

## **STRATEGIC MANAGEMENT AND THE THEORY OF THE FIRM**

*Jan A. Berg-Andreassen\* and Mazhar M. Islam\*\**

### **ABSTRACT**

*Strategic management is practiced today by large segments of corporate U.S. This process is having a profound effect on the firms and their economic adaptations. This new business culture has not yet been accounted for in the way positive economics treat the firm. This paper attempts to evaluate the theoretical implications of strategic management. The paper concludes that rather than steering actual firm behavior away from the neoclassical schema, strategic management endeavors to fulfill most of the assumptions of the neoclassical firm model, i.e., complete knowledge and profit maximization.*

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*JEL Classifications: G21, G20*

### **I. INTRODUCTION**

In contrast to the natural sciences, social scientific theories change as the society modeled change over time. Sometimes completely new theories replace old ones; sometimes theories are only amended or aligned as the object changes. This paper explores the behavior of business, seen in light of the popularity of systematic strategic thinking and planning over the last ten to twenty years.

The questions raised in this paper center around whether the increased emphasis on strategic thinking and behavior has changed the observed outcomes to such a degree that the neoclassical theory of the firm is obsolete and may even be dangerous as a foundation for public decision making. Quite a few business scholars think this is the case and a new approach is necessary.

Business historian A. D. Chandler, in an interview with the now defunct “Audacity” magazine [1] says, i.a., “I think it’s [the history of business] much more useful than most economics; in fact, some of today’s fashions in economics can be rather dangerous” and he goes on to say: “The hegemony of theory and numbers has a lot to do with some of our present difficulties” (*op.cit.* p. 8). Statements along these lines can be still be heard in both academic and business circles. It is not clear from this interview whether Professor Chandler referred to normative business economic theories only, or if he also included industrial policies generated

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\* P.O. Box 1939, Corpus Christi, TX 78427-1939, E-mail: [Jan.Berg-Andreassen@Infrastransgrp.com](mailto:Jan.Berg-Andreassen@Infrastransgrp.com)

\*\* Professor of Finance, Florida A&M University, E-mail: [mmimomin@yahoo.com](mailto:mmimomin@yahoo.com)

by positive theories of the firm. Under any circumstances, “neoclassical” theories and the “equilibrium theorists” do not seem to fare too well in Dr. Chandler’s historical analysis.

As indicated this criticism have been continued and enlarged by others, here it serves only as a catalyst in asking some pertinent questions about the current status of business firm behavior and the economic theory of the firm.

In reality, the issue is whether we are applying a mummified “homo economicus” to our analyses or if our “rational” classical business decision maker is as valid today as it was in the owner-manager era. In the first case, a whole set of new questions automatically surfaces which must be confronted by the total economics community.

## **II. THE MODERN STRATEGIC MANAGEMENT PARADIGM**

Strategic planning and management have been the buzzword for both profit oriented and non-profit organization the last twenty years. Today, even academic organizations exert large amounts of efforts implementing and perfecting carefully crafted strategic plans<sup>1</sup>.

Almost all theories or paradigms on strategic management center around a common procedure that starts with the corporate mission, a statement of goals and objectives, a set of strategies to achieve these goals, and managerial policies on implementation, control and dynamic readjustments. The process is supported by a situation analysis and forecast of the organization’s external and internal environments that delineates the internal strengths and weaknesses of the company in relation to the external threats and opportunities, the SWOT (Strength, Weakness, Opportunities, Threats) analysis.

Although the sophistication of the analyses and procedures vary between firms, the above model has become synonymous with strategic planning and management. In the process of continuous strategic adjustments, the management aspects, i.e., keeping the organization on the “correct” development path, becomes the crucial element for success. A typical strategically managed organization will have detailed plans for each of the four functional areas: Human Resources, Marketing, Finance/Investments and Production. A summary of these functions and the goals and objectives statements might help us better understand the relationship between the modern managed firm and modern economic theory.

### **Goals and Objectives of the Strategic Firm**

The competitive firm has one simple goal, namely to maximize profit or net revenue. The strategic firm (the strategically managed firm) has a set of goals and objectives. These might include increased market shares, or more specifically, attainment of market positions like number one or two, production, sales and inventory goals in addition to profits and shareholders’ wealth maximization. Most of these goals can, in fact, be traced back to owners’ or shareholders’ wealth maximization, i.e., they are strategies rather than objectives. Owners or shareholders wealth is maximized if the value of the firm is maximized. Miller & Modigliani [3] have shown that this can be done by maximizing period net cash flow, i.e., the firm’s receipts from operations minus payments to production factors and gross expenditure on capital equipment. It can easily be shown that for any given investment program, maximizing Return-on-Investment

(ROI) and maximizing the value of the firm are equivalent. Thus maximizing period net revenues (profit) before gross outlays on capital account will secure maximum ROI<sup>2</sup>.

Consequently, finding the optimal investment program and maximizing period profit are now *strategies* consistent with shareholders' wealth maximization rather than independent firm *goals*.

### **Human Resources**

Schuler [5] states that there are five basic functions and activities in modern human resource management (HRM):

- (1) Planning for human resource needs
- (2) Staffing the organization personnel needs
- (3) Appraising and compensating employee behavior
- (4) Improving employees and the working environment
- (5) Establishing and maintaining effective working relationships

For all its concerns with the institutional and legal constraints facing today's human resource manager, the survival of the firm and profitability are pivotal elements among the firm's HRM objectives (Gow [6]). Planning and assuring current and future supply of qualified personnel at wage rates compatible with expected qualifications is really at the heart of HRM. Function 4) and 5) are essentially an attempt to dynamically adapt the current work force to existing and expected levels of technology and working environment. In essence, HRM centers around collecting and processing information for strategic and tactical planning and management of one important factor of production, i.e., labor.

### **Marketing**

The analysis and the constant movement of the frontier of marketing from the "Production Era", through the "Sales Era" to today's marketing concept makes marketing one of the more mature business disciplines. The content of marketing, according to American Marketing Association's 1985 definition [7], is:

Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods, and services to create exchanges that will satisfy individual and organizational objectives.

This definition somewhat obscures the wide variety of activities behind the marketing label where we find the "modern marketing concept" and the marketing mix. These concepts ensure a company-wide customer orientation, careful market segmentation, target market selection and the blending of four distinct strategic elements on product, pricing, distribution and promotion (See e.g., Boone & Kurtz [8]). The strategies attempt to ascertain that the product or service is right for the firm's customers as identified and targeted. Furthermore, strategies are set up to secure that the price is "correct" according to company definition and that the product is distributed and readily available at the targeted and promoted locations.

If we peel away some layers of operational concepts and jargon, one is left with the impression that all marketing efforts are aimed at isolating a product from its substitutes by making it unique in its market. In this way the producer may gain control over the pricing function. The isolation is done through careful market segmentation combined with appropriate distribution and promotion strategies.

In modern marketing, the distinctions made are often purely perceptual. A product may, for all practical purposes, be equal to many others in application, effect and consistency, but the promotional strategies are centered on differentiation along the age, lifestyle, applications and effect continuum<sup>3</sup>. The less successful a producer is in isolating his product from its competitors, the more the price function moves over to the market. At one extreme we have niche marketing, the marketers nirvana, where the producer has a virtual monopoly. At the other end we have products that are perceived by the buyers to be homogeneous or perfect substitutes for many others and no amount of marketing can change this fact. In this case the market fits the free market description and producers have little or no influence on the price function.

### **Finance**

Nowhere among the business disciplines is the relationship with economics stronger than in modern financial management theories. Whereas some of the other sub-disciplines of business go to great lengths to distance themselves from economics, authors on financial management draw heavily from modern economic theories<sup>4</sup>.

The most important aspects of financial management are operational budgeting and control (accounting), capital budgeting - real and portfolio investments plus working capital, long term and short term financial planning and credit evaluation and management. Frequently, the financing function of larger corporations also includes public relations activities with customers, rating agencies and the general investing public.

The finance function of a corporation is not only an internal resource control function, but just as important is the continuous collection and analysis of external data on the capital and credit markets. Finance thus becomes an important support in corporate attempts to allocate optimally the resources of the firm to achieve the goals and objectives of the organization. Standard textbooks on finance frequently start out by defining as implicit goals profit maximization or shareholders wealth maximization. In reality the finance functions is subordinated to the general mission, goals and objectives of the corporation<sup>5</sup>.

### **Production**

The process of transforming raw materials into final goods requires management of facilities, work force, inventory, scheduling, product design and quality assurance. The main focus of the Operations Manager is to plan, organize and control a production process regulated by the overall goals and objectives of the firm. Keeping the production process efficient and cost effective becomes one of his most important performance indicators. Optimizing, i.e., keeping production on an efficient path, has been made simpler with the introduction of analytical/decision models and computer process control. Thus, productivity of all input factors, i.e.,

capital, labor, energy and raw materials is the main objective of the production/operations department. This, of course, includes production systems design, production capital planning, implementation and continuous monitoring.

### III. A SHORT LITERATURE REVIEW

The theoretical aspect that interests us in this paper is firm behavior. Standard textbooks on neoclassical firm theory pay just summary attention to the underlying behavior. Assumptions on profit maximization, cost minimization, price taking or monopolist price adjustments are made without much reference to neither the business environment nor the larger societal trends that also affect behavior of the firm.

Not unexpectedly, the behavior of the firm is much more the focus in the older literature than with modern writers. Marshall [11], although discussing at length *Industrial Organizations and Profits of Capital and Business Power*, does not explicitly concern himself with the behavior and the decision making that leads to “maximum net revenue”. He does, however, [op.cit. p. 248] outline some prerequisites for long term success:

... the manufacturer who makes goods not to meet special orders but for the general market, must, in his role as merchant and organizer of production, have a thorough knowledge of things in his own trade. He must have the power of forecasting the broad movement of production and consumption, of seeing where there is an opportunity for supplying a new commodity that will meet a real want or improving the plan of producing an older commodity. He must be able to judge cautiously and undertake risks boldly; and he must of course understand the materials and machinery used in his trade.

In strategic management parlance, Marshall basically states that “the ideal and successful manufacturer” should, on a continuous basis, perform a thorough SWOT analysis and strategic planning. Frisch [12] has a much more detailed discussion on “strategic types” and firm behavior. After describing the now standard goals and objectives, such as production maximization, cost minimization and profit maximization, in addition to profit optimization, Frisch [*ibid*] goes on to define the strategic categories which he divides into two: Adaptation Strategies and Negotiation Strategies. The first is then subdivided as follows:

**Table 1**  
**Examples of Adaptive Strategies**

	<i>Autonomous</i>		<i>Conjectural</i>
A. 1	Price Taking Quantity Adaption	C.1	Demand Adjusted Price/Quantity Adaption
A.2	Single Option (take-it-or-leave-it)	C.2 C.3	Conjectural Variation Single/Multi Move Game Theory Strategies

Of these, A.1 and C.1 are the strategies assumed for the classical free competition and monopoly firm respectively. C.2, Conjectural Variation, is assumed in, e.g., the Stackelberg oligopoly model.

Negotiation strategies would include cooperative game strategies and the Nash Bargaining solution, in addition to the single/multi move negotiation strategies often used in labor market deliberations.

Coase [13] attempts to explain the existence of the firm rather than its behavior for long term survival. His analysis, which focuses on the internalization of input factor markets, explains why firms in reality would be on the expansion path, but the classical profit maximization strategy is still applied.

Other authors who have contributed to the analysis and understanding of business behavior are Simon [14] and Cyert & March [15]. Both works must be seen based on their positive theoretical framework and business practices at the time they were written.

Only once does Simon [*ibid*]<sup>6</sup> mention strategic planning and then in relation to management decision models. These models are discussed in the context of macro economic management decision problems (energy/environment) rather than a business context. Although at the time of the latest edition (1975), strategic planning and management was making its way through the business community, its impact on firm behavior is not discussed.

Cyert & March [*ibid*] provide an interesting glimpse into the intersection of economics and business science in the early 1960's. The main purpose of the work was to establish a comprehensive positive behavioral theory of the firm contrasting the simple classical theory. The authors outline some of the important features of strategic management, but do not discuss its effect on firm behavior. The organizational and behavioral analyses result in an expanded firm model. In this model the "learned set of behavior rules - the standard operating procedures" are assumed to be the focus for control of the firm. They [the standard operating procedures] are the result of a long run adaptive process by which the firm learns, and the short run focus for decision making within the organization. The Cyert & March firm has the following features [*op. cit.* p.113]:

1. Multiple, changing, acceptable-level goals. The criterion of choice is that the alternative selected meet all of the demands (goals) of the [organizational]<sup>7</sup> coalition.
2. An approximate sequential consideration of alternatives. The first satisfactory alternative evoked is accepted. Where an existing policy satisfies the goals, there is little search for alternatives. When failure occurs, search is intensified.
3. The organization seeks to avoid uncertainty by following regular procedures and a policy of reacting to feedback rather than forecasting the environment.
4. The organization uses standard operating procedures and rules of thumb to make and implement choices. In the short run these procedures dominate the decisions made.

It is obvious that a firm, like the one described above, does not practice strategic management. In fact, it violates most of the strategic management principles.

#### **IV. A THEORETICAL ALIGNMENT**

The criticism of the classical theory of the firm has, to a large extent, centered around its assumption, particularly the perfect knowledge and the profit maximization assumptions. Few

aspects of the theory have escaped scrutiny and criticism over the years. It is thus more remarkable that the schema is still alive and well. The reason for this longevity may perhaps be found in Friedman's [16] proposition that it is the predictive power of the theory that is important, not the descriptive accuracy of its assumptions.

No text on microeconomics is published today without a thorough exposition of the classical theory of the firm. The theory has been further formalized and repackaged in set theoretical language and can now be found in books such as Varian [17] and Malinvaud [18], standard fare for introductory microeconomics in most graduate economics programs.

The over-arching criticism of the orthodox model is that it does not deal properly with all the pertinent issues of a modern business organization. An outline of the pure economical and non-institutional issues of the modern business firm can be grouped as follows:

- (1) organizational missions and goals
- (2) strategic options
- (3) production technology - short and long term
- (4) production capacity - short and long term
- (5) product markets, price, quality, quantity and selling expenses
- (6) factor markets, prices, quality and quantities
- (7) supply of funds for working capital and investments
- (8) business developmental controls and feedback

Most of these issues are, however, included in the classical model. Those that are not are in essence not needed or are implicitly assumed. As we shall see below, the procedures developed for solving modern business issues and problems have moved actual firm decisions closer to those one would expect the classical firm or entrepreneur to make.

### **The Competitive Firm**

The neoclassical firm operates in an atomistic market for product and input factors, where no buyer or seller is able to impact market outcomes. The firm product quality and consistency are in all respects equal to the market product specifications. The firm has perfect knowledge of the market parameters, specifications, buyers and sellers and its goal/objective is to maximize net revenue (profits). There exists a completely free and unregulated exit from and entry into the markets where the firm sells its product and buys its inputs.

In a strategic management framework the classical firm, the XYZ Co., might be described as follows:

#### **Mission**

XYZ Co. designs, manufactures and markets its only product, widgets, for the domestic market. The company's continued existence and success are dependent upon how well it serves its stakeholders: customers, owners, creditors, suppliers and employees.

### Goals/Objectives

Maximize net revenue.

### Strategies

Adjust factor inputs at market prices such that production is always on the expansion path.

Adjust output such that marginal cost is always equal to the market price of the product.

Control output such that the scale elasticity<sup>8</sup>  $\varepsilon(Q) \leq 1$ .

### Implementation

These strategies spawn the following implementation or business policies:

Monitor constantly factor and product markets for quantity, quality and price changes. Calculate marginal cost regularly. Adjust product output such that marginal cost equals product market price.

Ascertain that changes in the scale of production are done such that the percentage increase in input factors is higher or equal to the increase in production while output is always on the expansion path.

### Dynamic Feedback

Because the firm has complete knowledge and that credit and production capital are instantaneously available at market rates, feedback of market information and the subsequent reaction is without delay, investments and changes of direction pose no problem for the competitive firm.

### The Strategic Firm

Above we outlined the features of the competitive firm in a strategic management framework. We are now ready to discuss and contrast the competitive firm to any firm that follows strategic management principles (the strategic firm). We will first look at how such a firm deals with its factors of production and production capacity before we review the economic adaptations in the product market.

The main aim of strategic management is to ascertain that the company's resources are utilized efficiently and that no market opportunity is wasted. A successful strategic firm will have studied and projected the crucial decision parameters and variables for the duration of their planning horizon.

### Input Factor Markets

The responsibility for acquisition, use and management of the input factors rests mainly with the Human Resource and the Production departments. Additionally, the Finance and Production departments are responsible for the acquisition of production capital. This section reviews the procedures and processes of input factor management and planning.



## Labor Input

The focal point for the Human Resource Department is the labor markets for both administrative, technical and production personnel.

The SWOT analysis includes forecasts of crucial variables such as labor requirement by category and supply of these categories out to the planning horizon. This exercise gives the HR Department the “best possible” information on the company’s requirements for personnel, the availability of such personnel in the company’s natural labor markets and the current and expected wage rate levels. If shortages are expected, the HR Department will be able to perform labor market campaigns to secure such levels as is compatible with their goals.

Due to the SWOT analysis, the HR Department, in close cooperation with the other functional departments, including the Production Department, is in a position to minimize input factor costs, including organizational slack<sup>9</sup>, and the company would gradually adjust towards the expansion path as far as administrative and production labor is concerned. The competitive firm has, however, perfect knowledge of the labor markets and can and will make instantaneous adjustments to remain on the expansion path when wage rates change. There is no organizational slack in the competitive firm.

A review of the adaptation process is easier done with the help of a more formal model specification. Let  $w_i$ ,  $q_i$ , and  $r$  be the wage rates, the unit cost of non-labor inputs and cost of capital respectively. Let’s assume that there are  $k$  types of labor,  $n-k-1$  types of other inputs and one type of capital.  $P$  is the price of the output.  $C(Q)$  and  $C'(Q)$  are the expansion path cost and marginal cost function, respectively.  $\lambda$  is the Lagrangian multiplier used in the cost minimization process. Furthermore let  $v_i$  be the input factors ( $i = 1 \dots n$ ) and  $Q = \varphi(v_1, \dots, v_n)$  the production function with the characteristics given in Endnote 8.  $\varphi_i$  indicates the marginal productivity of input factor  $i$ . Cost minimization leads to the following first order conditions for labor adaption (see e.g., Varian [*op.cit.* p.23]):

$$w_i = \lambda \varphi_i(v_1, \dots, v_n) \quad (i = 1, \dots, k) \quad (IV.1)$$

Since  $C' \equiv \lambda$  for the cost minimizing firm, (IV.1) can be written as

$$w_i = C' \varphi_i(v_1, \dots, v_n) \quad (i = 1, \dots, k) \quad (IV.2)$$

or

$$w_i = s_i + C' \varphi_i(v_1, \dots, v_n) \quad (i = 1, \dots, k) \quad (IV.3)$$

where  $s_i$  is the “organizational slack”.

If the firm has monopsony in the labor markets (IV.2) changes to

$$w_i(1 + \eta_i) = C' \varphi_i(v_1, \dots, v_n) \quad (i = 1, \dots, k) \quad (IV.4)$$

Where

$$\eta_i = \frac{\partial w_i}{\partial v_i} \frac{v_i}{w_i} \quad (i = 1, \dots, k)$$

Both the competitive and the strategic firm would endeavor to fulfill condition (IV.2), (IV.3) or (IV.4). Depending on the strategic firm’s tolerance for organizational slack, the two

firms would, during periods of wage rate stability, converge on labor use and cost, given equal technology.

### Other Inputs

The requirements of a strategically managed firm are that all functional departments perform a SWOT analysis and forecast their own crucial parameters and variables<sup>10</sup>. As with labor, all non-labor factors of production and their market parameters are analyzed and forecasted by the Production Department whose efforts are focused on efficiency of production. Minimizing cost of production at the planned output levels would be the success or failure indicators for the Operations Manager. The competitive firm, on the other hand, will always adjust inputs such that (IV.5) is continuously satisfied. The adjustments are instantaneous and without errors or organizational slack.

$$q_i = C'\phi_i(v_1, \dots, v_n) \quad (i = k + 1, \dots, n-1) \quad (IV.5)$$

The strategic firm, through its Production Department would have “best possible” information on current and future supply curves for all non-labor input factors, i.e., the  $q_i^s$  curves ( $i = k + 1, \dots, n-1$ ). (IV.5) traces the demand curves for the input factors. Thus, the success of the cost minimization efforts compared to the all knowing, all seeing competitive firm, would depend on how good their information and forecasts are and how well their internal input control procedures function. As mentioned in Section II., modern process control models and methods have made this effort accurate and simple through extensive use of computers. Hence, also the strategic firm would endeavor to adjust to the conditions (IV.5) or (IV.6).

$$q_i = s_i + C'\phi_i(v_1, \dots, v_n) \quad (i = k + 1, \dots, n-1) \quad (IV.6)$$

Sometimes a perception of slack may exist in the adaptation of certain non-labor input factors. These cases are normally driven by long term supplier relationships and it would be extremely difficult to judge whether the perceived slack in reality is consistent with long term minimum unit cost for such input factors.

Again there are reasons to believe that the strategic firm would be very successful in allocating input factors such that its expansion path closely mirrors that of the competitive firm. The production policies of the strategic firm would thus be very similar to the ones described for the competitive firm.

### Investments, Capital and Capacity

As mentioned earlier, choosing an optimal investment and capacity path is one of the crucial elements in a well managed strategic firm. Here again the SWOT analysis and the forecasts of the product market, the factor and credit markets would steer the strategic firm towards the “best” information development path, i.e., one that would maximize not only short term ROI but the “true” long term value of the firm. There will of course always be the difficult trade-off between short term and long term ROI. The whole strategic analysis process is, however, set up to make the long term consequences of the investment decisions more transparent to the decision makers.

The competitive firm, as mentioned, has perfect knowledge and can instantaneously change its factors of production, including capital. Since there is no time lag between information, decision and capacity adaptation, the competitive firm will always be on an implicitly optimal development path, i.e., it will always satisfy condition (IV.7)

$$r = s_n + C'\varphi_n(v_1, \dots, v_n) \quad (\text{IV.7})$$

Since  $v_i$ , ( $i = 1, \dots, n-1$ ), are assumed to be flow concepts and  $v_n$  is the stock of capital, a closer specification of  $r$  is necessary:

$$r \equiv q_n(i + \delta_n) = s_n + C'\varphi_n(v_1, \dots, v_n) \quad (\text{IV.8})$$

where  $q_n$  is the price of capital,  $i$  the interest rate and  $\delta_n$  the rate of depreciation. For the competitive firm we always have that  $s_n \equiv 0$ . There are various reasons why the strategic firm might be faced with slack in the credit/capital markets (i.e., that  $s_n \neq 0$ ). The company might, for example, have long run relationships with bankers or capital suppliers that are, for various reasons, difficult to sever. This situation can result in  $s_n > 0$  or  $s_n < 0$ , i.e., too much or too little capital for its current output level compared to the competitive firm.

Thus, the better the information the strategic firm collects from the external environment on interest rates, technology, product and factor markets, the closer are the development paths of the two firms.

### **Product Markets**

The competitive firm has a very simple selling job. No marketing is required, the price of the product is given in the atomistic market and no one supplier or buyer has any impact on neither price nor the total quantity cleared by the market.

The competitive firm adjusts its output ( $Q$ ), such that

$$P = C'(Q_0) \quad (\text{IV.9})$$

where  $Q_0$  is the output level yielding maximum profit. We furthermore know that maximum net revenue or profit  $\pi_0$  would be

$$\pi_0 = PQ_0 - C(Q_0) \quad (\text{IV.10})$$

or

$$\pi_0 = PQ_0 - C'\varepsilon Q_0 = PQ_0(1 - \varepsilon) \quad (\text{IV.11})$$

since  $C(Q) = C'\varepsilon Q$  along the expansion path (see e.g., Varian [*op.cit.* p. 68])

We have assumed that  $\varepsilon(Q_0) \leq 1$  and thus zero or positive profits. Otherwise the firm exits the market.

For the strategic firm, however, the world is not this simple. The firm channels a large amount of resources through its marketing department to bring its product successfully to the market.

### **Niche Monopoly**

If a strategic firm is successful in distinguishing its product through strategic marketing from other similar or even functional substitutes, it will to a large extent be able to control the

price function. The firm does not, however, control both price and quantity sold. There is a demand curve facing the firm and the firm will normally set a price and endeavor to sell what it can. If the strategic firm knows its demand curve, it will also know how much it can and should sell/produce. We will classify as a niche monopolist a strategic firm that has succeeded through well crafted and executed strategic plans, to distinguish its product in such a way that the consumers do not see actual substitutes. A well run monopoly, as well as a niche monopoly, would always minimize cost of all production factors. Marketing expenditures incurred to protect the niche might severely cut into the net revenue. These expenses are, however, incurred in order to maximize long term ROI. A successful niche marketer would, at the extreme, be able to behave in the market as a neoclassical monopolist maximizing profits. Through its external analysis, the niche monopolist knows the demand curve for his product. He also knows how the market reacts to his marketing and promotional efforts, measured as the cost of marketing  $M = M(Q)$ .<sup>11</sup> Equipped with all this information he will endeavor to maximize the profit function (IV.12)

$$\pi_m = P(Q, M)Q - C(Q) - M(Q) \quad (\text{IV.12})$$

which yields the following 1. order conditions for maximum profit

$$P[(1 + \xi) + \mu(\omega - \alpha_m)] = C' \quad (\text{IV.13.a})$$

or

$$P[(1 + \mu\omega) + (\xi - \mu\alpha_m)] = C \quad (\text{IV.13.b})^{12}$$

where

$$\xi = \frac{\partial P}{\partial Q} \frac{Q}{P}, \quad \omega = \frac{\partial P}{\partial M} \frac{M}{P}, \quad \mu = \frac{\partial M}{\partial Q} \frac{Q}{M}, \quad \text{and} \quad \alpha_m = \frac{M}{PQ}$$

From (IV.13) we see that if no marketing efforts exist, i.e.,  $M \equiv 0$ , then (IV.13) becomes

$$P[1 + \xi(Q)] = C'(Q) \quad (\text{IV.14})$$

the first order condition for neoclassical monopoly maximum profit.

In order to maintain the niche, the marketer has to constantly position and reposition his product to the shifts in the market's perception of the product and its uniqueness. He will, however, achieve highest net revenue by adjusting his output according to (IV.13). The niche monopolist or the strategic monopolist knows the signs and magnitudes of  $\xi < 0$ ,  $\omega > 0$ ,  $\mu > 0$ , and  $\alpha_m > 0$ . Relative to the monopoly solution ( $Q_0$ ), the niche monopolist will adapt his output ( $Q_m$ ) as follows: When  $(\omega - \alpha_m) > 0$ , then  $Q_0 < Q_m$ . The price charged for the product will, however, be  $\mu(\omega - \alpha_m)$ 100% higher than the initial demand price. If  $(\omega - \alpha_m) < 0$ , then  $Q_0 > Q_m$ , and the price  $\mu(\omega - \alpha_m)$ 100% lower than the monopolist price. Otherwise, when  $(\omega - \alpha_m) = 0$ ,  $Q_0 = Q_m$ . The price charged for the product will be the same as the price charged by the classical monopolist.

The level of marketing funding is not necessarily given by the optimization process or (IV.13). A simple but realistic expansion of the model will bring out this point more clearly. Let  $M = mQ$ , where  $m$  is the marketing expense per unit of output or sales. From this simplification we have that  $\mu = 1$ , and  $\alpha_m = m/P$ .

$$P[(1 + \xi) + (\omega - m/P)] = C' \tag{IV.15}$$

As we see,  $m$  is a parameter of (IV.15) and we have a different set of solutions depending on the magnitude of  $m$ . If, however, the strategic firm endeavors to partially adjust its marketing efforts in order to get optimal demand reaction it will do so until the last dollar spent on marketing generates one dollar in income or when<sup>13</sup>

$$\frac{\partial P}{\partial M} Q = \frac{\partial P}{\partial M} \frac{M}{P} \frac{P}{m} = 1 \text{ or } \omega = \alpha_m \tag{IV.16}$$

Using the extended model, we now have that (IV.16) is equivalent to setting  $m = \omega P$ . In this case (IV.15) becomes again the classical monopolist solution (IV.14) as far as both output and pricing are concerned.

The more genuine or perceived substitutes that exist in the market, combined with the niche marketer's failure to distinguish and insulate his product from the rest, the more he becomes a monopolistic competitor.<sup>14</sup>

### Niche Failure

At the extreme, a complete removal of all perceived distinguishing characteristics of a product will put it in the homogeneous commodity category. A good example of this type of development is found in the destiny of the ballpoint pen. When it was introduced, after WWII, the ballpoint pen was an extremely exclusive and expensive writing instrument, advertised as the everlasting non-refillable fountain pen. Today the pen is, by most standards, an inexpensive bulk commodity. Other more recent examples are found in the electronics industry where various kinds of components, e.g., "computer chips", have become virtual bulk commodities and the producers have suffered a loss of price control.<sup>15</sup>

Thus, the marketing failure or ineffectiveness would move the control of the firm's pricing function over to the market, and only large amounts of marketing efforts and repackaging would reposition the product back into a niche.

A strategic firm that fails to secure a niche monopoly, but who knows its marketing will impact the price, will adapt the output to satisfy (IV.17)

$$P[(1 + \mu(\omega - \alpha_m))] = C' \tag{IV.17}$$

This firm will charge a price premium  $\mu(\omega - \alpha_m)$  100% above it's the classical competitive firm. The size of the price premium depends on the market reaction elasticity  $w$  and the resources channeled to the marketing efforts. If we assume the same optimization behavior as described above, i.e.,  $\omega = \alpha_m$ , then the strategic firm and the competitive firm have exactly the same market output and price.

If a firm completely fails with a marketing strategy, in the sense that the marketing efforts have no impact on the output sold, i.e.,  $\mu$  is very close to zero and the product ends up being considered on par with many other products, the firm virtually becomes a neoclassical competitive firm. If we assume that the firm still performs strategic marketing and that the cost of marketing is positive ( $\alpha_m > 0$ ), his output would be somewhat lower than the competitive firm, but the price exactly the same.

## V. CONCLUSION: A DEFENSE OF ORTHODOXY

The modern strategically managed firm, regardless of its market behavior, will collect and compile information on all significant decision parameters. Compared to the well managed firms of the 50's and 60's, the modern firm is information-wise in a far better position. This advantage is effectively exploited in both its internal adaptations of resources and in its marketing efforts. It is fairly safe to say that most strategic firms will operate as close to the theoretical expansion path as practically possible. Waste or organizational slack may exist, but the firm is aware of it and may for long run reasons accept this slack. Otherwise, and especially in business slump periods, organizational slack and most other inefficiencies are normally trimmed away. Thus, the classical assumption of cost minimization should fit the modern strategic firm very well.

A well crafted and implemented strategic marketing plan can move a firm's product into a market niche where the firm has virtual monopoly. In this case there are two instruments available to the firm. The first is the instrument available also to the classical monopolist, i.e., the firm can manipulate price or output such that profits are maximized. Furthermore, the firm can manipulate the demand curve through changes in  $M$ , its marketing efforts, to achieve a higher price than is possible for the classical monopolist.

The strategic firm might not have the possibility to completely remove the substitution effect between its own and competing products through its marketing efforts. It might, however, still be able to manipulate both the income and substitution effects enough to charge a premium for its product and thus generate larger profits than its competitors. If the firm, however, also fails at its marketing efforts, the market outcome would be very close to the competitive firm. In all these cases only minor modifications to the classical model are necessary to describe the outcome of the strategic firm.

Thus it seems that the mostly negative criticism of the neoclassical economic theory of the firm somehow has been refuted by the development in the business environment. The modern firm is forced by necessity and to some extent by a new business culture, to seek more and better information on its surrounding environs, and to use this information to make long term decisions. The logic of these decisions reflects to a large degree the tenets and inherent logic of the competitive firm and thus validating the foundations of the neoclassical theory of the firm.

### *Notes*

1. As Mintzberg [2] has pointed out strategies are not always the outcome of rational planning. In fact, emergent (unplanned) strategies can be just as important as the planned ones.
2. Many economists and management theorists have pointed out the fact that there are inherent dangers in emphasizing only ROI. One of them is of course that ROI and the value of the firm in the Miller /Modigliano sense can be increased by inactivity on the capital account. This strategy increases the short term ROI but jeopardize the long term survival of the firm. Some authors (see Hayes & Abernathy [4]) have argued that the decline of U.S. corporate competitiveness is mainly due to an overemphasis on short term ROI bolstered by low real investment in production capital and R&D. Another question is, however, whether in periods of high interest rates, and thus, in a rational expectation sense, high long term interest rates, the emphasis on short term ROI might be the only

- correct strategy for maximizing the value of the firm, i.e., high future discount rates severely limits the present value effects of future net revenue streams.
3. A good example of this technique taken to the extreme is the aspirin free analgesic “acetaminophen”, a bulk chemical sold under a great variety of brand names in addition to generic, drug store and super market brand names. (“The pain reliever hospitals use most”).
  4. As a matter of fact, modern financial management theories are essentially founded on work by such noted economists as James Tobin, F. Modigliano, M. Miller and H. Markowitz.
  5. Normally, some form of profit maximization or shareholder wealth maximization would be mentioned in an actual corporate goal/objective set.
  6. Updated edition. Original version dated 1945.
  7. Author’s inclusion.
  8. To ensure a U-shaped ATC curve, we will assume an “optimum law” in the production of widgets, i.e., we assume that  $\varepsilon(Q)$  goes from larger than 1 through 1 to 0 as output (Q) goes from 0 to capacity. At  $\varepsilon(Q) = 0$ , output is at maximum or “functional capacity”. Profits  $\geq 0$  and second order conditions for profit maximum is satisfied if  $\varepsilon(Q) \leq 1$ .
  9. Organizational slack is normally defined as the difference between what is actually paid to an input factor (frequently executive positions) and the market rate for comparable quantity/quality input. See e.g., Cyert & March [15] p. 36.
  10. Of course help and direction might come from the “Strategic Planning Department”
  11. This model differs from the one used in [19] in that we assume marketing expenses at the various stages of the product life cycle is set at a certain amount per output. This assumption is based on the fact that marketing expenses change with market penetration, i.e., with output. [19] assumes that M is a control variable. Here m is a control variable.
  12. IV.13b is just a rearrangement of the parameters in the IV.13a bracket.
  13. (IV.13a/b) and (IV.16) taken together are of course the 1. order condition for absolute profit maximum with respect to Q and m and could, of course, have been presented together. The two step procedure is used to emphasize that maximization with respect to m might not be undertaken by the strategic firm.
  14. It is interesting to note of the marketing efforts of some producers that they work, in a Slutsky sense, not only on the substitution effect (comparing their products to other functionally similar ones), but that they frequently work just as hard on the income effect, i.e., suggesting more value for the dollar or connects it to the upper income brackets.
  15. Intel’s earlier “The Computer Inside” market campaign was a clear reaction to this phenomenon.

### ***References***

- [1] Smoler, F., *Why Business History?*, Audacity, Vol. 1, No. 1, 1992, pp. 7-15.
- [2] Mintzberg, H., *Patterns in Strategy Formulation*, Management Science, 24, 1978, pp. 934-948.
- [3] Miller, M. H. & Modigliani, F., Dividend Policy, Growth and the Valuation of Shares, *Journal of Business*, Vol. 34, No. 4, October 1961, pp. 411-432.
- [4] Hayes, R. H. & Abernathy, W. J., Managing Our Way to Economic Decline, *Harvard Business Review*, July-August 1980, pp. 69-89.

- [5] Schuler, R. S.; *Personnel and Human Resource Management*, Third Edition, West Publishing Company, New York N.Y., 1987.
- [6] Gow, J. F.; Human Resources Managers Must Remember the Bottom Line, *Personnel Journal*, April 1985 pp. 30-32.
- [7] Marketing News (March 1, 1985) *AMA Board Approves New Marketing Definition*, p 1.
- [8] Boone, L. E., and Kurtz, D. L.; *Contemporary Marketing*, Seventh Edition, The Dryden Press, New York, N.Y., 1992.
- [9] Fayol, H.; *General and Industrial Management*, Pitman Publishing Corp. London, 1949 (Transl. from Early Nineteen Century French Text by C. Storrs)
- [10] Stevenson, W. J.; *Production/Operations Management*, Second Edition, Irwin, Homewood, Ill. 1986.
- [11] Marshall, A.; *Principles of Economics - An introductory volume*, 8th ed., Macmillian & Co. Ltd. London, UK. 1920 (reprint 1962).
- [12] Frisch, R.; *Theory of Production*, Rand McNally, Chicago, Ill. 1965 (or original language version, 9th Ed. Universitetsforlaget, Oslo, Norway 1962).
- [13] Coase, R. H., *The Nature of the Firm*, *Economica*, New Series, pp. 386-405, Vol. IV 1937.
- [14] Simon, H. A., *Administrative Behavior - A Study of Decision-Making Processes in Administrative Organization*, 3rd Ed., The Free Press, Macmillan Publishing Co. Inc., New York, N.Y., 1976.
- [15] Cyert, R. M., & March, J. G., *A Behavioral Theory of the Firm*, Prentice-Hall, Inc. Englewood Cliffs, N. J., 1963.
- [16] Friedman, M., *Essays in Positive Economics*, University of Chicago Press, 1953.
- [17] Varian, H. R., *Microeconomic Analysis*, Second Edition, W.W. Norton & Co. New York, N.Y., 1984.
- [18] Malinvaud, E., *Lectures on Microeconomic Theory*, North-Holland Publishing Co. Amsterdam/ London 1972.
- [19] Dorfman, R., & Steiner, P. O., Optimal Advertising and Optimal Quality, *American Economic Review*, pp. 826-836, Am. Econ. Rev. Vol. XLIV No. 4 September 1954.





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