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An Evaluation of the Comparative Advantage Theory of Competition

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I.

In a recent issue of the *Journal of Marketing*, Shelby Hunt and Robert Morgan outline a number of strategy oriented works in the field of marketing, and argue that this work is evolving toward a new theory of competition' (1995, 1). They argue that this new theory of competition `explains key macro and micro phenomena better than does neoclassical theory' (1995, 1). By neoclassical theory, they `mean the theory of perfect competition' (1995, 1). They argue that the comparative advantage theory of competition explains two phenomena, i) `why economies premised on competition are far superior to command economies in terms of the quantity, quality, and innovativeness of goods and services produced,' and ii) `the micro phenomenon of firm diversity' (1995, 2), by postulating a link between the firm's comparative advantage of resources and its ability to create a competitive advantage in the marketplace.

This paper deals with two issues concerning Hunt and Morgan's argument. Firstly, it questions the validity of their claim that the comparative advantage theory of competition provides a better explanation of competition than the neoclassical theory of perfect competition. Secondly, it addresses the implication in Hunt and Morgan's paper that their comparative advantage theory has superior explanatory power to existing theories of competition.

II.

Hunt and Morgan argue that the comparative advantage theory provides a better explanation of competition than does the theory of perfect competition. They state that:

> The comparative advantage theory of competition performs much better than neoclassical theory in explaining why market-based economies are more bountiful and innovative and have higher quality goods and services than do command economies. It also explains better why market-based economies exhibit a rich diversity of firms, even within the same industry (1995, 10).

There is a serious methodological flaw in this argument. It is the following. The neoclassical theory of the firm has never purported to be an explanation of how firms operate; it is a theory which seeks to *predict* price and quantity outcomes on markets

under certain conditions. The notion that prediction and explanation are essentially the same logical form is known as the symmetry thesis, and it was first put forward by Hempel and Oppenheim in 1948. However, examples abound to show why prediction implies only correlation between, not causal relation between, variables.

The concern of neoclassical economists is principally with the generation of successful predictors, not with successful explanations. Thus, their models can be highly abstract and still be deemed useful or successful. This notion is at the core of Friedman's methodology of positive economics:

> A meaningful scientific hypothesis or theory typically asserts that certain forces are, and other forces are not, important in understanding a particular class of phenomena. It is frequently convenient to present such a hypothesis by stating that the phenomena it is required to predict behave in a world of observations as if they occurred in a hypothetical and highly simplified world containing only the forces the hypothesis asserts to be important (1984, 236).

So the theory of perfect competition may predict certain events without explaining them, and still be considered a successful theory by neoclassical economists. The neoclassical theory of the firm is an acceptable theory if it results in verifiable predictions. The neoclassical theory of the firm does indeed result in verifiable predictions, and is therefore acceptable. However, while the neoclassical theory has produced a number of important verifiable predictions, `the theory is as frequently contradicted as confirmed by casual evidence' (Blaug 1992, 15 1). So, had Hunt and Morgan judged the neoclassical theory of perfect competition by its own methodological standard of successful prediction, it would have been reasonable for them to conclude that it is not a very successful theory. However, in order to prove their claim that the comparative advantage theory is a better theory than the neoclassical theory of perfect competition, Hunt and Morgan would have to engage in meta-methodological appraisal. They would have to show that the methodology underlying their new theory of competition is a superior methodology to the one underlying neoclassical economics. Their argument would then be that a theory which explains is preferable to a theory which predicts.

Hunt and Morgan also make the claim that `we develop the foundations for a rival to perfect competition theory - we do not just critique it' (1995, 2). How can it be a rival to

the theory of perfect competition when it is derived from different methodological principles? Only a theory with greater predictive power can constitute a rival to the theory of perfect competition. This reiterates the point made above which is that, in order to carry any weight, Hunt and Morgan's argument needs to begin from the methodological level. They need to show that their methodology is superior to that of neoclassical economics.

There are other significant differences between the two theories which render them incommensurable. The core of both theories is an analysis of competition, but their concept of competition differs. In neoclassical economics, competition is treated as a state. Concepts of equilibrium have meaning within this context and neoclassical economists focus on how an industry moves from one equilibrium to another. Hunt and Morgan, on the other hand, treat competition as a process in a way that is similar to the Austrian school in economics. In this context, concepts of equilibrium have little meaning. The two theories have very different conceptual, as well as methodological, starting points. These conceptual differences have to be addressed if the comparative advantage theory is to be proved superior to the neoclassical theory of perfect competition.

III.

Hunt and Morgan imply that a successful theory is one with greater explanatory power than its predecessors. With regard to their own theory, they state `each premise is offered as a proposition that can and should be subjected to empirical testing' (1995, 5). Yet, how strong a test is it of the comparative advantage theory to compare it to a theory which, it has long since been conceded, does not produce an explanation for firm behaviour? A stronger and more persuasive test would have been to compare the comparative advantage theory to more recent theories whose goal it is to explain the process of competition. To this end, this section compares the comparative advantage theory to some of the work in industrial economics.

Hunt and Morgan outline the following as being the underlying assumptions of the comparative advantage theory:

1. `consumers tastes and preferences... not only differ greatly as to desired product features and characteristics, but they are always changing' (1995, 5).

2. `consumers have imperfect information concerning products that might match their tastes and preferences, and obtaining such information is often costly in terms of both time and money' (1995, 5/6).

3. `humans are motivated by constrained self-interest seeking' (1995, 6).

4. `the firm's primary objective is superior financial performance... which it pursues under conditions of imperfect (and often costly to obtain) information about customers and competitors' (1995, 6).

5. `resources are the tangible and intangible entities available to the firm that enable it to produce efficiently and/or effectively a market offering that has some value for some market segment or segments' (1995, 6).

6. `resources are both significantly heterogenous across firms and imperfectly mobile'(1995, 7).

Hunt and Morgan concede that these premises or assumptions `have been discussed by others at numerous times in many places' (1995, 13). However, they argue that their paper `is the first to place them into a cohesive theory' (1995, 13). These six assumptions are used to derive the following fundamental or core proposition:

> A comparative advantage in resources exists when a firm's resource assortment enables it to produce a market offering that, relative to extant offerings by competitors, (1) is perceived by some market segments to have superior value and/or (2) can be produced at lower costs (1995, 7).

In other words, a firm will combine its resources in such a way as to attempt to produce a higher quality or a lower cost good or service than its competitors. This `comparative advantage in resources' generates a competitive advantage for the firm, which in turn leads to its superior financial performance. In addition, the comparative advantage leads to `superior quality, efficiency, and innovation' (1995, 9). Hunt and Morgan argue on these grounds that `the comparative advantage of resources' gives a powerful explanation for i. the relative abundance to market-based economies and, ii. firm diversity.

Hunt and Morgan's explanation for the relative abundance of market-based economies is the following:

> Comparative advantage theory straightforwardly explains why market-based economies are more innovative, whereas in command economies there are no mechanisms for automatically rewarding innovation, rewards in market-based economies flow to firms and individuals that develop innovative processes and products (1995, 8).

The notion that entrepreneurs require potential excess rewards in order to persuade them to take on the risk of innovation, has been investigated by economists for quite some time. It is found as far back as Cantillon (1755), in Schumpeter (1934), and more recently in Kirzner (1973). In addition, several economists have explored the extent to which government funding and support of research and development can generate a greater degree of innovation than private funding, for example, Nelson (1982); Mansfield (1983); Griliches (1986). These studies point to the conclusion that government funding of research and development does not provide a reward system conducive to the generation of innovation. Thus, Hunt and Morgan's explanation cannot be considered a new explanation for the relatively greater level of innovation among market-based economies.

Hunt and Morgan also claim that their theory explains firm diversity better than the theory of perfect competition. However, since the theory of perfect competition has the homogeneity of firms as an initial assumption, it cannot, by definition, explain firm diversity. Hunt and Morgan put forward eight explanations for firm diversity based upon the concept of `the comparative advantage of resources.' Each of these explanations is outlined below, and is compared to explanations for firm diversity put forward by models of industrial economics.

Explanation One:

> Because universal opportunism is not assumed, different firm sizes and scopes can be explained on the basis that some firms develop relationship with suppliers and/or customers that they can trust not to exploit them (1995, 9).

The fact that firms differ in size due to horizontal and/or vertical relationships is not new to economists and there is a wealth of investigation into the impact on markets of such linkages, beginning with J. S. Mill (1848). For a review of the theory of vertical integration, see Perry (1989). For empirical work on the impact of relationship-specific investments on contracts, see Joskow (1987), Hart and Holmstrom (1987), and Leffler and Rucker (1991).

Explanation Two:

> A firm may decide to conduct an activity in house, rather than contract it out, because it constitutes, or is a part of an assortment of resources that constitutes, a competency (1995, 9).

This explanation for firm diversity sounds strikingly similar to the theory of internalisation associated with Dunning (1988) amongst others. This is the notion that a firm will retain certain of its resources rather than leasing or selling them, when it is strategically advantageous for that firm. Dunning used this process of internalisation to explain why some firms engage in foreign direct investment.

Explanation Three:

> Each firm in an industry is a unique entity in time and space as a result of its history. Because of this unique history in obtaining and deploying resources, each firm will differ from their competitors (1995, 9).

This is a definition of firm diversity, not an explanation. It is tantamount to saying that firms are diverse because they are different. It says nothing about why firms should have different histories, and comes close to being a tautology. It is reminiscent of Knight's (1933) explanation for the diversity of firms as being due to `personality and historical accident rather than intelligible general principles'(quoted in Auerbach 1988, 90).

Explanation Four:

> Different assortments of resources may be equally efficient or effective in producing the same value for some market segments. These different assortments, therefore, lead to firms of varying size and scope (1995, 9).

The question of how firms combine inputs within the production function has been investigated thoroughly by economists in their development of theories on, for example, economies of scale, and organizational forms[1].

Explanation Five:

> Because of heterogenous demand, servicing different market segments will likely lead to firms in the same industry with different sizes and scopes, for example, "niche" marketers (1995, 9).

The notion that industries, in the presence of product differentiation, are in fact made up of market segments has not escaped industrial economists. Krouse (1990) describes the early models of product differentiation:

> The earliest attempts at developing a theory of product differentiation and variety treated different variations of `a good' as if they were different goods. It was then a short step to deal with sellers as isolated monopolists and leave systematic consideration of product rivalry outside the analysis (1990, 121).

This approach follows in the tradition of Robinson (1933), who sought to prove that non-perfect competition is inefficient and results in social loss. However, economic models of product differentiation have been greatly influenced by Hotelling's spatial models (1929), which reintroduce product rivalry in the face of geographic differentiation between goods. A classic example of this type of investigation into market segmentation is Schmalensee's (1978) analysis of the ready-to-eat breakfast cereal industry in the US.

Explanation Six:

[1]Theories of economies of scale began with Marshall (1920). Hay and Morris (1991) provide a comprehensive review of the development of the concept in more recent times. Auerbach (1988) traces the development of theories of organizational form in industrial economics.

> Some individual resources produce comparative advantage for only certain firms, even though their competitors service the same market segments. This is because, as discussed, it often is an assortment of interconnected resources that produce such advantages as distinct competencies (1995, 9).

This is a corollary of assumption 4 above, and the same comments apply.

Explanation Seven:

> If one or more firms servicing some market segments have a comparative advantage in resources that competitors cannot imitate, find substitutes for, or leapfrog with an entirely new resource, then these circumstances will produce diverse firms within the same industry (1995, 9).

As with assumption 3 above, this is simply a description of, as distinct from an explanation of, firm diversity. It is self-evident that if some firms have resources that other firms in their industry do not have, then those firms will produce products that are in some way differentiated from those of their competitors. An explanation needs to examine why certain firms have certain resources for which their competitors are unable to imitate or find substitutes.

Explanation Eight:

> The mixture of firms in an industry changes because of both changes in consumer preferences and the continuing search by all firms for a comparative advantage in resources that will yield a position of competitive advantage in the marketplace (1995, 9).

This final statement is far too vague to be considered a useful explanation for firm diversity. But what exactly is the nature of a useful explanation? There are, broadly speaking, two schools of thought. Those in the Hempel and Oppenheim (1948) tradition argue that, for a statement to be held as a valid explanation, the following rules must be obeyed:

i. the explanation must be a valid deductive argument
ii. the explanans must contain at least one general law

iii. the explanans must have empirical content.

The problem for the comparative advantage theory is the second rule. The theory does not appear to contain any general laws, despite the fact that Hunt and Morgan (1995, 13) argue that its advantage over previous work on competition is its generality. By their own admission, the general proposition of the theory fails to hold universally:

> A comparative advantage in resources, then, can translate into a position of competitive advantage in the marketplace and superior financial performance - but not necessarily (1995, 7).

Their propositions are also not lawlike, because they cannot support counterfactuals. In other words, the theory cannot tell us 'what happens if'. It cannot say what happens if the firm has a comparative advantage in resources. Note, however, that the lack of universal laws in the comparative advantage theory does not make it invalid, it just makes it non-general. There are other views which maintain that universal laws are not required in explanations. For example, Salmon's `ontic conception' holds that `explanatory knowledge is knowledge of the causal mechanisms, and mechanisms of other types perhaps, that produce the phenomena with which we are concerned' (1989, 128). One could argue that the comparative advantage theory does provide causal mechanisms, and to that extent it goes further than being mere description. However, in order to be a useful explanation under Salmon's definition, Hunt and Morgan's theory would have to explain the causal mechanisms at work when a comparative advantage in resources fails to produce a competitive advantage in the marketplace. They do not outline such causal mechanisms in their paper.

IV.

There are a number of methodological problems in Hunt and Morgan's paper. In the first instance, they are not comparing like with like when they compare the comparative advantage theory to the theory of perfect competition. To be valid, such a comparison requires a comparison of the very different methodologies which underlie the two theories. In addition, they must address the conceptual differences between the two theories. That is, they must consider the different definition of competition which the two theories employ.

A comparison of the comparative advantage theory to potential rivals from the field of industrial economics shows that there is little novelty in the comparative advantage theory. It does not have greater explanatory power than the current theories of industrial economics. Several of Hunt and Morgan's explanations do not go beyond mere description, and some are dangerously close to tautologies. They suggest that the main advantage of their theory over its rivals is its generality. Yet, their theory contains no general laws and explains few causal mechanisms.

Hunt and Morgan argue that a successful theory must have greater explanatory power than its predecessors. In addition, they argue that a theory should contain empirically testable propositions. However, using these criteria to judge the comparative advantage theory of competition shows that this theory does not live up to the methodological claims Hunt and Morgan have made for it.

The comparative advantage theory of competition may have greater explanatory power than existing theories of competition in marketing, but it does not have greater explanatory power than existing theories of competition in industrial economics. Even though Hunt and Morgan adopt a criterion of greater explanatory power, they only use this criterion to compare their theory to a defunct theory from another discipline. They are quite explicit about this:

> The dominant status of perfect competition notwithstanding, there have been numerous critiques of neoclassical theory, ranging from Austrian to evolutionary schools of economics. (Even the works of many industrial organisational economists can be viewed as resulting from a dissatisfaction with neoclassical theory.) Although we acknowledge and appreciate these critiques, we do not overview them (1995, 2).

It is not at all clear why they should stop short of applying their criterion to work from other disciplines which has a similar conceptual and methodological framework as their own. Such egocentrism can surely only serve to undermine the desire within the marketing discipline to find theories with greater explanatory power.

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