

Chapter 17

Timing of Market Entry

17.1 Innovators and Imitators

Companies that want to enter a market with their product are either innovators or imitators. An innovation, according to Grant & Nippa (2006, 418), is

the initial commercialization of inventions via the manufacturing and marketing of new products or services or use of a new production method.

A company is thus innovator, pioneer or first mover if it is the first to come up with a new market offer (Lieberman & Montgomery, 1988, 51). Imitators, followers or second movers are those companies that enter the market with a similar product or a similar service after the innovator. Whether a company is pioneer or follower thus depends heavily on the definition of the relevant market.

Let us take the example of the online auction platform eBay. In September of 1995, Pierre Omidyar founded eBay in the USA, under the name of Auction Web. It was renamed eBay in May of 1996 (Cohen, 2004; eBay, 2004). 1997, 1998 and 1999 gave rise to three German counterparts called Feininger, Ricardo and Alando. Feininger is the pioneer on the German market (Möllenberg, 2003, 162) and is still active on the market today. The follower Alando is taken over by eBay a mere six months after its foundation, in July of 1999, and becomes eBay's German marketplace. Ricardo, on the other hand, focused mainly on auctioning new goods in Business-to-Consumer (B2C) auctions. The Consumer-to-Consumer (C2C) auctions also offered by eBay serve mainly to increase customer loyalty (Möllenberg, 2003, 163). In November of 2003, Ricardo ceased holding auctions in Germany. As part of the European e-commerce group QXL Ricardo plc, based in London, Ricardo today successfully operates an auction platform in Switzerland, amongst other ventures. According to Ricardo (2007), they are market leaders there.

Who was the first mover in the market for internet auctions, then? The question must be answered differently, according to market differentiation. If we assume

that there is a world market for internet auctions, then eBay must surely be regarded as pioneer (Möllenberg, 2003, 154). Principally, anyone in the world could have participated in the auctions. However, it must be noted that eBay's service was only available in English at the beginning, making such an offer relatively uninteresting for people who do not speak the language. Added to this is the fact that the shipping of goods beyond US borders is, in most cases, very expensive in relation to product costs. It would thus make sense to differentiate the American market from the German market, i.e. to perform a spatial market differentiation (Backhaus, 2007, 128 et seq.). Hence Feininger would have to be regarded as another first mover. Here, then, we encounter a problem that affects digital information goods in general. Every information good is, principally, available worldwide, due to its digital availability. There may, as displayed above, be restrictions and inconveniences, but the relevant market—as long as the provider itself allows it—must always be objectively defined, that is to say the world market must be observed. For our example, this means that there is only one real pioneer, which is eBay. Feininger is an imitator, who can only be seen as a first mover on the German market. The first commercialization of the idea of online auctions has already been performed by eBay. Even if it does not make much of a difference for the second mover, when it is founded, that another company is already active, in a (spatially) different market, it will be well advised to take into consideration the fact that, objectively speaking, it is the same market. Feininger should thus list eBay as a competitor in its value net.

If we differentiate between B2C and C2C auctions, however, Ricardo is the first mover in the market for B2C auctions. Here we can see very clearly how important market differentiation is for determining the pioneer position. It also becomes clear that to be successful, it is not enough to be the pioneer. eBay began, as a second mover on the German market, to offer B2C auctions in the year 2000 and was able, in time, to establish itself as market leader in this area as well (Möllenberg, 2003, 158 et seq.). In the end, Ricardo had to strike their colors in Germany.

The analysis of Alando, on the other hand, is wholly unambiguous: the company is a second mover for internet auctions in every regard—spatially and objectively.

17.2 Advantages and Disadvantages for First Movers

As we can see, the decision of when to enter a new market has great strategic meaning. Risk and opportunity lie side by side. Will the attempt to win the market as first mover succeed, perhaps even resulting in a lasting position of dominance, or will the new product fail? In that case, it might be prudent to enter the market as second mover. In the following, we will investigate the advantages and disadvantages of a first mover—first generally speaking and then relating to information markets—and whether this position is the decisive magnitude of influence for mar-

ket success. Simplified, the question is: is it enough to be the first on the market in order to keep one's competitors at a distance in the long term?

Every pioneer creates market entry barriers for the follower. These can have many causes. Lieberman & Montgomery (1988) name the following possible advantages for the pioneer: name recognition and image, a head start in experience, the implementation of standards on the market, monopoly-based pioneer profits (e.g. via patents and copyrights), the building up of a loyal customer basis and the resulting switching costs or the securing of resources (e.g. employees) which can be deducted only with great difficulty later. However, this position does not only hold advantages. Disadvantages faced by first movers are free rider effects, where the follower profits from the pioneer's investments (e.g. in R&D, infrastructure), the difficulty of estimating the exact market potential, or changes of customer needs and technological change. As shown in Figure 17.1, there are advantages and disadvantages to both the first and second mover positions.

First Mover Strategy		Follower Strategy	
Advantages	Disadvantages	Advantages	Disadvantages
development of entry barriers: – name recognition and image – head start in experience – implementation of standards – pioneer profits – loyal customer base – securing of resources	– free rider effects – high investments – unknown market potential – high risk failure	– error prevention – stable environment – exact market information	– oversoming of market barriers – lion's share of sales potential is siphoned off

Figure 17.1: General Advantages and Disadvantages of the First Mover and Follower Strategy. Source: Following Wirtz, 2006, 654.

One can be successful as innovator or as follower (Oelsnitz & Heinecke, 1997), but there are no universally valid statements concerning as to what makes the difference between the two positions (Srinivasan et al., 2004, 41 et seq.). As shown in Figure 17.2, there are examples where the first mover was successful and able to appropriate a large part of the innovation benefit. At the same time, counterexamples prove that the costs and risks of tapping a new market were too high in many cases, and the pioneers could not establish themselves.

Product	Innovator	Follower	The Winner
Commercial jet aircrafts	De Havilland (Comet)	Boeing (707)	Follower
Floating glass process	Pilkington	Corning	Innovator
X-ray apparatus	EMI	General Electric	Follower
Office PC	Xerox	IBM	Follower
Video recorder	Ampex/Sony	Matsushita	Follower
Diet Cola	R. C. Cola	Coca-Cola	Follower
Immediately picture camera	Polaroid	Kodak	Innovator
Pocket calculator	Bowmar	Texas Instruments	Follower
Microwave stove	Raytheon	Samsung	Follower
Normal paper photocopier	Xerox	Canon	open
Fiber optic cable	Corning	many companies	Innovator
Video game consoles	Atari	Nintendo/Sega	Follower
Throwing away diapers	Procter & Gamble	Kimberly-Clark	Innovator
Ink-jet printer	IBM and Siemens	Hewlett Packard	Follower
Internet browser	Netscape	Microsoft	Successor
MP3 player	Diamond Multimedia	Apple (iPod)	Follower
Operating systems for digital handhelds	Palm and Symbian	Microsoft (CE/Pocket PC)	Follower

Figure 17.2: Examples for Successful Pioneer and Follower Strategies. Source: Grant & Nippa, 2006, 431 based on Teece, 1987, 186-188.

If we then turn our investigation to information goods, we can find proof of both variants in the aforementioned examples as well. Thus the follower Microsoft took over market predominance for internet browsers from the pioneer Netscape and has held on to it until today. In the market for operating systems for digital handhelds, however, Palm and Symbian were able to hold their own for a long time. Microsoft probably still carried the day in 2004, when, in the declining mar-

ket for handhelds, more units with Windows Mobile were sold than units with the Palm Operating System (Lehmann, 2004). The market for Smartphones is different; here Symbian OS is keeping its competitors Microsoft, Apple and Palm at a clear distance (Postinett, 2008).

A large part of Microsoft's success is surely owed to its superior resource basis, particularly in the areas of product development, marketing and sales (Grant & Nippa, 2006, 433). Perhaps the most decisive point, however, is the installed base that Microsoft profits from. The huge number of Windows operating systems in the private as well as business environment leads to distinct indirect network effects in Microsoft's favor. In using Internet Explorer as well as Windows-based handhelds, the customer has clear advantages through their compatibility with his PC's operating system. Thus it is much easier for owners of handhelds to exchange data with the preconfigured Office programs than to have to install separate programs such as "Palm Desktop".

17.3 First-Mover Advantages on Information Markets

Which of the first-mover advantages are specifically relevant for information markets, then? To be the first to enter a market provides a head start in customer acquisition. The company that is the first to start building up its customer base has two decisive advantages it can profit from both upcoming network effects and customer loyalty effects, which are created via switching costs.

A growing number of customers makes the product more valuable for everyone via (direct) **network effects** (Lieberman, 2005, 9), and not only for the pre-existing—and this is where customers' expectations play a large role—but also for potential customers who have not made up their minds to buy yet. Indirect network effects serve as additional entry barriers for possible followers. A large customer basis creates an impetus for complementors to bring out complementary products to the basic good. If, on the other hand, the second mover has only negative prospects for gaining a large customer basis, it will be an unattractive option for complementors to support such a competing offer. Indirect network effects create even stronger barriers for followers when the established provider makes bundled offers, i.e. offering basic product and complement in one package (Peitz, 2006). If the follower is unable to be a one-stop shop, it will prevent him from entering the market. This becomes truer the more insecure the prospects for business success become. A second mover specializing only on one product from the bundle will regularly decide against market entry when financial straits must quickly be navigated or the prospects for future gains are not positive enough to justify market entry costs (Choi & Stefanadis, 2003, 2). If the new competitors' products are, in addition, incompatible with those of the established provider, and if the product's reproduction costs are near zero, the emergence of a natural monopoly—i.e. the monopolist is able, due to constantly sinking average costs, to always offer lower prices than two or more companies—is heavily encouraged (Sundararajan, 2003, 27).

The second advantage is in the existing customers being confronted with **switching costs** after their buying decision (Dietl & Royer, 2000, 327; Lieberman, 2005, 8-9), which tendentially rise further as time goes by, and may become prohibitive in the end. This results in a lock-in, i.e. it becomes economically unattractive for the customer to switch providers because the costs of such a switch would not warrant the expected gain. For the follower—this is shown by Farrell & Klemperer (2006) via model studies—it might still be relatively easy under these conditions to gain previously uncommitted customers by offering low prices, yet the building up of a comprehensive customer basis becomes markedly more difficult. If the second mover is dependent on the pioneer's customers in order to succeed, the market entry barrier can prove insurmountable.

It must further be noted that due to the dominant fixed costs for information goods the **economies of scale** that occur are disproportional (Dietl & Royer, 2000, 327; Shapiro & Varian, 1999, 168). Since they occur not only for the basic good but also for the complements, however (Ehrhardt, 2001, 28), it becomes even harder for a second mover to implement the cost reduction necessary for an attractive offer.

Another advantage enjoyed by first movers is in the establishment of **standards**. A (communication) standard means the totality of rules that form the foundation of human or machine interaction (Buxmann et al., 1999, 134). Such standard could be the grammar of a language or the rules of Hypertext Markup Language (HTML). Standardization is the process that leads to compatibility. Compatibility in turn means that products can work together. Companies that have already heavily invested in development, market entry and the establishment of a standard have a vested interest in their chosen standard's eventual success (Dietl & Royer, 2000, 327). This readiness to fight for a standard is a very credible signal to the stakeholders (customers, competitors, suppliers, complementors). Potential customers form positive expectations toward the prospects of the offered product and thus contribute to the creation of (direct) network effects.

If consumers expect the product to become popular, the network will grow relatively large (Lee & O'Connor, 2003, 251).

Competitors might decide not to enter the market with a competing product but to follow the standard. Suppliers will choose the purportedly more successful producer, and the complementors will also decide to align their offer to the basic product that promises the greatest distribution. This will speed up the creation of indirect network effects.

The entry into network effect markets is further benefited by the size and thus comprehensive **resource endowment** of a company. Smaller first movers are thus well advised to seek partners rich in resources (Srinivasan et al., 2004, 55), as it takes time and effort to finance, produce and market innovations, and not only in network effect markets. To be successful, a variety of complementary resources

are needed, such as finances, marketing, personnel etc. (Grant & Nippa, 2006, 424 et seq.).

Thus Chester Carlson may have invented Xerography, but he was unable over the course of many years to make his product ready for the market, since he lacked the resources to further develop his invention, to produce, distribute and furnish it with the necessary service (Grant & Nippa, 2006, 424).

The first mover then has the advantage of being able to collect the resources necessary for market success at an early stage. What is meant here is not the geographical localities and physical resources relevant for traditional goods, as these are mostly irrelevant for information providers (Lieberman, 2005, 5). Localities can only be spoken of figuratively, e.g. when considering domain names or access to a customer basis.

As an example, Monster.com paid AOL \$100 million in 1999 for the right to serve as AOL's sole provider of recruitment services for four years. This preemptive move blocked rivals' access to a leading consumer portal and helped build brand recognition and referrals for Monster.com (Lieberman, 2005, 6).

Very recently, for instance, AOL made a deal with Hewlett Packard. Both companies agreed that in the future, the PC manufacturer would preinstall the AOL header with search interface on all new computers (as of 2007).

Certain advantages with respect to the resource endowment can arise in human resources. Key personnel who are under contract with the pioneer are—at least in the short term—unavailable to competitors (Heindl, 2004, 247).

It is of large importance for information providers, however, to be noticed by the customers. We remember that information goods carry with them distinct experience qualities. In order to relieve the quality insecurities that these entail, a good **reputation** of the provider is of enormous help. Brands, as Shapiro and Varian (1999, 5) observed, play an important role:

The brand name of the *Wall Street Journal* is one of its chief assets, and the Journal invests heavily in building a reputation for accuracy, timeliness, and relevance.

In order to make a brand widely known, it must be built up and maintained with care over a long period of time, which already brings us to the decisive point: a first mover cannot create the positive attributes of a brand ad hoc, he must first build them up, which takes time and money (Heindl, 2004, 232; Besanko et al.,

2004, 439). And the fact that the latter cannot replace the former can be seen in the example of many dotcom companies spending many millions of Dollars on marketing endeavors during the time of the bubble, only to end up, in many cases, practically throwing it away.

Despite huge outlays on advertising, product discounts, and purchasing incentives, most dot-com brands have not approached the power of established brands, achieving only a modest impact on loyalty and barriers to entry (Porter, 2001, 69).

There can be no real mention of a true advantage in brand-building enjoyed by a first mover over his follower in this regard. There could, however, be an advantage for a pioneer in generating publicity and a positive reputation, which are both prerequisites for brand-building (Fritz, 2004, 195).

From the perspective of learning theory, the first comer will profit from a series of attention, image and recognition advantages. The [new, A/N] brand of a first party is received more attentively by the consumer, it is remembered better and, overall, rated more highly (Oelsnitz, 1998, 26 with reference to Alpert & Kamins, 1995).

If the pioneer manages to leverage these attention advantages into a good reputation and thus customer loyalty, this will represent an advantage. For second movers, this can represent a market entry barrier, as they know that they will have to make heavy marketing investments in order to overcome the innovator's more favorable position. In case of failure, these would be irrevocably lost as sunk costs. Three of today's best-known internet brands were successful first movers in this regard: Yahoo, eBay and Amazon. On the opposite scale we can find eToys, for example, who made enormous advertising endeavors in order to make their brand known but failed nevertheless (Lieberman, 2005, 6).

17.4 Empirical Proofs for First-Mover Advantages

The first-mover advantages mentioned above are comprehensively substantiated and, in individual cases, even supported by model analysis. Now, though, it is interesting to see what empirical proofs we can find for the existence of first-mover advantages. There are relatively many studies that stem from general pioneer research (for an overview, cf. Heindl, 2004, 65 et seq.), but there are only a few more specific analyses that apply for information providers. Thus Lieberman (2005) investigates internet companies in terms of how first-mover advantages have a positive on the company's success measured against the development of market capitalization and profit. Since the analysis deals to a large degree with in-

formation providers, we can admit the results to be valid for our considerations. Lieberman makes out two very interesting points. To be the first to enter a market bears advantages both when network effects are at play and when the offer is secured by legal protection, particularly patents (Lieberman, 2005, 28).

In segments with very distinct network effects, such as the ones observed by market makers or brokers (e.g. eBay, E*Trade, Expedia, Monster, DoubleClick), a first mover has measurable advantages (Lieberman, 2005, 29). Providers as well as demanders here have a vested interest in meeting the largest possible number of market participants from the opposite spectrum of the market. This will favor the creation of a single, dominant platform, which in most of the observed cases is the first mover's. The pioneer thus has a good chance of being the first to reach critical mass and dominate the market.

The success of internet pioneers is also measurably greater if they protect their offer legally and build up a large portfolio of patents, such as Amazon or Yahoo have done, for example (Lieberman, 2005, 30).

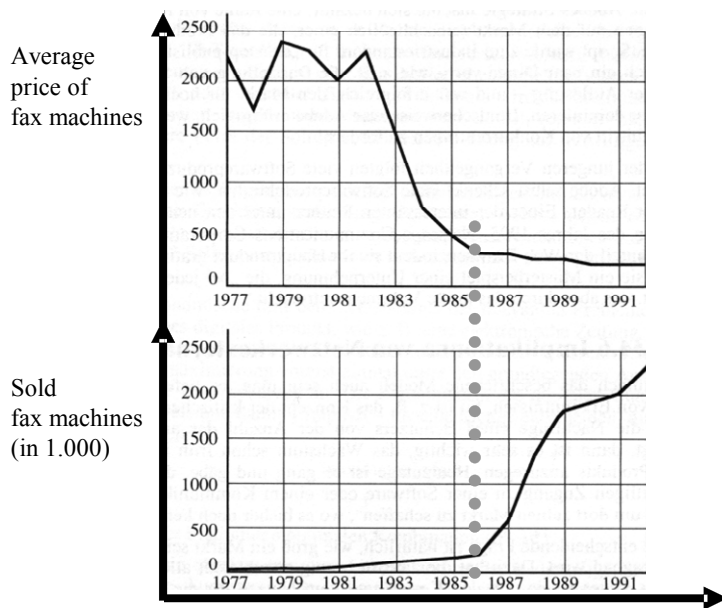


Figure 17.3: Market Development for Fax Machines. Source: Following Varian, 2004, 654.

On the exact opposite seems to be, at first glance, the central assertion of the empirical analysis by Srinivasan et al., (2004, 54).

First, network externalities have a strong negative effect on the survival duration of pioneers.

Firstly, this supports the point, well known to us, that it is hard to assert oneself on network effect markets. There is a great risk of not reaching critical mass and thus failing to profit from the lock-in effects of the installed base. It is known from several markets that there is a long lead time of minimal growth for network products before the market really takes off. Varian demonstrates this via the example of the fax machine (Figure 17.3).

Must the general recommendation thus be: do not be the first in markets with strong network effects? It appears to be of advantage to let others go in front of oneself and, personally, merely to prepare for one's market entry at the time it becomes clear that the market really gets going. Now there are definitely first movers who are very successful in network effect markets. What marks them out? According to Srinivasan et al., there are three critical success factors that play a central role for survival in such markets dominated by network effects.

First movers increase their chances of survival every time they offer **technology-intensive products with a high degree of innovation**. This can be very clearly demonstrated via the example of CD technology introduced by Sony (Srinivasan et al., 2004, 54):

Because of its laser-based, computerized technology, the CD-player offered virtually noiseless sound quality that was impossible to achieve with the prevalent audiocassette player, thereby providing a breakthrough in sound reproduction. Not affected by the scratches, smudges, and the heat warping that afflict audiocassettes. CDs maintained their original sound quality for a long time. The CD player was revolutionary and, as an industry analyst (*San Diego Tribune* 1987, p. B1) notes, was "the most dramatic development in sound reproduction since Edison."

This radically new technology created high market entry barriers that have secured a dominant position for Sony to this very day.

However, pioneers that already offer innovative products must take care not to invest half-heartedly in new products and technologies. This is called "technological inertia" (Christensen, 2007), frequently observed in established companies. This attitude is characterized by a resistance to make large investments in new technologies which would threaten their precursors. A good example for this is the Encyclopædia Britannica, which for several centuries was practically the byword for reference books. However, the book version was clung to for too long, and the step toward an online version made so late that Microsoft, with its digital Encarta encyclopedia, was able to gain a large market share in a short amount of time.

A second aspect is **company size**, which bears a positive relation to success in network effect markets. A pioneer with a comprehensive resource endowment will

find it a lot easier to be the first to survive in the market (Srinivasan et al., 2004, 55). It is thus recommended for smaller innovators to strengthen their resource basis through collaborations.

Perhaps the critical success factor for pioneers that have survived is that they offer their customers **extrinsic value** (Srinivasan et al., 2004, 54; Lee & O'Connor, 2003, 251). They concentrate not only on a product's intrinsic value but simultaneously make sure that direct and indirect network effects occur. Again, Sony provides a nice example with its introduction of the CD player in 1982 (Srinivasan et al., 2004, 54):

Sony worked extensively to develop the CD format accepted by the music industry and entered into extensive licensing agreements for other firms to manufacture the CD player. Sony also recognized that the availability of music titles on CDs was crucial for delivering utility to customers of the CD player, so it leveraged its Columbia Records label and its collaboration with Philip's PolyGram Records, two of the world's largest music producers at the time, to ensure the availability of music titles on CDs. When Sony introduced its first CD player, Columbia Records simultaneously released the world's first 50 music CD titles.

In order to generate extrinsic value, companies must think not only of marketing their own product but develop the network in parallel. To do so, they can license their product, support the development and marketing of complements and perhaps even secure downward compatibility with pre-existing networks in order to keep switching costs low.

Network effects are quite clearly a critical aspect. The more pronounced they are, the more they can negatively influence the pioneer's chances of survival (Srinivasan et al., 2004, 54-55).

This is shown in Figure 17.4 via the negatively inclined main effect. This effect is heightened if the pioneer is already the provider of the preceding product generation. In that case, there is a danger of investing too little into the new product in order to limit the cannibalization effect vis-à-vis the old product. Network effects are beneficial if the degree of innovation of the new product and its technology intensity are high, the company has a good resource endowment and knows how to make the customer understand the extrinsic value.

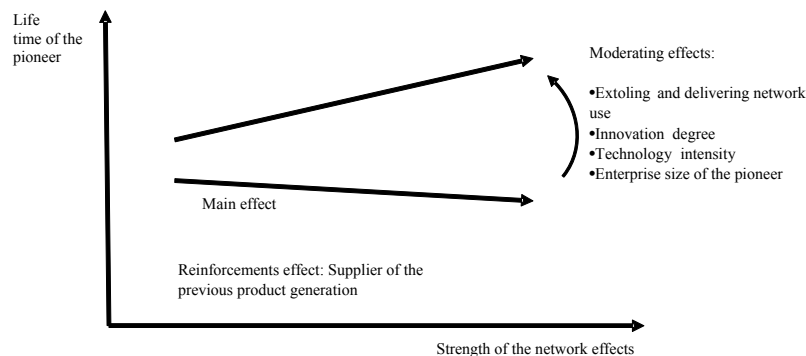


Figure 17.4: Influence of Network Effects on the Length of a Pioneer's Survival. Source: Following Srinivasan et al., 2004, 45.

17.5 Second-Mover Advantages

We can summarize that there is no general advantage for internet pioneers (Lieberman, 2005, 8, 28). There are special challenges to innovators, particularly in network effect markets, if they not only offer their product but at the same time make sure that there is a sufficient number of attractive complements. Due to the initial reticence of customers (to buy) and suppliers (to make offers), it becomes even less important, when offering products with pronounced network effects, to be the first in the market at any cost than it is to be the first to build up a large installed base in a short period of time (Lee & O'Connor, 2003, 246-247). If the second mover succeeds in establishing swift distribution via extensive use of resources, this may even overcompensate for pre-existing first-mover advantages (Tellis & Golder, 1996, 2002). Related to a product's intrinsic value, first-mover advantages are less important in network effect markets than they are in markets without network effects (Lee & O'Connor, 2003, 247). In such markets—to emphasize once more—it is far more important to quickly establish an installed base and to offer attractive complements in parallel to the basic product.

A propitious moment for second movers to enter the market should be every time technological changes occur. In the software market, such a window opened e.g. when graphical user interfaces appeared. The hitherto dominant spreadsheet application Lotus 1-2-3 lacked the corresponding features, so Microsoft was able to enter and take over the market with Excel (Brynjolfsson & Kemerer, 1996). The

first-mover advantage on its own is thus definitely not enough to be successful in the long term. The pioneer must also continually work at securing his position by creating further competitive advantages (Fritz, 2004, 167). In a study, Liebowitz (2002, 44 et seq.) uses the example of Yahoo and AOL, among others, to show that they offered a markedly higher product and service quality, respectively, than the market average, which was probably the critical factor for their success. Some other factors that favor the second mover's success are, according to Gerpott (2005, 20), good access to a large customer basis, sufficient financial power for comprehensive advertising measures and an offer that is part of the established array of products' core business. The example of Google's entry into the market for electronic classifieds shows the established providers, such as newspaper publishers and eBay, do not have a permanently secure market position:

With more than 400 million permanent users worldwide, enormous profit margins in the regular business and a good image due to the quality of its search results, Google meets all three requirements with ease (Gerpott, 2005, 20).

Generally, followers are in the so-called free-rider position (Lieberman & Montgomery, 1988), i.e. they can profit from the pioneer's work at no cost. Followers can generally manage to attain the pioneer's knowledge without having to make the same research endeavors, be it through the publication of copyright-protected knowledge that is nevertheless used by the follower via engineering around or by poaching key personnel (Specht, 2001, 143). Followers are also favored by the advancing infrastructure expansion. For i-commerce offers, this means cheap offers for hardware and software, available (micro) payment systems, prevalent internet access and PC availability as well as a general acceptance of the product. Another advantage enjoyed by followers is market insecurity decreasing over time. Innovators must accept the risk that it will only become clear what product properties are particularly preferred by the consumers after the product's introduction on the market. It can be of great advantage to only enter a market once it is clear which standard will assert itself.

Hence even if the first-mover position can be of benefit, it cannot do all the work (Oelsnitz & Heinecke, 1997, 39), and will not be enough, in the long run, to beat competitors who have better products or manage to create an installed base more quickly. Even when established companies dominate markets with free offers, there is a chance at a successful market entry with a priced product if the added value in terms of quality or endowment is made sufficiently clear to the customer (Gallaughar & Wang, 1999, 82 et seq.). Quality, up-to-dateness and exclusivity are identified by Stahl et al. (2004, 59) as critical success factors for information goods in particular. According to Weiber and Kollmann (2000, 58 et seq.), traditional positioning as cost or quality leader is less important for information goods than a differentiation as speed leader or topical leader. The speed leader can offer information to potential demanders more quickly than the competition. His

competitive advantage is a head start in information availability. An early market entry is of advantage for this strategy. The “quality leader in the sense of high-quality information acquisition” (Weiber & Kollmann, 2000, 60) positions himself less through the speed of information provision than through the kind and content of the information provided. This strategy particularly comes to bear on special information that needs high-grade processing (studies, test reports). The provider must draw his competitive advantage from having better content than the competition. This way is still eminently realizable after a later market entry.

For a successful market entry, it is thus important to carefully weigh the risks and opportunities of the first- and second-mover positions. The more pronounced network effects are, the more important it becomes to concentrate on the network effect value for the consumer.

First-Mover Advantages	Second-Mover Advantages
<ul style="list-style-type: none"> • Above-average economies of scale, scope and experience • Creation of network effects, switching costs and Lock-Ins • Establishment of a Standard • Perception/Reputation • Securing of scarce strategic resources 	<ul style="list-style-type: none"> • Free-rider effects <ul style="list-style-type: none"> - Appropriation of (legally unprotected) technological knowledge - Infrastructure development • Lesser market insecurity (development of a standard)

Figure 17.5: First- and Second-Mover Advantages of information providers.

17.6 Conclusion

Only available in the printed version.

17.7 Bibliography

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