

CHAPTER VII

SUMMARY, IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

This chapter presents a general overview of the entire study, a summary of the evidences obtained and their interpretations, theoretical and methodological limitations, policy implications for practising managers, future directions for pharma industry specific research and finally, a brief emerging scenario for the industry and available strategic options open to it

1.0 Overview Of The Study

Objective : The harsh and stressful state of competition, characteristic of the present day marketplace, dictate that only those firms that consistently possess a competitive edge will survive. Thus, it becomes imperative for practising managers and academic researchers alike to realise the value of identifying, analysing, and understanding the causes of differential performance amongst firms. Given that four decades of development and theory building in the field of strategic management has yielded rich evidence, this study aimed to add to the existing knowledge base.

Existing research analysing determinants of performance, can largely be categorised as either focusing on the external dimension or internal dimension. Refer Fig 7.1. The external analysis body of research has proposed that industry structure or the environment within which the firm competes (the SCP Paradigm and the strategic group

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school), determines firm performance. The internal analysis body of research, has proposed that the roots of competitive advantage, leading to superior performance, lie within the firm. The Revisionist school, Austrian school of economics and the Resource based perspective of the firm hold the view that it is the internal critical capabilities possessed by the firm which lends it the efficiency to achieve superior performance. The PIMS program is in between the two aspects and does not explicitly capture either of the effects. The possibility that the two aspects could jointly be deployed to explain differential performance has rarely been attempted, much less tested. Therefore, this study made an endeavour to consider these two streams of thought in strategy literature as complimentary and present an integral model of strategic firm behaviour.

The study proposed that it is the proactive behaviour of firms, attributable to competitive dynamics, that caused differential performance amongst firms. It was stated that competition is inherently imperfect. The access to and control of required competitive capabilities and resources is not homogenous amongst firms. Further, the status of having a competitive advantage also is never eternally with a single firm or a group of participating firms. This dynamism leads to fluctuating equilibria in competitive conditions and as a consequence we have variation in firm performances. The conceptual model of strategic firm behaviour discriminated between firms adopting a passive stance and those asserting a proactive posture. The latter reflecting the firm's intentions and efforts, over time to modify and/or remove market constraints permitting a better achievement of the firm's objectives. Specifically, the empirical model of strategic firm behaviour laid out the rationale for the selection of high growth markets, commitment to

reinvest retained profits, vertically integrate operations, and the launching of assertive marketing efforts as constructs of firm proactivity for explaining differential performance. A justification for the exclusion of market share from the model was also highlighted on the grounds of it having no inherent value. The model was tested for its empirical relevance within the context of large pharmaceutical firms operating in India.

1.1 Research Method

Constructs were generated to operationalize the five mentioned variables. Return on Investment measured as return on capital employed was used to represent firm performance, Share of High growth Market Segment products in a firm's total turnover was used to represent the implications of participating in rapidly expanding markets. The Retention Ratio, indicating whether the firm had a conservative dividend payout policy, was used to represent the firm's commitment to fund strategic ventures. The Value Addition ratio was used to represent the extent to which the firm was vertically integrated reflecting desire to control the supply function. And the combination of market orientation, firm reputation and brand equity reflected in the size of the firm's marketing outlay was used to represent Marketing Intensity demonstrating the efficacy of the firm's monopolistic competitive practices.

Financial data was largely sourced from company annual reports, the Bombay Stock Exchange official directory, the CMIE and the Capitaline Ole financial database. Market related data was mainly sourced from the ORG retail audit database. The model

and its respective a priori hypotheses were empirically tested in their linear forms using the ordinary least squares method. Simple regressions were run for checking the individual explanatory power of selected variables and multiple regressions were run to check the explanatory power of the model as a whole. The cross-sectional analysis method was employed to run regressions for single years. Pooled data regressions were used for examining the behaviour of variables, and the model's performance, for the study's combined time period.

1.2 Summary of findings

The general hypothesis of the study was that it is the proactive, strategic behaviour of firms that determines variation in financial performance. The empirical findings largely support the overall model. In particular the findings indicate that:

1. The decision to participate in high growth markets may not always be a sound strategy. The presence of high growth market segment products did not explain variation in profitability to any substantial degree and was not proving statistically significant either. However, the inverse relationship between the two indicates that markets offering growth prospects may affect profitability adversely. Given that market growth rates are representative of industry structure, these results are consistent with findings reported in recent research, namely, that industry structure or environmental factors are not important predictors of variance in performance (Hansen & Wernerfelt 1989, Rumelt 1991). In

general, the results also bring into question the value of research that emphasizes the importance of industry structure factors (i.e. the SCP paradigm).

2. Although results for the proposition of ploughing back profits, are unfavourable, this has been largely attributed to methodological and data paucity handicaps. Nevertheless, the theoretical underpinnings developed for the same, firmly establish its candidature as an essential element for determining the scope of pursuing a proactive business policy.

3. The reasonably favourable results in the case of vertical integration indicate that the firm's desire to control the supply function, acquire market power, harness and protect critical competencies is important in determining firm profitability. These results are consistent with the resource based perspective and are also supportive of the findings of Aaker & Jacobson (1987), Ravenscraft (1983), Buzzell (1983), & Williamson (1975) that financial performance will be positively impacted by the level of vertical integration.

4. A major finding of this study is that the marketing activities of a firm have a most decisive positive influence on profitability. The results in this case are not only statistically highly significant but also display a high explanatory power. These results are consistent with views of Aaker (1989,1991), Bogner & Thomas (in Hamel 1994), Kohli & Jaworski (1990), Peters & Austin (1985), Peters & Waterman (1982), Narver & Slater (1990), Dierickx & Cool (1989), Milgrom & Roberts (1986), Keller & Aaker (1992), and others. Providing proof that the product differentiation strategy enables the firm to command premium prices, these results vindicate this study's central theme that a firm's proactivity

(in this case it's monopolistic competitive practices) impacts performance significantly and favourably

The evidence that marketing intensity is not significantly related with market share also demonstrates that the product differentiation marketing efforts have a direct impact on profitability (Porter 1996). An increase in marketing outlay need not necessarily materialise in volumes generated by an increase in market share, but, it may be reasonably claimed, given the empirical results of this study that marketing intensity certainly helps increase margins of the existing share base, and prevents erosion of the same

5. A most important contribution of this study is the reporting of the insignificance of the role of market share in determining profitability. These results are inconsistent with the PIMS data based research (Buzzell & Gale, 1987), but however are consistent with the arguments of some researchers that market share is presented to be a much more important determinant of performance than it actually is. Especially this fact is more pronounced when firm-specific resource and skill variables are also considered predictors of performance in integrated models that include competitive strategy and industry variables (Jacobson & Aaker, 1985; Jacobson, 1988,1990). The results are also in line with the position of other researchers (Boulding & Staelin, 1990) who argue that when firm-specific variables are included in a performance model, market share will not continue to be a significant predictor of financial performance. Thus, the model for this study stands justified in excluding market share.

This finding further supports the central theme of this study that it is a comparative advantage in resources and critical success competencies that leads to a market position of

competitive advantage (note, and not necessarily dominant market share status) that results in superior financial performance (Hunt & Morgan 1995, 1996, 1997, Prahalad & Hamel 1990) Low market share players can orchestrate a better combination of proactive strategies and be more profitable than market share leaders (Woo & Cooper, 1981)

Considering that the constructs profiling firm proactivity are ratios generated by combining an assortment of variables, the overall significance and explanatory power of the model are reasonably satisfactory. The results for the same, it should be noted, are relevant to the performance of large Indian pharmaceutical firms only.

2.0 Limitations Of The Study

A few of the chief theoretical and methodological limitations of the study are highlighted in this section

Theoretical : Attempting to fuse work from the disciplines of marketing, business policy and industrial organization economics, this study brought together a range of theoretical perspectives. Each discipline and each school of thought offered a variety of factors that could explain differential firm performance. A limited set of variables were selected from each subset and it is quite likely that there are more factors that do account for the balance unexplained variation in firm performance. For industry structure - industry concentration and exit barriers, for competitive strategy - breadth of product line, product customisation, product price, product quality, and capital intensity, and further the role of firm-specific

intangibles like corporate culture, functional skills, planning and implementation ability may be considered

The nascent state of theory formulation in the field of strategic management prompted this researcher to venture generation of constructs to operationalize qualitative aspects of firm behaviour by in turn employing a conglomeration of variables which were further brought together as ratios and represented as percentages. Thus, theoretical propositions regarding the nature of interactions among the specified constructs need to be explored further. Although the linkages between marketing intensity, market share and profitability were investigated, future research examining these issues is warranted.

Robust theoretical rationale and explicit measurement scales for some variables like market orientation, firm reputation and brand equity to enable examination of their individual explanatory power is called for. Similarly appropriate compatible measurement techniques backed by theory development for representing the effect of ploughing back profits was found wanting.

There is yet a need for theoretical development with regards to capturing the efficacy of a firm's product portfolio. This aspect, in fact, represents the cornerstone of strategy. Future research on generating measurement instruments based on a rigorous theoretical platform to measure the fit between environmental opportunities and threats faced by a firm and its subsequent response based on inherent strengths and weaknesses is called for. Representation of high growth market segment products in the firm's overall turnover is not comprehensive enough a criteria.

The aspect of representing the firm's intentions and efforts to control the supply function and consolidation and protection of critical complementary competencies vide the extent of vertical integration also leaves much to be desired. The entire prospect of modelling for capturing core competencies necessitates in-depth theoretical development.

Methodological : The prime limitation of the study was data availability, both for securing sufficient number of observations and also for obtaining the same for a much more number of years. If sufficient data had been made available, the ideal method to empirically test this study was designing a circular recursive model and solving the same in a simultaneous equations context.

While, the study was cross-sectional, most marketing and strategy situations are dynamic. Longitudinal studies that capture the dynamic components are necessary in order to provide greater validity to the results.

Although the data was predominantly in numerical values obtained from company annual reports (and other reliable research agencies) and not perceptual, obtained by administering questionnaires, cross-sectional pooling of data across the concerned years are an additional area of concern. While pooling does capture the dynamism of the behaviour of the firm in the long run, it also increases the potential for error.

Regressions are a statistical technique which seek to explain the variation caused in the dependent variable because of variations occurring in the independent variables. However, if the variation per se in either case of variables is low, then, resulting coefficients too, will be low. It is evident that fluctuations in variables like the ones used

for generating constructs deployed in this study cannot, in the short run, be large enough to produce a very high R^2 . For example, in the case of market share or retention ratios in-between-year fluctuations might not be so large as to yield a high R^2 when pooling data

3.0 Managerial Implications

Given the general proposition of this study that it is firm proactivity, attributable to the competitive dynamics phenomenon, that determines differential firm performance and largely supported by the empirical results, some important implications for practising managers in the Indian pharmaceutical industry are presented below

A crucial implication for managers in the industry is that the efficacy of marketing efforts, mainly those which promote a customer orientation, enhance firm reputation and build brand equity; is a prime determinant of firm performance. While a price penetration policy may yield gains in market shares, this need not necessarily translate into improved profitability. Considering that the demand for ethical drugs is price inelastic, the efficiency and competencies in marketing operations alone will determine the extent to which the firm's offering will be perceived as relatively superior thereby enabling the firm to command premium prices which is the source for superior profitability. Further, the fragmented nature of the Indian pharmaceutical market consisting of thousands of units, makes it imperative for firms to harness and build product differentiation competencies by appropriately positioning itself. Rather than focusing on securing operational efficiencies, the firm would be better off concentrating on effective marketing strategy formulation by targeting high margin niche market segments

The decision to participate in emerging rapidly expanding markets be considered with caution. While market segments exhibiting high rates of growth may offer promising avenues for the firm's growth, they may turn out to be ventures fraught with risk. The guiding principle in such situations would be to enter only those related therapeutic segments where the firm already has an established presence. Moreover, broad product lines will only hamper profitability of existing core businesses.

Formulation manufacturing firms would do well to initiate strategic exercises for integrating vertically by either making investments or acquisitions to enable the building of core competencies in either research and development, bulk drug manufacturing operations and/or in setting up autonomous distribution trade channels.

It is also, finally, recommended that Indian pharmaceutical firms adopt a consistent conservative dividend payout policy. This would help generate reserves not only to fund vertical integration projects, product launches and acquisitions but more so to finance research and development, a soon to be decisive factor in the Indian context.

4.0 Directions For Future Industry Specific Research

To consolidate the findings of this study, work to explore the market power theory in the context of the Indian pharmaceutical industry is called for. The possession of market power by a firm in a particular market means that the firm can behave in a manner different from the behaviour that a perfectly competitive market would enforce on a firm facing similar cost and demand considerations. An enquiry into this issue to determine whether large pharmaceutical Indian firms in the drug industry possess market power is to

ascertain, for products which are therapeutically homogeneous, whether they are able to command significant price premiums relative to the price charged by small firms

Research is also welcome to investigate the role of heterogeneous organizational competence in the context of pharmaceutical research. Generating a model to measure the effects of firm specific competencies in research productivity, for example, on firm performance, would vindicate the stand adopted by the resource based theory of the firm's proponents (Henderson & Cockburn 1994, Grabowski & Vernon 1990)

Finally, little attention is paid to the issue of innovative manufacturing-process technologies in the pharma industry, which provide for leveraging the following strategic advantages, over and above cost competitiveness. Accelerated time-to-market, rapid ramp-up, enhanced product functionality and customer acceptance and extended proprietary positions. Not only are such processes difficult to duplicate, but can also block a would be imitators push into the market. The role of such firm specific processes in acting as entry barriers warrants more research (Pisano & Wheelwright 1996)

5.0 Emerging Industry Scenario And Available Strategic Options*

As product patents in India become a reality and the onslaught of post-GATT proprietary drugs in the Indian pharmaceutical market materialises, the following appear to be the available proactive strategic options for Indian firms

- * Increase research and development outlays for basic/applied research from the existing 1.8 % of sales to that of international pharma companies in the range of 10

* Figures quoted in this section sourced from Business World (3-16, April, 1996)

to 20 percent. Here, India has an advantage as drug development costs only one-fifth to one-tenth of international costs. Also refer Section 9.0, Chapter II

- * Compete in the \$ 30 billion U.S., European and Japanese generics market by leveraging high cost-effective proprietary manufacturing processes relative to global players. Also refer Section 11.0, Chapter II
- * Pursue 'Reengineering' (making a structural change in a molecule and applying for patents) as an alternative to 'Reverse engineering'
- * Strategic partnering with transnationals to gain access to latest fourth generation products
- * Shift to participating in the \$ 6,000 million European and \$ 2,100 million Japanese markets for alternative (herbal and homeopathic) medicines
- * Export to emerging Asian, Latin American, African and other third world country markets. Also refer Section 3.0, Chapter II

Conclusions

This study by developing and empirically testing an integral model of strategic firm behaviour has contributed to the extant knowledge bank on strategic competitive behaviour of firms in imperfect markets. It describes the role of firm proactivity in destabilising competitive equilibria and in generating differential financial performance amongst large Indian pharmaceutical firms. The study largely extended the propositions forwarded by the resource based theory of the firm. It, perhaps, constitutes one of the few empirical pharmaceutical industry specific studies of its kind.