>
</tr>
<tr>
<td>Brand Name</td>
<td></td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>Product on Sale</td>
<td></td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>Product Availability</td>
<td></td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>Perceived Value of Product</td>
<td>3</td>
<td>33.3%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

*Based on summation of 1st and 2nd Importance.

The results show product expectations and product cost almost equal in rank with the additional declaration of value in a product as a key selection criteria. This clearly establishes the two variable paradigm of the first hypothesis and verifies the existence of a non-cost parameter in the selection decision.

The concept of variation within the two principle criteria that individuals employ in making a selection is also established in the research. Figure 1.0 was developed from a scrambled arrangement of boxes and respondents were asked to join the most likely response to the each box that contained a cost – value statement. The results indicate the linkage between product expectations and value perceptions. As was anticipated the concept of a high value is associated with multiple benefits and at the other end of the scale low prices or cost are tied to bare bones (utility) performance.

Figure 1.0 Criterion Variation

Almost two-thirds of respondents (64.7%) conjoined value with multiple benefits. One third associated high prices with multiple benefits (33.3%) and they
generally endorsed the association (54.2%) with many features. Commensurately low prices or **costs** were associated with elementary performance, taken to be a basic **utility**.

The third hypothesis is generally established from the data output in Figure 2.0 using a simple McQuitty (1966) linkage analysis.

**Figure 2.0 McQuitty Linkage Analysis of Criteria**

**Cluster One**

- **Rank Label/Brand**
  - **Balance LowCost & Quality**
    - **Perception Of Value (HI)**
      - **Only Brand & Quality Count**
        - **Only Basic Performance Counts**
          - **Has to be A Good Deal**

**Cluster Two**

- **Motivated by Performance**
  - **Perception of Value (LI)**
    - **Number of Benefits**

The data was analyzed using Spearman correlations and only the results at the 0.05 and less significance level were included in Figure 2.0. Cluster One establishes a general relationship between value perception and expectation of product performance. A negative correlation (-.648) between Brand or Label identification and the selection based on low cost balance tends to confirm the hypothesis. This is again established with the negative association (-.446) between the perception of value as a requirement and the criteria that it has to be a good deal. Cluster Two furthers the hypothesis with positive correlation between value and benefits and performance, (.454 & .413).
The Market Forces Model

The strong showing of correlations in the study between the two constructs of utility – benefits and cost – value empirically confirms the model taken from the theoretical presentations in previous papers, Figure 3.0 below. The model finds its rationale in the economic behaviour of individuals who operate over a spectrum of criteria contained within the paradigm construct.

Figure 3.0 Market Forces Model

The Model presents four quadrants each of which occupy a definable sector of the economy in the context of marketing concepts. The initiation of a new product is seen to occur in response to the needs/wants/desires of some portion of a population for newer goods that are either technologically or socially innovative. Here we find the genesis of all business and economic activity. It reflects an alpha economy where the demand is for goods and services that are perceived as having significant value and command a strong price position.

On the other hand the beta economy sector is taken at a product demand position where there are now competitors, all vying for a market share with similar products, little discernable differentiation and relying on competitive pricing. In most cases the strategy is to maintain price leadership through cost reductions and smaller margins; hopeful of volume sales to generate adequate profit. Failure to maintain a position in this sector leads directly to sales decline and possible failure.

The beta sector is governed by economies of scale and productivity issues. Products in this sector take on the nature of a commodity where the determinant of purchase is generally on price. The low cost leader in any market gains competitive advantage from being able to produce at the lowest cost. Factories are built and maintained, labor is recruited and trained to deliver the lowest possible costs of production; ‘cost advantage’ is the focus. Costs are shaved from every element in the
value chain. Products tend to be 'no frills.' However, low cost does not always lead to low price. Producers could price at competitive parity, exploiting the benefits of a bigger margin than competitors. Some organization, such as Toyota, are very good not only at producing high quality autos at a low price, but have the brand and marketing skills to use a premium pricing policy.

The business requirement is to constantly innovate and improve the product/service mix. In the case of small firms in small economies the need to improve is vital in the global marketplace. Stronger and larger firms are easily able to replace their product mix and drive them out of business.

**Innovation and Product Recycling in Smaller Economies**

Goods and services are created for markets in response to needs for something new or improved. It may be that innovation is introduced into existing products that reposition them in the market. A software program is modified to include an additional function and is sold as an improved item. A machine has a unique attachment that improves its output and is sold as a new and improved model. In each case the intent is to provide added value and to move from the less profitable, highly competitive cost-utility quadrant to the benefit-value section where higher prices can be charged. In due course, except for certain branded and/or commodity type products such as Tide soap and despite all improvements, the market rejects the product and it declines or dies. The activity of marginally changing products in an effort to improve them is referred to as incremental innovation. In due course the incrementally adjusted product is superseded by radical innovation and it declines as well. General Motors falls into this category. The Barbados sugar industry, some segments of the tourism industry and some manufacturing operations have passed this way.

The smaller economies, Barbados in particular, do not enjoy the cumulative effect of the oscillation of technology. The compensating activity in developed nations, born from the technologies of the Information Age, biology, electronics, medicine and nanotechnology to name a few, compensated the prior losses as declining industries cut costs and improved productivity. These new, innovative companies redefined the economy and created a new class of labor, the knowledge worker. Smaller economies tend to retain older, less technologically driven firms in such industries as food processing, furniture, clothing and household goods. For the most part these are beta quadrant products that can only survive through cost-price leadership or, as most often is the case, some form of governmental protection. This is most probably an important stop-gap, since opening up the country to free trade would result in domestic plant closings and economic loss. In the long haul, unless governmental policies stimulate innovation and niche strategies the smaller economies will face stagnation, perhaps decline. In the face of mounting national indebtedness in foreign currency this too is untenable as a policy.

Larger enterprises, particularly those with commodity type products are able to globalize their reach and become even larger, at least for a period of time. The expansion of soft drink, fast-food chains, and other consumer goods is a mark of the effort to extend the life of products about to reach their mortality. Unless innovation is applied to these items, thus increasing their value, they will in time decline.

**Importance to Smaller Economies**

This poses a looming threat to smaller economies. If they are to survive as independent states they need to re-appraise their policies and strategies. They must innovate or die, both with existing larger firms and in the encouragement of new entrepreneurial firms. There is evidence that for smaller, lesser developed economies
the larger firms must also succeed in what is termed a Schumpeter Mark II or managed economy. Van Stel et al (2004) noted in their study of the need for entrepreneurship and innovation as economic boosters that “The result that poorer countries fail to benefit from entrepreneurial activity does not imply that entrepreneurship should be discouraged in these countries. Instead, it may be an indication that there are not enough larger companies present in these countries benefiting from economies of scale and scope.”

Here then is an added rationale to encourage existing firms within a smaller economy to innovate and survive, since they often act as incubators if not stimulators of the entrepreneurial process.

Conclusion

Barbados industry is on the edge. There is an apparent shortfall on innovativeness and entrepreneurship within the industry, only eight percent of firms have an R & D department. The recent study of Barbados manufacturing clearly shows that existing firms do not pursue innovation and leadership in their sectors. They are locked into the beta phase of the economy with the real prospect of experiencing a decline in their position and real threats from external companies within the global economy.

Nor is there much evident encouragement by government and policy makers to further success in manufacturing. If it is to survive and grow, building the economy and serving as part of the support system for the further development of entrepreneurship in the country government and industry must work together to stimulate their survival, growth and competitiveness.

If Barbados and smaller economies are to survive the leadership for this campaign will not likely come from the industry itself. While it is very important manufacturers develop improved policies for their manufacturing operations and that they increase own R&D activities there is little indication they will do so. Therefore it becomes important that government step in and it begins to encourage management to take the steps needed to assure survival.

There are a number of campaigns the industry and government could encourage, including import replacement and joint venture manufacturing. Both of these strategies have been and are being pursued by other nations to encourage domestic economic survival and growth.

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