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## A QUESTION OF STRATEGY: TO BE A PIONEER OR A FOLLOWER?

**ABSTRACT:** *One of the most important questions faced by business leaders in the strategic management process is a choice of timing to launch new product/technologies and enter new markets. There are two options: to be a pioneer or to be a follower. Both have advantages and risks. Pioneers often have higher profitability, greater*

*market share, and a longer business life, but the relative success of each strategy depends on several factors, both internal and external (pace of evolution of technology and markets).*

**KEY WORDS:** *pioneer, follower, first-mover advantage*

**JEL CLASSIFICATION:** M10, M30

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## **1. Introduction**

The question of first-mover advantage has long been a subject for intense discussion by economists and business people. It is recognized that first market entry rewards pioneers, the main initial reward being the biggest market share (Urban et al, 1986). This reward decreases over time as new firms enter, forcing pioneers to take actions to increase and/or defend market share. However, market share is often not highly correlated with other important performance measures (profitability, survival, or sales growth) in new industries, and this has led to changes in business strategy (VanderWerf, Mahon, 1997).

Historically the advantages of being a pioneer have been promoted to a much greater extent than the risks (Lieberman, Montgomery, 1998). The actual outcome depends on the initial resources of the pioneer, as well as on the resources and capabilities subsequently developed in response to those of the followers. Environmental change certainly provides opportunities to first-movers, but firms must initially possess the organizational skills and resources to capitalize on such opportunities (Kerin et al, 1992). Additionally, the question of whether to be a pioneer or a follower is of increasing importance in the modern Age of Information/Uncertainty.

Speed of entry into any market is always of great competitive importance. Perhaps an enterprise intends to develop a new product or a novel technology to generate new products, creating a new industrial sector, or even a whole new industry. Alternatively a company wants to be first to invade a hitherto unexploited national or regional market. In all cases, companies are trying to beat the competition. This is superficially similar to an athletic contest, in which every runner tries to finish first, but in business, the race never ends. Competitive advantage has to be continuously maintained. A temporary innovation-based monopoly has to be transformed into a sustainable long-term process or product. However, there are companies that consciously choose to follow, rather than innovate, believing this to be a more advantageous strategy.

Pioneering and first-move advantage can be achieved in several ways: 1) by making new products, 2) by using a new process, or 3) by entering a new market (Heiens et al, 2003). In all cases, pioneers create new market demand for their products/services and continue to satisfy that demand before other enterprises enter the same market. It has also been claimed that first-move advantage can be established by new advertising campaigns, initiating price changes, and the adoption of new distribution techniques.

The first two cases (new product or new process) fall into the category of technological pioneering. Technological pioneering refers to the development and commercialization of an emerging technology in pursuit of profits and growth (Zahra et al, 1995: 144). The third case is described as market pioneering, when an enterprise with established products and technology is the first to enter a new market. Both technological pioneers and market pioneers, through their timing and actions, are first-movers. Other companies are followers. The latter can be divided into early or late followers (or entrants). Early followers enter the market soon after the pioneer; late followers enter after more time has elapsed.

In any company, the choice of whether to be a pioneer or a follower must be incorporated in the strategic planning process. A pioneer strategy is compatible with the choice of a broad or a focused differentiation strategy. A follower strategy is compatible with the choice of a broad or a focused low-cost strategy (analogous to Kaplan, Norton, 2004).

## **2. Advantages and Risks of Pioneer and Follower Strategies**

Pioneers gain advantage by making first moves in technology, product or marketing innovation. These advantages are called first-mover advantages. Other enterprises are followers, they aim to maximize the late-mover advantages and to minimize late-mover disadvantages.

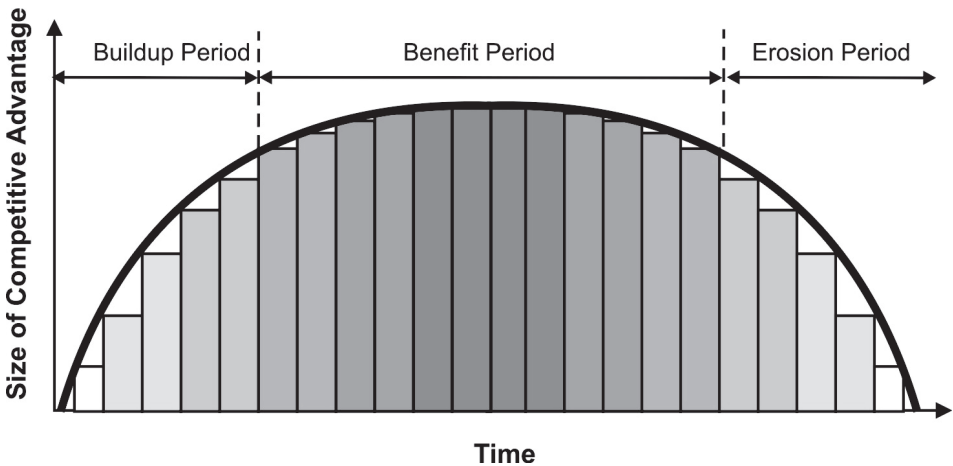
First-mover advantages are: 1) owning the positive image and reputation of being a pioneer, 2) reduction of total costs through control of new technology, and supply and distribution channels, 3) the creation of a base of loyal customers, 4) having the ability to make imitation by competitors as difficult as possible (Thompson, Strickland, 2003: 193).

Pioneers try to make a competitive advantage through being first in a new field. Building a competitive advantage is a time consuming process (time is the horizontal axis on figure 1) and is called the build-up period. This period can be minimized if an enterprise already has the necessary resources in place and the customer response is positive and rapid. Build-up periods can be longer if demand growth is weak, or the technology takes several years to perfect, or if it takes time to establish manufacturing capacity..

The size of advantage is shown on the vertical axis. It can be large (as in pharmaceuticals, where patents result in a substantial advantage), or small (as

in the fashion industry, where popular designs can be imitated quickly). After the build-up period comes the benefit period during which a company enjoys the benefits of competitive advantage. The length of this period depends on both the responses of the followers and the success of pioneers in enhancing and strengthening their position in the market. The overall magnitude of pioneer competitive advantage depends on the extent to which followers: 1) benefit from the difference between innovation costs and imitation costs, 2) exploit saving innovation costs, 3) capitalize on the pioneer's mistakes, 4) benefit from economies of scope, and 5) influence/change consumer preferences (Kerin et al, 1992: 47). If followers are successful, the period of competitive advantage erosion begins.

**Figure 1.** Building and Eroding of Competitive Advantage



(Source: Thompson, Strickland, 2003: 186.)

Generally, the greatest first-mover advantage is in being the market leader and in maximizing early revenues from the products/services. Thanks to the initial temporary monopoly from innovation, pioneers are in a position to charge higher prices for their products, and thus maximise profits. This strategy is popularly called “skimming the cream”. Pioneers can also create new sources of revenue through licensing, but this generally produces the lowest rewards for entrepreneurship.

In most cases, pioneers continue to hold the biggest market share even after the entry of followers into the same market. High profitability can be maintained through high entry barriers in the form of resource control (control of technology,

locations, managers and key employees). Also, the inevitable learning curve can positively influence the pioneer's market share. These advantages are summarized in the teachings of one of the greatest military theorists ever, Chinese general Sun Tzu. Sun Tzu wrote: "Generally, whoever comes first to the battlefield, and awaits the enemy, will be rested; but, whoever comes last and has to go straight into battle, will be tired. So, one who is skilled in war constrains the others but is not constrained by the others" (Cu Sun, 2005: 81).

High switching costs also benefit the pioneer. There is inevitably a cost to the customer to switch to a follower's product. Naturally, a pioneer has to continuously improve his own product, in case followers offer an alternative whose enhanced performance outweighs switching costs.

The main first-mover disadvantages (Lieberman, Montgomery, 1988) are: 1) free-rider benefits to followers, 2) market and technological uncertainties, 3) unforeseen changes in technology or customer needs, and 4) incumbent inertia, which results in the gradual updating of existing technology, rather than the adoption of new and improved technologies. Several factors influence the size of the risk in being a pioneer. For instance, R&D (research and development) costs involved in innovation can be so high that they may not be recovered in revenues. It is logical that the risks associated in a completely new product are greater than those associated with incremental product changes (Min et al, 2006).

Another difficult task faced by pioneers is in creating primary demand for a completely new - and non-branded - product. Educating customers about a novel product can be very expensive. Nevertheless, pioneers usually have longer market lives than their followers. In contrast, followers try to create selective demand, for a specific brand. In their case, technological standard has been established by the pioneer, hence they avoid these costs.

Bandwagon effects can increase the risk to followers. Bandwagons appear when companies make strategic decisions - such as new-product development, technological innovation, or even an acquisition - in response to the actions of other companies (McNamara et al, 2008). Institutional bandwagon pressures appear when non-adopters are pressured to mimic the actions of early adopters to avoid appearing different. Competitive bandwagon pressures appear when non-adopters fear they may be disadvantaged. Bandwagon companies often base decisions on informal information, ignoring criteria used in rational decision making processes. Very often heuristics are used, thus "company XYZ has an excellent track record, so, if we follow them, we will not make a mistake".

Networks are currently envisaged as company environments in which value for customers is created. Consequently, when discussing new management challenges, we compare how networks compete against networks, rather than companies competing against companies (Cares, 2006: 40-41). This has implications with respect to choice of pioneer or follower strategies. New products created through effective cooperation of networked members are more likely to dominate new markets. There are also associated risks.

In the context of networking achieving pioneering advantages, consider innovation ecosystems. Innovation ecosystems are forms of strategic alliances focused on new technology and new product development. Through them, firms combine their individual offerings (in the form of parts) into a coherent, customer-facing solution (in the form of a final product). The total risk in these innovation ecosystems consists of initiative risk, interdependence risk, and integration risk (Adner, 2006).

Initiative risk is a type of risk inherent in every new venture. There are a lot of unknowns with the launch of any new product or service, both technical (does it do what it's supposed to) and with respect to marketing (is it acceptable to the customer).

Interdependence risk is associated with the uncertainties of coordinating the relevant contributors. We can estimate the joint probability that different partners will be able to satisfy their commitments within a specific time frame. For instance, suppose that each of three suppliers has a 0.9 probability of success in developing a part of the whole product. In that case, the probability of launching the new product on time is 0.66, or 66%. This probability is the product of the probabilities for successful completion of every partner, i.e.  $0.9 \times 0.9 \times 0.9$ .

The final type is integration risk. It is concerned with the uncertainties in the adoption process across the value chain. Time is required for all intermediaries in value chains to become aware of the product, sample it, and make orders. Logically, the more intermediaries, the bigger the integration risk for customer acceptance and loyalty. For instance, a flat-screen TV manufacturer needs eight months to bring a new screen to production. End consumers need four months to become aware of a new product before they start to buy it in significant numbers. Realistically, suppliers need six months to develop inputs for flat-screen manufacturers. If we add two months for the distributors to stock the product and train the sales force, the integration period will be 20 months ( $8+4+6+2$ ). If a flat-screen manufacturer is able to allocate additional resources and reduce

development time by 50%, a saving of four months will be made. Now, the total integration period will be 16 months (4+4+6+2), and there is a greater chance of achieving the product-launch target.

### **3. Conditions for Implementing Pioneer and Follower Strategies**

The resource-based view of companies is a concept often explored in the search for competitive advantage. This holds that competitive advantage is a positive consequence of the exploitation of resources that are valuable, rare and difficult to imitate. How long it lasts, is not simply a question of time flow, nor is it strongly connected with the patent period. The time competitive advantage lasts is a function of the time spent creating a pool of superior resources. The resources needed for a pioneer to succeed are different from those required by a follower.

In the case of technology, success often depends on radical changes, which are frequently the consequences of scientific discoveries. Accordingly large, financially-strong companies with well developed and funded (R&D) programmes are best positioned to be technological pioneers.

However, great technological pioneering will only gain market leadership if it is followed by successful commercialization. Innovative technological pioneering and market leadership do not always go hand-in-hand. Examples of success include Gillette in safety razors and Sony in personal stereos. But other companies failed in the commercialization of technological innovation, e.g. Xerox in fax machines, eToys in Internet retailing (Suarez, Lanzolla, 2005), Bowmar in calculators, and EMI in scanners (Mittal, Swami, 2004). Examples of followers gaining greater market share than pioneers include Seiko in quartz watches, and Matsushita in VHS VCR (Mittal, Swami, 2004).

Market leadership for pioneers is a consequence of temporary monopoly based on innovation. This needs to be defended and improved by carefully formulated and implemented strategies for innovation, distribution, pricing and promotion. Increasing investment in advertising and price cutting are the most frequently used ways of retaining market share (Urban et al, 1986). If a technological pioneer lacks marketing competencies, early followers will soon erode the initial advantage.

In contrast, the critical success factors for followers are strong competencies in production and marketing. Followers can gain advantages in cases when they

possess valuable assets, when learning curve effects are not crucial for profit, when customers have lower switching costs, and when the market is growing slowly. Clear positioning and strong promotion are essential for the market success of followers.

Some followers invest significant amounts of money in R&D, but, unlike pioneers, investment is narrowly focused into areas giving the best returns. Michael Dell has said that Dell's R&D strategy is shareholder focused. R&D projects result in product characteristics valued by customers who are prepared to pay for them. Those companies who invest in things that are technically interesting, but not valued by customers, are "over-inventing" (Stewart, O'Brien, 2005).

The choice whether to be a pioneer or a follower is strategic decision. The correct approach is to start by accurately establishing the current and future internal capabilities of the company. The choice depends on the likely length of first-mover advantage. This period is determined not only by the internal resources of the company but also by industry dynamics (Suarez, Lanzolla, 2005) or environmental dynamics (Suarez, Lanzolla, 2007). Industry (environmental) dynamics are created by the interaction of two important factors: the pace of technological evolution and the pace of market evolution. Both factors are external and beyond the control of any single company.

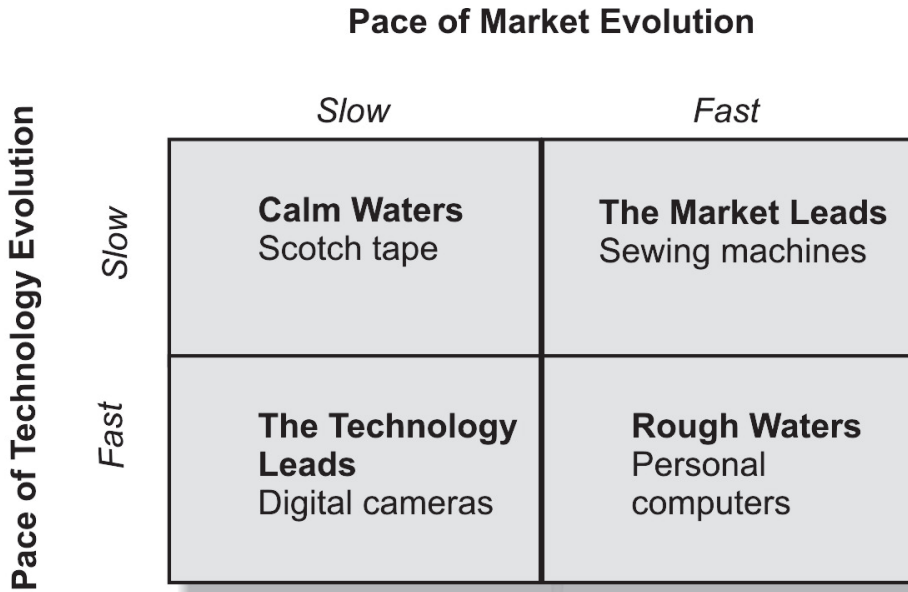
The pace of technological evolution refers to the number of performance enhancements with time. Some technologies, such as computer processors, evolve in series of incremental improvements. Other technologies, such as digital photography evolved in sudden, disruptive bursts, with little or no connection with earlier technology (digital photography actually started to displace film). Regarding the pace of technological evolution, the faster or more disruptive it is, the more difficult it is for any enterprise to control.

The pace of market evolution refers to market penetration - the number of customers who bought the product in a specific time period. The market for automobiles and fixed telephones evolved more slowly than the market for VCRs and cellular telephones. Fixed telephones took more than 50 years to reach 70% of households. Cellular telephones achieved the same level in less than two decades (Suarez, Lanzolla, 2005: 123). Regarding the pace of market evolution, the greater the difference between old and new product, the greater the uncertainty about the pace of market growth and the number of market segments.



The combined effects of market and technological change determine a company's chances of achieving a first-mover advantage (see the figure 2).

**Figure 2.** The Combined Effects of Market and Technological Change



(Source: Suarez, Lanzolla, 2005: 124)

There are four possible combinations. “Calm Waters” represents the situation where both technology and market grow slowly. The gradual evolution of both factors allows pioneers to create long-lasting dominant positions. The slow pace of technology evolution makes it difficult for followers to differentiate their products. The slow pace of market evolution helps pioneers to create, defend and develop new market segments. Scotch tape is an original product of the very innovative company 3M, which has maintained first-mover advantage. For this combination, resources are of less importance for defending competitive advantage. One of the more relevant is brand, others may be physical assets, location and financial resources.

When “the market leads, and technology follows” describes situations where the technology evolves gradually but the market grows quickly. It is very likely that first-mover advantage will be short-lived (as in the case of Howe sewing machine, after Singer entered the market). First-mover advantage can be through superior

design, marketing, branding and capacity production (using all these strategies, Sony maintained a long lasting advantage with the Walkman, the first personal stereo).

When “technology leads and the market follows” is the situation where the market evolves gradually but the technology evolves rapidly. Success in these circumstances requires significant R&D effort backed by strong finances. This is exemplified by digital cameras. Sony launched the first digital camera, the Mavica, but sales remained stagnant for a decade. After many performance upgrades, sales finally started to increase. Throughout this period Sony kept a leadership position in the USA market.

“Rough waters” describes situations where both the technology and the market evolve rapidly. Sustaining first-mover advantage is very difficult as it requires superior resources in R&D, production, marketing and distribution. In this situation pioneers become vulnerable very soon. A good example is the case of Netscape, the first Internet browser created in 1994. Today, Microsoft Explorer is dominant. However, Netscape created wealth for its shareholders, since AOL paid around \$10 billion to the owners. On the other hand, Intel is an example of a company that has strongly defended its leadership position, through significant and focused investment into resources, as well as acquisitions.

From the above, we can conclude that, in some situations, the creation of first-mover advantage can be time-consuming, expensive and ultimately unsustainable. In such situations, it is wiser to be a follower.

The success of market pioneer strategy, in the sense of rapid penetration of a new market before competitors, depends on identification of challenges and risks specific to the targeted market. This includes analyzing company resources, predicting market growth, and forecasting future relationships with competitors. The emphasis today is on emerging markets, those markets inside states that have accepted the economic model of developed countries in the past few decades. China, India and Brazil are the largest, but similar characteristics are found in the Southeastern European countries, including the Republic of Serbia.

Emerging markets are characterized by uncertainty. Pioneers have to minimize those uncertainties and profits are often less than in other markets. Followers usually enter when market conditions stabilize, the infrastructure is in place and customers educated. One way to minimize the risk is to enter through a joint

venture with a local partner. Such partners can possess important resources, such as knowledge of local markets and distribution channels (Cui, Lui, 2005).

Successful penetration of emerging markets often depends on the image of the country of origin of the pioneer. Customers are usually prepared to pay a premium for products which come from developed countries with high reputations, especially the USA, Japan or Germany (Gao, Knight, 2007). This preference is most marked for products associated with a specific country, e.g. Swiss watches or Scotch whiskey. Country images are not the creation of individual companies, but rely on the concerted efforts of national government agencies and individuals over a long period.

#### **4. Conclusion**

The process of strategic business planning consists of making a series of choices: generic strategy, method of growth, diversification strategy, product-market segment selection etc... One of the most important is the choice of timing or market entry - when to develop and commercialize new products and technologies and when to enter new markets. There are two options: to be a pioneer or to be a follower. Followers also have to decide whether to be early or late entrants. All options have advantages and risks. Research suggests followers may fare slightly better than pioneers but, logically, the outcome should depend on the specific characteristics of each new market (Lieberman, Montgomery, 1998:1122).

The magnitude and durability of pioneer competitive advantage drives first-mover strategy. In most cases, pioneers enjoy benefits in the form of a greater market share; but market share is only one performance measure. Planners must also consider other, possibly more relevant, factors such as profitability, or sales growth. Concentrating on shareholder focus and value-based measurements will increase the chance of making the correct strategic choice.

Most current strategic management approaches emphasize the importance of possessing strong internal resources and competencies for implementation. The resource-base determines choice of strategy. A pioneer strategy implies greater R&D and financial resources. A follower strategy implies strength in marketing and production. This is of great importance when allocating limited resources. Understanding internal resources and competencies is the first pillar or strategic analysis.

The duration of the first-mover advantage period depends on both internal and external factors. The latter are beyond the control of any single enterprise. An understanding of external constraints on entry order and lead times is the second pillar of strategic analysis. Two external factors are especially important: the pace of technological change and the pace of market evolution. Rapid changes in both generally reduce the period of first-mover advantage. In the current Internet era, both technological and market evolution happen almost in real time. Internet-based technologies promote the emergence of new businesses and the transformation of old. This constant creation of market entry opportunities presents new challenges for strategic management in the 21<sup>st</sup> century, and potential areas for future research.

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*Dorde Kalićanin*

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