
Marketing in High Tech Companies: A Valid Ally for Business Success with the Associated Risks

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Abstract

Marketing is a branch of economic science that deals with the descriptive study of the market and the analysis of the interaction of the market, of users with the company. Marketing represents the tool to designate the success of the company within the market. Starting from this statement, in this contribution we will first examine the importance that marketing plays in High Tech companies, guaranteeing their success on the market, and then focus on the risks connected to them.

Keywords: High Tech, marketing, risk, companies

1. Introduction

Marketing is a branch of economic science that deals with the descriptive study of the market and the analysis of the interaction of the market, of users with the company. The term marketing originates from the English market to which the ending of the gerund is added to indicate active participation, action on the market itself. There are several possible definitions of marketing, depending on the role it is called upon to cover in the company in relation to the strategic role, the positioning of the company in its competitive environment. The main definition comes from Philip Kotler, unanimously recognized as the father of matter. He defines marketing as the social and managerial process aimed at satisfying needs and requirements through processes of creation and exchange of products and values. It is the art and science of identifying, creating and providing value to meet the needs of a reference market, making a profit: delivery of satisfaction at a price. The scholar also defines the role of marketing management, highlighting the tasks it is called upon to perform. In fact, it highlights that the task of marketing management consists in analyzing, planning, implementing and controlling projects aimed at the implementation of exchanges with target markets in order to achieve company objectives. It mainly aims at adapting the offer of products or services to the needs and requirements of the target markets and the effective use of pricing, communication and distribution techniques to inform, motivate and serve the market. The role that marketing takes on is different depending on the reference context. In fact, marketing can address the consumer market, and in this case we are talking about B2C marketing, that is business to consumer (often referred to simply as marketing), or to the business market, and in this case it is called industrial marketing or marketing. B2B (business to business). Services marketing (airlines, hotel chains ...) and institutional marketing (ie done by institutions) should also be mentioned. Of less economic significance is political marketing. A fundamental element of marketing is being, together with the sales department, the only

corporate function openly directed towards the outside world. Therefore, this activity can act as an "interface" between the company and the external context, observing its behavior and supervising, at least in part, the information flows outgoing from the company (whether desired or unwanted), and collecting the knowledge coming from the outside ; these include the weak signals that make it possible to understand, possibly in good time, the changes to the market that will take place in the near future. The analysis of the competitive position should be widespread in the direction of the various functions, but it is often left to marketing, which uses models such as the "5 forces of Porter¹" (theorized by the American university professor Michael Porter), analytical models such as the matrix of the Boston Consulting Group oMcKinsey's 7S, market research and surveys and market segmentations.

Marketing is also aimed at creating value for the customer, and one of its purposes is to create a brand positioning in the consumer's mind through brand management techniques. The latest trends are aimed at the study of experiential marketing, which embraces the vision of consumption as an experience, in which the purchasing process merges with perceptive, sensorial and emotional stimuli.

2. The marketing mix

Before highlighting the marketing characteristics of high-tech companies, it is necessary to highlight the operational levers of marketing more commonly known as the marketing mix. It is essential to know these levers as the actions that a company can take to influence potential customers involve the use of certain marketing levers. The actions that a company can take to influence potential customers involve the use of certain marketing levers. By the term "marketing mix" we mean the set of marketing levers through which a company supports one or more products. This concept was first formulated by Borden in 1953 and subsequently spread in the famous more popular version proposed by McCarthy (1960), also taken up by Kotler (1967). It is based on four categories: based on four categories:

- ✓ Product Product: we consider not only the product itself with all its characteristics, but also the ancillary services offered to the customer;
- ✓ Price: also includes discount and premium policies, payment terms and conditions, awarding of awards, terms and conditions of payment, granting of credit, etc. ;
- ✓ Place Place (Point of sale, read distribution): structure of): structure of distribution channels, inventory policy;
- ✓ Promotion: Advertising, sales promotion, etc.

The current version partially changes the name and meaning of the four levers, identifying them

¹The five competitive forces model (also called the analysis of broad competition or Porter's five forces analysis) is a tool that companies can use to evaluate their competitive position. The model aims to identify the forces (and to study their intensity and importance) that operate in the economic environment and that, with their action, erode the long-term profitability of companies. In fact, these forces act continuously and, if not properly monitored and dealt with, lead to the loss of competitiveness. Such forces are

- Direct competitors: entities offering the same type of product on the market;
- Suppliers: those from whom the company purchases raw materials and semi-finished products necessary to carry out the production process and who could decide to integrate downstream;
- Customers: the recipients of the output produced by the company who could possibly decide to integrate upstream;
- Potential entrants: subjects who could enter the market in which the company operates;
- Producers of substitute goods: subjects who place products on the market that are different from those of the reference company, but which satisfy, in a different way, the same customer / consumer need.

The analysis of these forces allows the company to obtain a complete picture of its competitive position, to make strategic decisions, to establish the behaviors and attitudes to adopt towards these forces.

- ✓ in the product,
- ✓ in the price,
- ✓ in distribution
- ✓ in communication

Let's see the details:

- ✓ managing the product variable means designing products capable of responding to the needs of customers in the company's reference markets, composing the range and monitoring it, in order to modify existing products, eliminate those no longer consistent with the strategy of enterprise, develop new ones;
- ✓ managing the price, in its quality as a particular attribute of the product, means determining the most appropriate price level to be applied for the products sold, as well as setting appropriate discounts and any price differentiation policies;
- ✓ the selection and management of the distribution channels through which the company's products buy the markets, and also the development of a physical distribution system for transport, storage and delivery of products, fall within the scope of distribution;
- ✓ marketing must finally communicate to the demand the characteristics of an offer that has become more complex, as the differentiation and variability of the products increase over time, and therefore less and less interpretable on the basis of price alone. The communication variable therefore includes all the actions that the company takes to inform consumers and stimulate them to buy. On the other hand, the communication mix includes, in addition to the typical levers of commercial communication, also public relations, through which the company communicates itself rather than the products.

The concept of marketing mix signals the presence of distinct marketing factors, each of which has its own articulation and internal complexity and is interdependent with all the others. Among the various possible combinations, the company must choose the one that best suits internal resources / skills and a specific target market. The need for integrated management of the distinct marketing levers in order to avoid inconsistencies between the actions taken by the company in the market and to enhance the synergies between the individual variables that make up the mix, assumes a fundamental importance in the new marketing management approach and postpones to the planning dimension that the function takes on. This significance is demonstrated by the definition of marketing management approved by the American Marketing Association “planning and implementation process of the conception, pricing, promotion and distribution of ideas, goods and services in order to create exchanges that allow to achieve the objectives of individuals and organizations”.

3.The strategies of high tech companies

High tech companies have particular characteristics which are at the origin of specific strategies. These strategies answer four questions

- ✓ When to enter the market
- ✓ How to survive the shakeouts
- ✓ What strategies to adopt when a dominant design emerges
- ✓ What strategies to adopt when radical innovation "invades" a stable business.

It is a widespread belief that one of the most difficult decisions for the high tech company is choosing the moment in which to enter the market with an innovation and with which policy to enter. When innovation creates a new potential market, there are two main options: be the first (pioneer) or wait. Day and Freeman examined the benefits of a quick entry into a high-tech market. Following Abell, they took up the four product-market dimensions (technologies, customer function, value-added stage and customer segments) to remember that innovation can concern each of them. They examined the risks of premature entry into the high-tech market and studied the strategies adopted by firms that 'survived' and those that entered the later stages of the life cycle. Aaker and Day, for their part, questioned the widespread belief that rapidly developing markets are more attractive than "mature" or declining ones. In one article, the two authors first examined the arguments that are typically used by those who argue for the benefits of rapid entry into a rapidly developing market. Subsequently they examined the risks of premature entry into the market and the benefits for those who delay. Day and Freeman, taking part in the article by Aaker and Day cited above, have identified the factors that inexorably determine the emergence of shakeout in a sector and the strategies adopted by companies to successfully survive this shakeout. Let's first start by examining the benefits of being the first to hit the market. In this type of market, the company finds itself operating in a mature market and with customers who already know and use a product or service. After this brief introduction, let's see what the advantages are:

- ✓ **Takes the best positions.** The company that innovates chooses the market segments that promise the best profitability. Consequently, it leaves to potential adversaries market segments which are subject to the risks of unprofitable production volumes and the risks of price reduction (to respond to new entrants). The company that first launches a product chooses the best distribution channels. It can tie retailers and other intermediaries to itself with exclusive formulas, forcing those who follow to choose alternative channels or to offer high margins (which further depress the economic convenience to enter). It is easier to attract a customer with a new product or service than to convince him to abandon a product or service he already uses to move on to another that has the same characteristics but carries a different brand. While in a mature market to the entry of a new competitor the companies already present in a market respond by lowering prices, increasing promotion costs or other forms, they are rarely ready to react to a company that enters with a new product and which often creates a new market. It is also true, however, that in order to attract customers to a new product, it is necessary to inform, convince and prepare for use. ATMs (Automatic Teller Machines) took ten years to go from technical feasibility to actual use. Investments are often significant. Especially if it is a new service, it is necessary to overcome the reluctance that the customer often has in running the risks perceived in abandoning what they already know. Gaining a share in a growing market means increasing sales (and likely profits) as the market grows. The situation is quite different in a mature market, in which not only is it difficult to conquer shares, but then once conquered and after having consolidated the position, sales do not grow or grow little.

- ✓ **Strengthen technological superiority.** Firms that are the first to introduce a technology to the market, who are the first to experience customer responses, can also benefit from a second generation of technologies.
- ✓ **Discourages competitors.** Entering a new product on the market and even more creating a new market is a strong signal for companies that potentially would be able to imitate. This is especially true if the "pioneer" has resources, tradition, notoriety. Furthermore, the "pioneer" can quickly build barriers by investing in image, occupying distribution channels that make them exclusive, stipulating agreements with suppliers and other partners. Potential competitors can opt out even if the development prospects are high. Much depends on the barriers and the weight that the new market has in the overall strategy of potential attackers. If it is considered "critical" they also enter with high barriers. If innovation is successful, demand grows faster than supply. Under these conditions, at least for a certain time, the "pioneer" can charge higher prices. However, there is also a downside here. High prices attract new competitors. Furthermore, some of these - especially if they have ample resources - may choose the path of offering low prices for a penetration strategy.
- ✓ **Create an image of a leader.** If the company that first enters the market is successful, it creates a leadership image that rivals can hardly know at a later time. Credibility is acquired not only with innovation but also with quality, distribution and communication. If the company that innovates is already known for having achieved success in similar markets, the image of a leader is even easier to build and defend.
- ✓ **Create customer loyalty.** Adopting a new product often means incurring costs that can no longer be "recovered" in a subsequent abandonment (switching). These are the costs that a company incurs to train staff, change procedures, change equipment. Loyalty can also depend on the uncertainty that arises from abandoning a product that you are satisfied with for another whose features and performance have not yet been tested. This advantage is all the stronger the more radical the innovation and leaves new rivals only the possibility of incremental improvements.
- ✓ **The benefits of experience.** The accumulation of experience in the first phase of product introduction can be a significant advantage both in the (subsequent) reduction of costs and in improvements in product performance. If this "learning" is difficult or expensive to imitate, the new rivals face a difficult barrier to overcome. This barrier can in certain situations be built with a patent, more rarely keeping the acquired experiences safe from imitations in whole or in part. The company that enters first accumulates experience in advance of its rivals. So it has an advantage in particular in cost reduction. If it quickly gains market share it is also able to reduce costs thereby creating a gulf for potential competitors. Thanks to the high volumes and the market share it has gained, it can lower prices to the point of dissuading those who intend to enter.
- ✓ **Sustainable advantage.** If the imitation is difficult, if the imitation times are long and if the "pioneer" moves frequently, the rivals are unable to keep up. In order for the "pioneer" to defend the advantages acquired, some conditions are necessary:
 - ❖ It must have sufficient resources to occupy and oversee the best positions (market size, extensive distribution), to build and strengthen the leadership image and to maintain technological supremacy (investments in R&D).

- ❖ The cost advantages must be acquired only by firms which enter the market first and which rapidly gain large shares
- ❖ Competitors, especially those who come from neighboring sectors, must evaluate as good (or overestimate) the ability of the "pioneer" to maintain positions and therefore fear of not being able to attack successfully.
- ❖ The technological advantage can only be maintained if the technology cannot be imitated or overtaken.
- ❖ Ultimately it is not enough to conquer a large share of the market, it is necessary to defend it and to defend it, it is necessary to have sustainable competitive advantages.

4. The risks of premature entry

Pioneers can fail either because they fail to overcome market resistance ("burnout") or because they fail to maintain initial superiority ("fadeout"). The risk of a "burnout" is greater than a "fadeout" when technological innovation is radical rather than incremental. The history of many technologies reveals that successful enterprises have often emerged from the ashes of the pioneers. Often the true pioneers fail to overcome the obstacles posed by high costs, uncertainties, slow payback which they can oppose only modest resources. Equally often it happens that the true pioneers come under the control of companies that subsequently enter or are permanently expelled from the market. In other words, true pioneers often fail to overcome market uncertainties. These uncertainties may relate to technology, costs, the evolution of competition, the degree of acceptance of innovation by the customer and the necessary financial resources. Let's examine them in detail:

- **Technology:** When the product is marketed, it is not certain that new technologies have the expected effect on production volumes and cost trends. It can also happen that a technology is mistakenly valued as a radical innovation, but customers then react differently. To be successful, the new technologies must stimulate the market support (demand volumes and profitability) necessary to overcome the initial stage. "Whoever enters first must navigate facing great uncertainty." "A safer strategy is to wait until it becomes clear which technology will dominate and only then try to develop it with an entry strategy compatible with the context"
- **Costs:** The experience curves do not always have the expected trend. Initial costs can go down but not for all (cost) classes. If they do not go down to the expected extent, the success of new products can be seriously jeopardized. It is not certain that the "pioneer" will be able to acquire experiences more quickly than those who enter later. It should also be remembered that although the existence of advantages deriving from experience curves has been amply demonstrated, these curves do not always snap, especially when the market is small.
- **Competition:** The introduction of a new product changes the competitive environment. The questions are many. How will the producer who is threatened by innovation react? What strategies will the rivals who imitate the pioneer adopt? Are there emerging technologies that can offer customers functions similar to those offered by the existing product? The risk is that competition may be tougher than expected. Furthermore, the

market can fragment into several segments and the "pioneer" must choose which of them to compete in. Consequently, the advantage of the surprise can fade.

- **Customer acceptance:** When faced with an innovation, customers may be cautious and prefer to wait rather than buy. This happens especially when innovation does not quickly translate into a standardized product, when the customer fears that the innovation will quickly become obsolete and when the quality is not stable and therefore the future evolution is not foreseeable. This situation reinforces the propensity to resist change dictated by the fact that customers are already satisfied with existing alternatives and are reluctant to change a role model. It is always difficult to predict the response of a market, especially when the product is new and when the first launch is followed by an euphoria that soon disappears. The collapse in sales also has disastrous consequences for the "pioneer", especially if the new rivals, who have entered the market in the meantime, try to survive by lowering prices.
- **Financial resources:** "Burnout" often originates from the company's inability to acquire the necessary resources to overcome the early stages of market development (phases almost always at a loss). Sometimes it is human resources, more often financial resources. Various research shows that both small and large businesses have often failed to launch new products due to financial shortages in the face of unexpected demand developments or higher than expected entry costs.

Alongside these advantages related to entering the market first, there may be advantages even if you are not the first to enter a market. Let's see them in detail:

- ❖ **Advantages for those who delay.** Businesses that prefer to wait can have a number of benefits. First of all, they do not have to make investments to convince potential buyers of the benefits of the new product or service, as the "pioneer" has already disseminated the necessary knowledge. Second, by exploiting the mistakes of the "pioneer" they can offer a better product or service. Competitors can imitate the "pioneer" in various ways by taking advantage of his investments and early experiences. Let's see them:
 - Assuming (by hiring) collaborators of the "pioneer" can quickly acquire the necessary knowledge and can avoid making mistakes.
 - The company that enters later can "leap-frog" (override), the "pioneer" by using more recent technologies (which represent a development compared to the previous ones) or by building plants that give greater advantages of economies of scale.
 - After a certain time, the suppliers of components or equipment and systems also reduce costs through their own experience curves. Not only the "pioneer" benefits from this, but also the other competitors.
 - Those who follow the "pioneer" may have cost advantages for reasons other than experience; more advantageous locations, State subsidies or different structural costs.
- ❖ **Advantages for those who delay.** Businesses that prefer to wait can have a number of benefits. First of all, they do not have to make investments to convince potential buyers of the benefits of the new product or service

- ❖ **Technology obsolescence.** If a new generation of technologies is followed by incremental improvements, the "pioneer" is protected at least in a first phase. If, on the other hand, other radical innovations follow, incompatible with the previous one, those who introduced the first technology find themselves at a disadvantage. The managers of the entire organization find it difficult to abandon the old technologies for the new ones. They are reluctant to abandon technologies that have become mature but still have good profitability. There are many examples of "precursors" who have waited too long to abandon old technologies. Aaker and Day observed that often the "pioneer" faced with the threat of a new technology responds by investing in the existing technology, which he already controls, with the aim of revitalizing it. Often, if the point of diminishing returns has already been reached, the strategy fails. Unconstrained new entrants and the rigidity of the initial investments (made by the pioneer) can be benefited.
- ❖ **Customer needs change.** Innovation can stimulate the emergence of new needs to which the "pioneer" is not always able to respond.
- ❖ **Success factors change.** Each innovation creates a new competitive environment and triggers new stages of market evolution. If the "pioneer" is not able to acquire the new skills and the necessary resources, he may not be able to adapt to the new reality and may therefore lose positions. Often in the first phase the success factor is technology; in a second, it may be the ability to provide services. The "pioneer" may have been able to build advantages in technology but, as demand evolves, he may not be able to deploy the human and financial resources and organizational skills needed to consolidate the initial advantages. Often, when new success factors continually emerge, "late movers" are in the best position to compete.
- ❖ **Constraints in distribution.** Distribution channels have limited capacities (expressed in volumes). They are not always able to bring all the brands that the producers offer into contact with the final customer. A conflict can therefore arise in the distribution channels. If existing companies have consolidated positions (exclusive agreements, or their own distribution networks), the "pioneer" may find himself in difficulty. Such difficulties may also come from distributors who exploit the power they have (given the existing constraints on the expansion of distribution channels) and impose their own pricing, promotion, delivery, stock management conditions
- ❖ **Market crowding and shakeout.** Once the "burnout" has been overcome and the "fadeout" avoided, the pioneers can succumb if there is a shakeout originating from an excessive crowding of the market. The increase in the number of competitors leads to an increase in production capacity. If this is associated with a slowdown in the pace of market development (compared to the expectation of new entrants) or if those who attack and those who defend themselves adopt aggressive policies (price cuts), the market enters a phase of shakeout, of which in advance it is difficult to predict the if and when. But it is certain that many of these competitors will not be able to survive as independent companies. If they are not expelled from the market they are bought by other companies.

5. The life cycle of High-technology products

Geoffrey Moore, hi-tech marketing guru, revisits the model of the "technological adoption life cycle" in his best seller Crossing the chasm, stating that there are "gaps" between the different types of customers. These splits, present in the bell curve, are relatively small except the one that exists between the early adopters (visionaries) and the early majority (the pragmatists) which is a real "crevasse" in which companies risk falling by putting I risk their survival. The difficulty of selling a hi-tech product on the market is precisely that of moving from one group of customers to another, always offering the product in a different way, given that each type of customer has difficulty in accepting it in the same way in which it was presented. to the previous group. The first interval that appears on the curve is precisely the one that exists between innovators (innovators) and visionaries and is a consequence of the fact that there is a substantial difference between the innovator who loves the product exclusively for his technology and the visionaries who are not real tech geeks and expect a real step forward in being competitive. For example, companies that produce neural networks and video conferencing equipment seem to have fallen into this rift, products that, due to their high degree of innovation, have not managed to conquer the visionary market, not having been perceived as strategic to gain ground. over their competitors as they conquered the poor market for innovators. Once the first obstacle has been overcome, another much more difficult to overcome appears: the crevice between visionaries and pragmatists. Numerous hi-tech companies have already fallen into this chasm which owned a highly innovative and potentially successful product but which did not realize that they were right on the edge of the precipice. In fact, it is very easy to confuse an increase in sales with the beginning of a primary market while in reality we are at the end of the visionary market and near the chasm. The first phase of the hi-tech product market follows this dynamic:

- ✓ **I stage:** there is a market which is that of innovators and visionaries; enthusiasm reigns here and there are great resources to achieve the goal
- ✓ **II stage:** there is no market, here is the ravine; the number of customers does not grow and as a result the company begins to have losses
- ✓ **III stage:** the primary market begins and this is where hi-tech companies can build their fortunes.

Let's now trace the identikit of the first two types of customers, innovators and visionaries, to be able to understand what they differ in and how to win them over. Innovators are the first to buy a high-tech product when it is very expensive and full of flaws. They expect a very competent technical service and a low price, they want to make the "bargain" to be the first to own the product. Direct communication (for example direct mailing) works well with this type of customer who, once conquered, can be very useful both for acquiring new customers (they are the landing head for the visionary market), and because their feedback they can improve the product. Visionaries see technology as a strategic opportunity and usually have large budgets to be used in risky projects with great potential. By buying the product, they expect to get a big step forward and not a simple improvement and have the ability to see the "potential" return on investment deriving from the product. In favor of the pilot project, they are willing to tolerate some bugs and oversights in programming. Once conquered, they give excellent references in their own group and are at least a (economic) basis for attacking the difficult primary market. The saturation of this market can also occur after 5 or 10 contracts; at that point the company

finds itself without financial resources to feed projects of further visionary customers and must prepare to approach the primary market for pragmatists. There would be an opportunity to sell the product to other visionaries, but it would lead to requests for customizations that are very expensive both in terms of time and money. At this moment, the possible entry of a competitor with a better product that would cut the company out of the market if it is not ready to jump the chasm and start selling on the primary market is also to be feared.

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