

Competitive Dynamics : An Empirical Analysis of Large Pharmaceutical Companies in India

Abstract of the thesis



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The discipline of strategic management has largely addressed itself to explaining differential performance amongst firms. Fundamentally the field is concerned with identifying whether it is the environment containing the competitive domain, that governs firm behaviour or, is it the nature of competitive activities of participating firms that in turn shapes the environment encompassing them. The conventional framework utilized by the strategy researchers is the 'SWOT' (strengths, weaknesses, opportunities and threats) analysis technique. Firms possessing superior performance are supposedly those that leverage their existing strengths and exploit available environmental opportunities while effectively circumventing threats and building on weaknesses. Such firms are more apt at consistently achieving a good fit between their resources and the relevant environment. Broadly the analytical framework may be categorised into having the external perspective and the internal perspective. The external perspective represents the environmental opportunities and threats dimension, while the internal perspective is conceived with analysing the strengths and weaknesses inherent in the organisation. The last few decades have seen major progress being made with regards to research in the area of the external perspective. In general, much of this knowledge has evolved out of the work of industrial organisation economists and later on shaped by strategy researchers. The advances made in this direction has yielded rich evidences taking the form of models which specify environmental conditions predominantly, offering varying opportunity/threat levels as determinants of differential firm performance. Although the Efficiency school argued that

it was efficiency which resulted in performance and in turn impacting industry structure, this school of thought did not provide for firm specific characteristics i.e. the strengths and weaknesses internal perspective. An ideal model would synthesis both the dimensions to provide a holistic picture of differential firm performance and relevant behaviour. Recently, over and above industry conditions, important advances have been made incorporating the critical impact of observable competitive strategies and also provide for the unobservable firm specific factors. Although research emphasising the internal dimension is yet emerging, the field of strategy is far from a grand unified theory of competition.

While the search for an integrated paradigm is experimented with in extant literature, the debate is more along dichotomous lines. One in favour of the external analysis component. The other in favour of the internal aspect. Each having to its merit a few credits. Mostly, the effort is to determine where the roots of competitive advantage lie. It is against this backdrop that this study proposes that, the source of differential performance does not entirely lie with the external environment, nor does it solely exist within the firm. The logic is quite simple. Perfect markets are illusive. Those firms more adept at exploiting imperfections in markets are the ones who will be exhibiting superior performances and in continuing to do so are the ones who are redefining requisite critical success factors. It is the dynamics of such competition, to seize the competitive initiative, which ensures that market imperfections continue to exist.

Participants in a competitive market domain may broadly be classified as either price-takers or price-makers. Price-takers are the class of firms which seek to optimize

profits (assuming profit maximisation as the firm's objective) within given environmental constraints. On the other hand, price-makers are those firms which seek to circumvent and influence the legitimate competitive market forces by deploying profits gained from operational efficiencies in strategic ventures that ensure a sustained comparative advantage in the long run. The former category may be called the firms exhibiting passivity while the latter as proactive firms. That variations in performance exist, is per se evidence enough that such probable postures adopted by firms are a reality. It is the proactivity of firms that generate asymmetries in a market's competitive conditions that perpetuates the existence of disequilibrating markets. The phenomenon in this study, is called 'Competitive Dynamics', and it was proposed that this is the cause of differential performances.

Given that the nature of this study is to explain the firms competitive behaviour in imperfect markets, the objectives were .

- 1 To develop an integral model of strategic firm behaviour that aims to make an incremental contribution to the theory of competition.
- 2 To demonstrate that it is the proactivity of firms, attributable to the dynamics of competition, which determines differential performances and that this phenomenon is a more rational explainer of firms achieving superior performances.
- 3 To empirically test this model by analysing the strategic behaviour of large pharmaceutical companies (interchangeably used in this study with the term firm), representing the organised sector of the Indian pharmaceutical industry, vindicating the role of proactive factors as determinants of superior financial performance.

The emerging perspective on the resource-based view of the firm provided the inspiration and rationale for the integral model proposed in this study. This study is also based on the premise that all firms participating in a market are not equipped with homogeneous competitive capabilities. This means that the access to and control of the required resources is also not equal amongst a given set of competing firms. Idiosyncratic resources are not easily imitable in the short run and prove to be a major source of comparative advantage.

The researchers in industrial organisation have emphasised the role played by industry factors in explaining differential performance amongst firms. This school of thought, representative of the Structure-Conduct-Performance paradigm, forwarded that industry structure influenced conduct (strategy) and impacted on performance. Empirical evidence to support this paradigm is limited and at best mixed. However, there were industrial organisation economists who broke with traditional SCP thinking and proposed that firms within an industry are not identical, exhibiting high variance in performances, implying that they were in turn influencing the structure of the industry in which they operate. This led to the acceptance of the proposition that conduct (i.e. strategy) does influence performance and is as important as the structure aspect. When market share is taken into account, industry concentration accounts for little, if any, of the variance in firm profitability. It was also posited that the association between concentration and profitability is due to efficiency differences among firms. These indications support the nature of this study.

Branching out from the above mentioned research stream, is the research bank on market share-profitability relationship. More than two decades of research have gone into investigating this relationship largely supporting the view that market share has a decisive influence on profitability. Chiefly the rationale behind this proposition is that market share volumes will materialize in scale economies, and more importantly result in the acquisition of market power making the firm a price-maker.

However, critics have pointed out that the role of third factors, mainly firm-specific factors, have not been adjusted for in the requisite models. When these firm-specific factors are included in a profit model the market share coefficient turns insignificant. But when they are dropped the market share coefficient is biased upwards. This also supports the argument forwarded by some researchers that market share per se has no intrinsic value. What matters are the factors that led to securing a significant market share, in the first place. In this sense it is per se a determined, output, variable. This study had opted to exclude market share from the model and solely include firm proactivity constructs to capture effects of the same. The findings of the market share-profitability relationship, in this study, support the same.

This study largely aims to extend work in the direction of the resource-based theory of the firm. This perspective argues that superior performance firms are those that have a comparative advantage in resources and make effective and efficient use of the same. It is this feature that drives strategy and leads to the achievement of a better competitive position. Contemporary emerging perspectives, like the core competence theory, are also illustrative of the need not to treat the firm as a 'black box'.

Finally, little empirical work in the context of the Indian pharmaceutical industry, to the best of the knowledge of this researcher has been attempted to operationalize the dimension of firm specific unobservables in a profit model

Interestingly, the pharma industry is an ideal illustration of a case for competitive dynamics. A unique feature of the pharma industry, specifically in the case of ethical life saving drugs, is the almost complete absence of consumer sovereignty. Demand for pharmaceuticals is contingent on a physician's prescription for the drug, which ensures no possibility of substitution. This implies the demand function for drugs is expected to be highly inelastic for either price reductions or price increases. The same also holds true with respect to the influence of consumer income upon quantity demanded. Standard economic theory suggests that demand for drugs is essentially independent of price and income.

Given the above, it then follows that large pharma firms should possess tremendous market power, earning above par profits consistently. To check such and other monopolistic forces, the state is compelled to impose a good measure of regulation. Not only on prices, but also on manufacturing practices, which to some extent is responsible for a uniform cost structure. Trade channel members (central in pharma marketing) are also unionized impinging on margins which are already controlled. In spite of these constraints, the large pharma firms do exhibit ample tendencies of pursuing a proactive policy.

The Indian Pharma Industry, too, is no exception to the above observed phenomena. It is characterised by seemingly ever increasing governmental regulations

and policy changes, shifting price controls, eroding profitability and consequently a vanishing bottomline, rigorous controls on formulations and an absence of international patent protection resulting in a maze of me-too products, increasing clout of trade associations and their constant demand for an increase in the trade margins, a staggering 23,790 large, medium and small units jostling for a place in the markets making this industry the most competitive one in the Indian Economy While such a competitive market structure enforces similar cost and demand considerations, large firms are yet found to be behaving differently A few of them have, on the contrary, achieved a transnational status. Finally, in the light of emerging post GATT-IPR challenges, this study stands more than validated

The conceptual model of strategic firm behaviour discriminated between firms adopting a passive stance and those asserting a proactive posture The later 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

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.

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.
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.
4. A major finding of this study is that the marketing activities of a firm have a most decisive positive influence on profitability. Providing proof that the product differentiation strategy enables the firm to command premium prices, 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.

5. A most important contribution of this study is the reporting of the insignificance of the role of market share in determining profitability. 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. Low market share players can orchestrate a better combination of proactive strategies and be more profitable than market share leaders.

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

Theoretical : 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. Theoretical propositions regarding the nature of interactions among the specified constructs need to be explored further. Robust theoretical rationale and explicit measurement scales for some variables to enable examination of their individual explanatory power is called for. 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 warranted.

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.

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. 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. 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.

The study has 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.