Dynamic strategy on biotechnology: a case study for merck biopharma

Business, Strategy

Background: Whether the manager develops a strategy focused on the viewpoint of one type of approach, although each approach has an abundance of copious paths to elaborate, but discussing each type of viewpoint is as if all have suitable differences.

We expect that from the adoption of commonness in resource-based view (RBV) and efficiency-based view (EBV), or in ready conformity, the viewpoint of mutual support, to construct a multiple-strategy viewpoint concept. Methods and findings: This research selects a case study, focusing on the pioneer in global Merck Biopharma. In-depth interview method, focus groups, literature analysis and other methods are carried out; and within the research process there is the collection of correlation data, and secondary analysis inspection is to be carried out on the strategic document.

Results: We developed a commonality, the ready conformity to mutual support viewpoint, to construct a “ dynamic”, “ resources”, “ capability” many types of strategic viewpoint construct, in the dynamic environment all the biotechnology’s unique resources and capabilities, can be bestow for future use, to establish the biotechnology’s competitive advantage. Conclusions: In the past traditionally strategic experts all elaborate and examine on the single point of strategy, but strategy’s single orientation can create the product providing serious gaps or weaknesses, neglecting important customer needs, easily suffering from the competitor’s counter-attack, as well as causing the organization to lose elasticity and narrow changes in the long-term.

Aside from these majority of discussions regarding capability separately views the internal and external environments of the biotechnology, in reality the two must be mutually bound and are inseparable functions/internal path and external path’s mutual bundling, in order to achieve an increase in synthetic effect.

Keywords: Dynamic capabilities, biotechnology, resource-based view (RBV), efficiency-based view (EBV)

Introduction

Competition’s essence is the unceasing change and evolution (Jacobides, 2005; Kor and Mahoney, 2005; Darnall and Edward, 2006; Adner and Zemsky, 2006).

The early competitive forces framework (Porter, 1980) in the industry competition’s evolution, offers a robust and systematic approach to analyzing these threats and opportunities, and thus explaining why some arenas have better profit prospects than others. Its greatest virtue is that it demands thinking about the future of the arena, as a consequence of shifts, disruptions, and trents in the underlying factors. Although the competitive forces framework is quite robust, and capable of being applied to diverse settings, there are some weak spots and limitations that require caution. First, competitive forces often there is little guidance on where to place the boundary. This is especially troublesome when boundaries are fuzzy, or arenas are converging because of changes in technology and functionality.

A second problem with the standard formulation of the five forces framework isn’t begin to capture the complexity of emerging industries in which the distinctions between customers, suppliers, and competitors are increasingly blurred, and the rules of engagement keep changing. Rivals may actively collaborate, may reduce the intensity of rivalry in any single arena and buyer-seller relationships are being recast as collaborations or partnerships with a positive-sum outcomes. Weakening the competitive forces framework presents the interaction of customers and suppliers as a zero-sum game – evoking images of the exercise of uncompromising bargaining power (Wright, 1986, 1990; Day and Reibstein, 1997; Yamin and Mavondo, 1999). Consequently, the rightness or wrongness of a strategy depends on the situation. There is no optimal strategy across all strategic situations. Because of this contingency dependency, strategic development is an evolving process.

Therefore because of the above approach viewpoint’s limitations, the pendulum angle sways towards the “ resources” as the basic viewpoint, included within this are the RBV and EBV approaches, recognizing the importance of the resource viewpoint. Literature ReviewEfficiency-based view (EBV) is useful in precisely describing strategic situations (Brandenburger and Nalebuff, 1995). The most commonly used equilibrium concept is the Nash equilibrium, an array of strategies (or action choices) such that each player believes he or she is doing the best he or she possibly can, given the actions of others.

The theory uses visual representations and a unique set of terms to describe situations, Thus, game theory provides a consistent framework for structuring competitive decision problems. This structuring process, in turn, focuses managerial attention on relevant competitive factors and helps configure a firm’s resource base for strategic advantage. Like any planning tool, game theory has its limitations, in the competition site’s balanced basic supposition is established on fair competitive stage of stability, optimality, rationality, as an industry mired in chaos may, it turned out to be a set of firms rationally responding to mutual uncertainty about each other’s rationality, thus appears some limitations.

In particular, the prescriptions game theory offers for “ optimal play” now depend on the conjectures firm make about the knowledge and rationality of their opponents – beliefs that may not and need not follow from standard economic textbooks. As Day points out, this is a half-truth, and like many half-truths its use will produce suboptimal results (Day and Reibstein, 1997). Resource-based view (RBV) approach focuses on the enterprise’s internal advantages sufficient to be used in any different situation, but still has its strategic blind spot.

The knowledge resource exchange discussion (Parise and Henderson, 2001) explains the resource domain as divided into explicitness and tacitness. The former such as the company, resource, factory etc can attain the ability to shift in the market, the latter like experience, culture, brand etc cannot shift and is difficult to imitate, is because the enterprise in the scale of economics and scope of resource, can form value creation and product development

resources exchange, but the inability to shift and the difficulty to imitate, can present the valuable creation of competitive advantage. But RBV meant, the firm if not already possessed, acquire or otherwise obtain the requisite assets to compete in the market. From this perspective, the process of identifying and developing the requisite assets is not particular problematic. If assets are not already owned, they can be bought. The resource-based perspective is strongly at odds with this conceptualization. Thus accumulating valuable technology assets, often guarded by an aggressive intellectual property stance.

However, this strategy is often not enough to support a significant competitive advantage. Although companies can accumulate a large stock of valuable technology assets and still not have many useful capabilities. Therefore the resources viewpoint obtained through the market appears to have some limitations. As Barney point out, unless a firm is lucky, possesses superior information, or both, the price it pays in a competitive factor market will fully capitalize the rents from the asset (Barney, 1986).

Research Design

This research selects a case study, focusing on the pioneer in global Merck Biopharma (Biomedical Engineering Research Laboratories, 2018). On the reliability aspect, this research target is introduced by an industry expert as well as an academic professor (Babbie, 1994), and can be presented in observation, test, interview, transcripts and intersubjective – these five stratification planes (Fetterman, 1989: 29); there are many approaches to having resource reliability, with replication logic’s research reliability’s

reproduction and representation and revisiting, with the demand for consistency (Graebner, 2004: 753).

On the validity part, this research does not discuss internal validity (causal relations) and external validity (conciseness), but construct validity as well as external expert review – these two are use to guarantee this research's validity; in studying the document situation, in-depth interview method, focus groups, literature analysis and other methods are carried out; and within the research process there is the collection of correlation data, and secondary analysis inspection is to be carried out on the strategic document, including company history description, organization construction, 2003-2006 Asia Pacific Regional Marketing Plan Book and Public Relations Activities Plan etc, using the multiple resources accumulation plan to achieve positive construction effects (Yin, 1994). Next select an external expert as the industrial high level manager (20 years and above) as well as a field expert to carry out the investigation of this research's accuracy (Hammersely and Atkinson, 1983: 1-2).

The interviewees – high level managers – were separately interviewed via phone: world's number one, Pfizer Pharmaceutical Ltd. Taiwan's general manager Mr. L; world's fifth, Schering-Plough Corporation, Taiwan regional general manager Mr. W; as well as Eli Lilly and Co. Taiwan Inc. 's Academic Director Mr. C; using the Cross Triangular Method to re-examine the authenticity and accuracy of the research object's interview content, as well as moderately stating the situation issue, thereby able to accurately respond to real significance desired by the research institute (Babbie, 1994).

Research FindingIf it is desired to understand the essence of the enterprise’s unique characteristic of competence/capability, it is necessary to understand the enterprise’s face the several dynamic veins of internal and external environments, in accordance to the created conformity, creating the organization’s internal and external departments’ dynamic resources and capabilities, responding with the enterprise’s intention and innovation’s competitive advantage.

Regardless if faced with internal resource origin and capability as well as the suitable paths of the external environment, management process, market stability as well as competition signal, by itself models the evolved path’s Strategic Specific Assets process, describing the real significance of the enterprise’s dynamics and competitive advantage. This research uses the enterprise’s external environment and internal core ability divided into the external path and internal path’s two-track elaboration, the affiliated literature materials, in-depth interviews, focused discussion and the external expert’s inspection of the content’s conformity, the company proposes a correlation propositions.

Distinctive resourceLong-term superiority’s only foundation, obviously is the ability to continuously innovate (Sarkar and Sen, 2006; Gvindarajan and Kopalle, 2006), in the situation of a cross-century challenge, not only needs an exuberant business center with the initiative to attack, utilizing innovation management, on one hand makes the first move and accelerates production and develops the innovation of activities, on the other hand within the industrial structure, striving for the product’s dominant position, at the same

time expanding market sales scope, accumulating brand awareness (Garund and Kumaraswamy, 1995), gradually molding the core leadership position and future industrial structure operation model (Gvindarajan and Kopalle, 2006).

Regional Sales Manager for Asia pointed out: “…the innovated products’ success in the global market received esteem because the product is more effective than its competitors, moreover regardless of product combination, prevention and treatment medicine all have outstanding performances, for example: the antibiotic, pain control and disease treatment etc four main domains are all outstanding…”. Therefore innovative research and development of strategies is one of the important strategies in dynamic environment enterprises, innovative research and development strategy has a large influence on the enterprise’s achievements and rise (Barney, 2002), but Merial in medicine as well as vaccine innovation research and development, is globally the apex in the first step of each animal medical healthcare industry (Biomedical Engineering Research Laboratories, 2006).

Merck Research and Development Manager for Asia said: “…whether it is in research and development or product all conforming to USDA, EPA, FDA and EMEA’s international standards, in each production level it is insisted each process and step be carried out strictly, conforming to health, security, environmental protection, quality control, guarantees as well as legal standards, persisting in global factories, production conforms to international highest product quality and safety standards, as well as persisting on the validity of related products, whether it is used on medicine or vaccine. ” But

to maintain competitive advantage’s effects from core competence, the enterprise uses the distinctive resources and idiosyncratic capability to achieve the fastest opportunity for change (Prahalad and Hamel, 1990; Foss and Foss, 2005). But innovating research and development itself is also a special technical characteristic, the research and development department manager said: “…our research and development technology is a series of complex flow technologies, especially some diffusing barriers, and it is difficult to use simple formulas, charts, or usually used terms for study, completely blocked and impossible to investigate. ”