

Medion: the Retail “Orchestrator” in the Computer Industry

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Medion is not a product manufacturer. Rather, it is a service provider offering retail partners the right product at the right time at an attractive price so they can pass good value for money on to their customers. Medion supervises and manages the entire value chain, from the initial product idea right through to after-sales services.

Medion Annual Report, 2005

INTRODUCTION^{1,2}

As its annual report points out, Medion AG (from here on Medion), a German-based player in the European computer industry, is not a PC manufacturer, but an intermediary service provider to retailers in Europe. It works with retailers to define specific products, subcontracts to build them, and promises to deliver them on a tight build-to-order model, in which Medion essentially acts as an ‘Orchestrator’.

The orchestrator is a management literature metaphor to describe the role of a player which organizes and manages a set of activities in a network, by ensuring value-creation opportunities in the system and value appropriation mechanisms for each player (Dhanaraj and Parkhe, 2006).

Several features characterize Medion’s unique business initiative. First, Medion is the only European competitor that has a significant market presence in the European PC market, along with the well-known world of traditional PC producers, made up of global firms such as IBM, Dell, HP, and Toshiba. (Table 1). In just a few years, Medion was able to become an important player in the market, especially for desktops.

TABLE 1. Unit Volumes and Market Shares in the European PC Market (4Q 2005)

	Units (millions)	%	% Desktop	% Notebook
HP	3.08	19.3%	21.1%	15.6%
Dell	2.23	14.0%	19.2%	12.0%
Acer	1.94	12.2%	4.7%	18.6%
Fujitsu Siemens	1.55	9.7%	9.4%	9.9%
NEC/packard bell	1.02	6.4%	6.6%	3.7%
Lenovo/IBM	0.63	4.4%	4.0%	5.7%
Toshiba	0.64	4.0%	-	9.7%
<i>Medion</i>	<i>0.43</i>	<i>2.7%</i>	<i>3.7%</i>	<i>1.8%</i>
Apple	0.37	2.4%	2.6%	2.3%
Sony	0.29	1.8%	-	3.7%
Other	3.76	23.6%	28.7%	17.0%
TOTAL	15.94	100.0%	100.0%	100.0%

Source: IDCa

¹ The authors would like to thank Marco Curioni, CEO of Medion Italy, and Giuseppe Turri, responsible for public relations of Medion Italy, for different informal discussions and suggestions. The whole responsibility of what is written in the case is totally on the author.

² This research has been supported by grants from the Alfred P. Sloan Foundation (Globalization II) and the US National Science Foundation (SBE-HSD-Agents of Change #0527180). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation or the Sloan Foundation.

Second, Medion developed a strongly atypical business model in the PC value chain. It combined mass market coverage with high product quality and exploited the benefits of an ‘intermediate’ position between the assembly/production and the distribution phases. Medion was simultaneously able to offer new sales channels to component manufacturers, a range of attractive products to mass market retailers, and a convenient quality/price offering to final customers.

Third, Medion was able to execute this business model with flexibility, adapting (or anticipating) some changes which affected the PC market in the recent years, such as the decline of PC prices, the saturation of demand, the outsourcing and offshoring of operations, and the bottlenecks in physical distribution.

This paper’s aim is to analyze Medion’s business model in detail, in order to understand the innovative traits of its orchestrator strategic approach, and the impact it may have on the structure and the competition in the PC industry.

The paper is organized as follows. After a brief historical sketch, where the origin of Medion is presented, the paper introduces the evolution of the European PC market and the strategic positioning of Medion. Then, the orchestrator approach of Medion is explored in detail in terms of structure, activities, and performance. The final section of the paper is dedicated to conclusions and propositions that can be provided through the analysis of this case.

HISTORICAL BACKGROUND

Although founded³ in 1982 as a supplier of electrical kitchen appliances, during the 90s, Medion progressively enlarged its scope of activity, moving toward the growing and promising European PC market. Medion decided to enter this market by exploiting the huge potential of the large (and untapped) mass market retail channel.

The distribution channel always represented a problematic node in the PC value chain, especially in European markets, because the specialized retail channel was highly fragmented and often unable to effectively manage the relationships with final customers. At the same time, the idea of building a property-based retail channel had never been considered, because of huge costs and risks.

Recently, several players addressed the distribution node with radical business models: Dell, for instance, with its direct sales model to business users, avoided the use of physical distributors; Gateway initially did the same thing with consumers in the US, while companies like IngramMicro proposed a virtual intermediary model, where both supply and demand were aggregated online.

In contrast, Medion decided to leverage the already established but unexploited mass-market retailer chains, such as food retailers, supermarkets and discounters in Europe. Around them, Medion decided to build and manage a unique set of activities both upstream (e.g., product development) and downstream (e.g. physical distribution, customer care) in the PC industry

³ Medion was founded by Gerhard Brachmann, who is still the CEO of the firm, as well as the main stockholder. Medion’s headquarters is located in Essen, Germany.

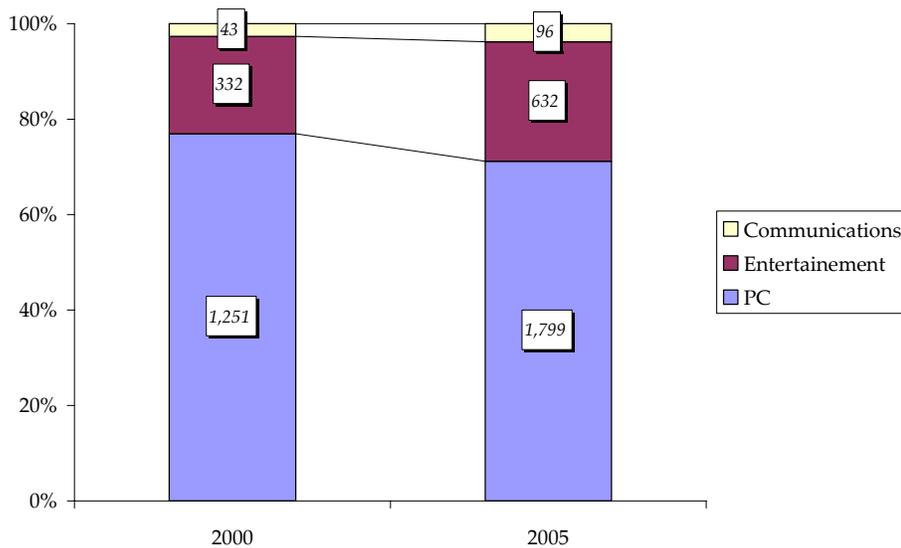
value chain, which enabled it to become a true network orchestrator. The whole articulation of such activities is described in the next section.

To a certain extent, its approach can be compared to that of e-Machines, a U.S. player which introduced a similar innovative business model based on leveraging the mass market retail system in the computer industry (Ralston, Kraemer and Dedrick, 2005). The main differences with e-Machines are that Medion does not focus only on low price products, and it directly involves retailers in design and product development.

In terms of offerings, the core product of Medion has always been desktop PCs and notebooks, along with peripherals (scanners, printers, modems, software). However the firm has recently developed complementary multimedia offerings in the areas of entertainment/household electronics (electrical appliances for personal care, home equipment, TVs, DVD-players, VCRs, HiFi, cameras and video cameras) and communications technology (telephones, answering machines, fax machines, decoders, satellite systems).

Figure 1 shows the breakdown of turnover according to these product categories. In 2000, PCs represented 76.9% of Medion’s annual sales, while at present their contribution to sales is 71.1%, as consumer electronics increased their role by 5.8 percentage points during the same period.

FIGURE 1. Breakdown of Medion Sales by Product Type (% and millions Euro)



Source: Medion’s annual report

In 1999, in the middle of the Internet bubble, the firm decided to become public, entering in the M-Dax, the index for small caps in the German stock exchange. With the revenues gained from going public, Medion launched a tremendous international expansion, opening new branches in the key European markets (Table 2) and acquiring some European rivals with competing business models, such as Gericom.

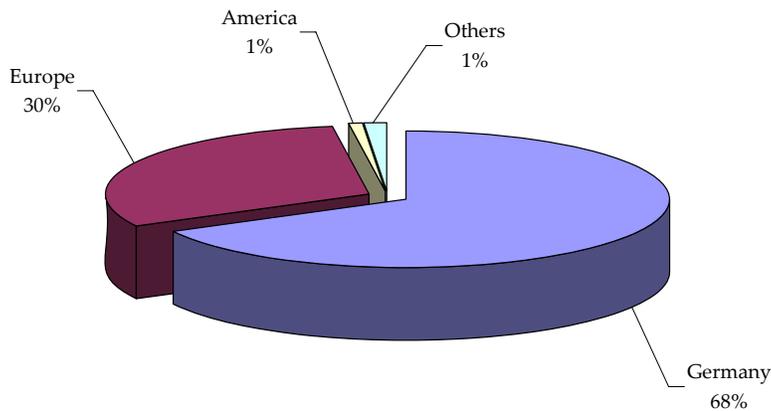
TABLE 2. List of International Companies in the Medion Group at 2005

Company	Country	% of control
Medion Australia Pty Ltd.	AU	100
Medion Austria GmbH	AT	100
Medion BV	NL	100
Medion France	FR	100
Medion Iberia S.L.	ES	100
Medion Italia S.r.l.	IT	100
Medion Nordic A/S	DK	100
Medion USA Inc	US	100

Source: Medion's annual report and Amadeus European balance sheets database

In the beginning, Medion concentrated on penetrating the German market and now has reached double digit market shares in certain product segments. In recent years, the company also has been successfully implementing its business model in markets outside Germany, especially in Western Europe (Figure 2). Eastern Europe and other regions are now also becoming important target markets. Today, the company's products are available in 25 international markets.

FIGURE 2. Breakdown of Medion Sales by Geographic Areas (% , 2005)



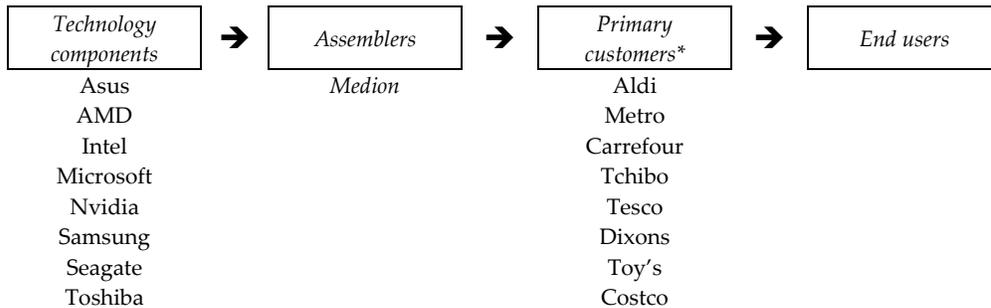
This growth was largely pulled by the Medion's business customers. Because Medion's customers are large retail chains in the mass market, its internationalization was mainly a way to follow and exploit the international breadth of such large customers. These included leading European retail chains like ALDI, Carrefour, and Metro, which mainly operate in Germany, France, UK, and Italy.⁴

⁴ These chains play the same role as Wal-Mart in the US.

MEDIOD STRATEGIC POSITIONING: THE ORCHESTRATOR

In order to understand the reasons for its success, it is useful to examine Medion's role in the value-chain of the PC industry (Figure 3).

FIGURE 3. Medion Positioning in the Value Chain



* These customers are throughout Europe and not on single countries only

Medion occupies a classic intermediary role, but it does not provide traditional aggregation and matching services for supply and demand. Rather, it organizes a true 'strategic network' of players in the whole value chain (Jarrillo, 1988). Starting from the strategic idea of leveraging mass-market retailers' chains, Medion orchestrates a network of activities in the PC value-chain, where some of these activities will be directly performed by the orchestrator, some will be shared with other key players in the network, and still others will be partially or totally outsourced to more peripheral nodes of the system (Gulati and Gargiulo, 1999).

At the upstream level, Medion acts as a final assembler, and thus it relies on technology suppliers, as do the vast majority of PC brands. Assembly activities are organized differently in terms of make-or-buy decisions, with different levels of outsourcing according to the nature of the product (desktop vs. notebook) and the size of orders.

For both desktop and notebook the case with the majority of components is always outsourced to Far East producers. For desktops, the product is then finalized in the Medion assembly lines which are mostly located in eastern Germany and Czech Republic.

Regarding notebooks, only large size orders are finally assembled in Far East, while small orders are finalized in Medion plants in eastern Germany.

At the downstream level, Medion does not focus on final customers in developing its channel distribution strategy. Instead, it focuses directly on innovative distribution channels as target customers, and then indirectly provides them an undifferentiated but valuable product offering for final consumers. Medion focuses primarily on some atypical⁵ distribution channels, like mass market discount retailers in many European countries, such as ALDI, Carrefour, and Metro. In addition, Medion also focuses on unusual specialized distributors such as coffee machine vendors (Tchibo), or large playthings retailers (Toy's), which are interested in enlarging their assortment with PCs and electronics products.

⁵ Atypical in the sense of different from a traditional electronic store.

This approach is totally different from the mainstream approach of the key PC brands in Europe, which seek to enhance the customization of the final offering. The most extreme example of this approach is Dell, whose business model enables a final customer to customize its product in detail and order the product online.

Medion's approach gives it different strategic advantages.

The first is *avoiding entry barriers*. The traditional customization approach requires huge marketing investments on brands and established relationships with specialized distribution channels. This created significant entry barriers in the PC industry, which explains why the market is dominated by a few key players.

The Medion approach reduces such entry barriers, because the company approaches already established mass market distributors and provides them with business opportunities, offering attractive items for the non-food product range. In this way, Medion products are also exposed to a correctly targeted large consumer base, which is generally less interested in branded products and more sensitive to price and intrinsic quality. Acting as an orchestrator, Medion owns fewer assets, and by leveraging resources of partner companies, it can be better protected against market volatility (Hacki and Lighton, 2001).

The second advantage is *leveraging on economies of scale*. Given the structural trend of price reduction in the PC industry, one of the key issues in this market is to reach high volume, in order to achieve cost efficiency. Addressing large retailers as key customers facilitates rapid growth of Medion volumes in the market.

This, in turn, produces benefits on the upstream side of the chain, through better exchange conditions in the procurement of key components. At the same time, the opportunity to provide a standardized product further reduces R&D and marketing expenses. The operational advantages of Medion's approach can be seen in Table 3, which compares main cost indicators of some key PC players in the European market. It can be appreciated that Medion shows high levels of efficiency, in terms of labor costs and investment per employee, and outstanding levels of productivity in terms of earnings per employee.

TABLE 3. Main Cost Indicators of Medion and other Key Players in the PC EU Market (2004)

	Medion	HP*	Toshiba*
Working capital per employee (,000)	274	259	245
Total assets per employee (,000)	576	593	423
Net assets/ Sales	4.59	3.50	8.27
Costs of employees/ Operating earnings (%)	2.30	8.20	5.10
Operating earnings per employee (,000)	1,754	794	1,721

* European branches and PC businesses

Source: Amadeus European balance sheets database

A final advantage is *gaining flexibility and faster time-to-market*. Medion's working model starts by defining contracts on a confirmed basis with big retailers, where the features of the product are shared. It is only after this phase that the firm begins selecting suppliers and assembling the products. This build-to-order supply chain organization promotes great flexibility, because the products can be easily updated with the latest technology. In addition, the risk of unsold inventory is transferred contractually to the distributor, who has committed to sell what is ordered. This advantage is similar to that gained by e-Machines in the US. e-Machines was able to sharply reduce excess inventory in the distribution channel and streamline the supply chain by providing the right quantity to the right place at the right time.

Furthermore, the tight network of operational facilities located in Germany and Eastern Europe provides Medion with an advantage in terms of time-to-market. Once a big retailer and Medion agree on a product definition, the assembled final products can be supplied by Medion in less than four weeks.

Obviously, such strategic positioning also has some risks. The first concern is the product/country focus. Although the international dimension of Medion increased significantly during recent years, sales remained strongly dependent on the German market (almost 67% of total turnover in 2005), (Figure 2). And although Medion enlarged their range of products to entertainment and multimedia items, the contribution to sales from PCs remained above 71% in 2005 (Figure 1). In particular, at the geographical level, this may mean that exporting the model to other European countries, where retail chains are more fragmented, is not an easy task.

The second threat is represented by an issue that we had described before as a point of strength: the high concentration on the customers' side. Having a few large, established customers made it easy and quick for Medion to reach a significant market share. Nonetheless, large customers usually have bargaining power (Porter, 1980), and Medion is hugely sensitive to the behaviors of its two or three main customers, which absorb more than 60% of its global turnover. For example, in 2005 the performance of Medion, although still positive, was significantly penalized by a single but relevant failed deal with ALDI, the main customer of Medion.

MEDION'S OPERATIONAL MODEL

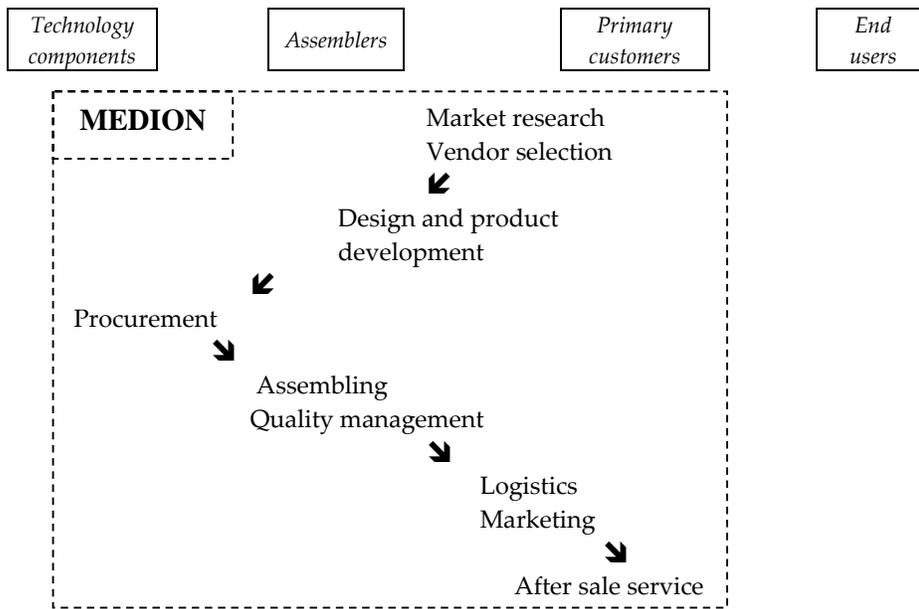
Given its innovative strategic positioning and business model, Medion has a unique operational model, which reflects its network orchestrator approach (Figure 4).

First, Medion decided to perform a wide range of activities, both directly and through outsourcing, mobilizing resources and knowledge along with the whole PC value chain. Second, it was able to provide attractive value creation and appropriation mechanisms for each player involved in the network, from components producers to large retail chains.

For instance, large retail chains find incentives in buying Medion's products for enlarging their assortment while, at the same time, component producers find it useful to sell to Medion because of its interesting volume of sales.

These issues can be better understood by looking in detail at each activity performed by Medion.

FIGURE 4. Medion Business Model



Source: Interviews and Medion’s annual report

The starting activity is *market research*. This process has the aim to continually monitor trends in the PC, multimedia, and consumer electronics markets, in order to identify business opportunities and to cover unsatisfied consumer needs. Usually, Medion employs pre-test campaigns to forecast demand trends, but sometimes business opportunities also arise from past experience and interaction with key customers (i.e. the retailers). For example, the idea to sell the desktop cases unbundled from monitors, and to launch a Medion branded satellite car navigator originated from suggestions by retailers and not from market research on consumers.

The second key activity - the *selection of retailer vendors* – is linked to the first one. Given the strategic positioning already described, this phase is crucial for Medion, because it represents the way the firm reaches the market. Generally, retailers are positively considered when Medion products are a good fit with their customer base, when the retailers can provide mass market exposure for Medion products, and when retailers are committed to take all the products they order.

Historically, as already described, Medion has focused on non-specialized big retailer chains, such as ALDI or Metro, or other distributors, to complement their non-food offering. More recently, other atypical networks such as banks, telecommunications carriers or petrol kiosks are under scrutiny for new business opportunities. Once the product(s)/vendor(s) decisions have been set up, Medion begins the production activities.

As regards *design and product development*, Medion manages both aesthetic and functional features, but the key issue here is that the decisions about product concept, functionality, and design are often jointly taken by Medion and the retailers. This strategic partnership with retailers is what differentiates Medion from other similar business models, such as that implemented by e-Machines, which rely on retailers only as a distribution channel to sell their brand.

In contrast, Medion sells final products through a set of umbrella brands, sometimes tailored to their distributors. In some cases, products are Medion branded; this usually happens for products which are already well-known in the market. In other cases, products can be sold with the retailer's brand; this happens, for instance, when the intention is to link the product to a specific feature of the retailer's offerings (i.e. low price). In some other cases, especially for brand new items, products can be marketed with new creative names.

Generally, Medion products reflect the most up-to-date technical and design cues. That is, Medion products are not positioned as 'entry-level' goods, although they can benefit from a discounted price compared to other unbranded products, due to economies of scale in both downstream and upstream sides.

Regarding the *procurement* activity, thanks to large volumes assured by retailer chains, Medion is able to order large quantities of electronic components and gain a significant price discount, estimated to be between 10%-15% compared to the price obtained by top-tier brands (Neubauer and Maug, 2006). This happens because Medion volumes, although smaller in absolute terms than those provided by PC market leaders, are concentrated in a few big orders, because large retailers place purchases simultaneously for all the European outlets of their chains.

In terms of *assembly*, the company acts as a final assembler. Once purchased, components for PCs and other products enter the Medion assembly lines. The production network of Medion is differentiated. For desktops, the PC case including main components is outsourced to China-based producers, while the final assembly is completed in Medion's production lines located in Eastern Germany and the Czech Republic. For notebooks, large orders are entirely subcontracted and totally assembled in the Far East while, for small orders, Medion's factories in Eastern Europe provide final assembly.

Medion also ensures *testing and quality management*. Medion staff carefully monitor outsourced activities to ensure high standards of quality; in some cases, this happens directly through Medion personnel located in the plants where the production is outsourced, both in Eastern Europe and China. Given the high reliance on third parties for production, these direct controls are crucial to ensure targeted quality standards. Furthermore, the emphasis on quality is ensured also on the downstream part of the value chain, where Medion pre-tests prototypes before the products physically appear in the retailer outlets.

In terms of *sales and marketing* activities, Medion does not provide dedicated staff in-store for information and demonstration. It generally uses sales campaigns, which are often announced with large scale printed media advertising and printed fliers. In these cases, the retailers provide warehousing and space, but given Medion's selling model, they are neither forced nor inclined to provide information or advertising as well, although some staff are sometimes available to help customers in the store, especially in Germany outlets.

According to its orchestrator role, Medion also is able to modulate the partnership with the retailers in different ways: much more strategic in the early stages of product design, and more of a support role during the distribution and selling process.

Finally, since mass market retailers do not provide any kind of *after-sale services*, Medion operates local call centers in its major market areas through more than 700 part-time and full-

time employees, offering activities such as application advice, warranty settlement, order follow-up, etc. It is important to underline that Medion considers such services crucial because they are the only direct link with the final customers. This is why it decided not to outsource after-sale services.⁶

To summarize, the operational model of Medion shows some special features:

- It is organized around a *build-to-order* structure. Production starts only when order and product features are committed to by retailers. This reduces inventory and, thanks to large orders, reduces procurement costs. Nonetheless, as previously pointed out, it also increases the risks of dependency on key customers, and requires continuing investment to carefully monitor the whole supply-chain to ensure quality.
- Medion's operations are organized on a *project-based* activity. Each significant contract promoted and closed with a retailer is considered a single project. Each project is managed by a team which ensures that all the required production steps are integrated, completed on time, and the products have met quality specifications. Projects are typical organization structures in network-based companies (Hoogeweegen, 1997), because they allow for managing network roles whereby the coordinator has a close relationship with the customer and is responsible for forming and managing a supply chain, whose structure can be temporary or stable. This configuration allows for extreme customization, although it can be costly to set up and maintain due to huge coordination activity required.
- To a certain extent, Medion's products are *co-produced* by customers (Ramirez, 1999), in the sense that products are conceived and designed jointly by Medion and retailer chains, which later will market them to final consumers. This strategic approach is also important for increasing the chances of success in the process of a new product launch. The involvement of the potential target customers in the product development phase is considered critical because it ensures the availability of more and better market information (Hultink et al., 1997).
- Finally, Medion's business model is strongly *service-oriented*. The emphasis on quality along the whole supply-chain, as well as the attention to the link with the final customer (although Medion does not address it directly), configure the company essentially as a service provider, able to redesign the activities and provide support to different actors in the value-chain in response to changing markets. This orientation differentiates Medion from pure low-price competitor brands, and ensures a good market reputation.

⁶ During the interview, the CEO of the Italian branch recalled how the first introduction of the frontal USB ports on desktops in the European market was due to a Medion product. This decision was suggested by final customers through the Medion call centre.

WHAT CAN WE LEARN FROM THE MEDION CASE?

The previous pages described the Medion business model and discussed some strategic issues that this model introduced in the European PC industry. Although descriptive, the case provides some strategic implications.

The first refers to the growing role of network-based organizations in today's business landscape. Medion is a good example of what managerial theory indicates as an orchestrator business model, where a firm: (a) decides how to organize knowledge and resources in a value chain; (b) provides value creation opportunities in the network (enlarging the pie) and value appropriation mechanisms for each player (gaining a slice of the pie); (c) ensures stability to the network (Dhanaraj and Parkhe, 2006).

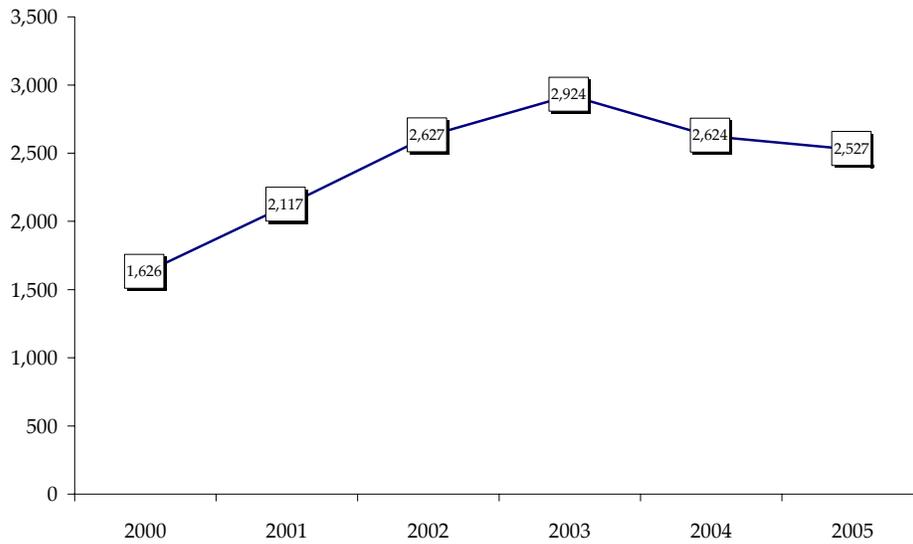
Applying this frame to our case, it can be seen that Medion first selected the range of activities to be performed in the value chain, then decided how to perform them (in terms of make-or-buy), and finally, for those to be outsourced, it decided who is the better counterpart. Second, it also organized the flow of activities in a way that each player finds incentives to participate and can obtain a reasonable payoff: component manufacturers can rely on new sales channels, mass market retailers may enlarge their range of products with new attractive items, and final customers can benefit from a convenient quality/price offering.

The second implication regards the strategy in the so-called mature industries. Medion's example seems to reveal that there may be room also in 'adult' contexts for innovative business models which restructure the articulation of the value-chain. Unconventional strategic answers, such as those proposed by Medion, allow for hidden and unexpected business opportunities, even in a context of stable (or declining) market perspectives (Baden-Fuller and Stopford, 1994). In the PC industry, for instance, simply rethinking how to deal with a notorious tricky issue, such as the management of the distribution channel, changed the perspectives and the perception of opportunities and threats along with the whole value-chain.

A third reflection refers to the temporary aspect of competitive advantage. Even the most unconventional and innovative business model is a contingent solution, and what today represents a point of strength (in our case, the presence of a few big customers) can become a key weakness.

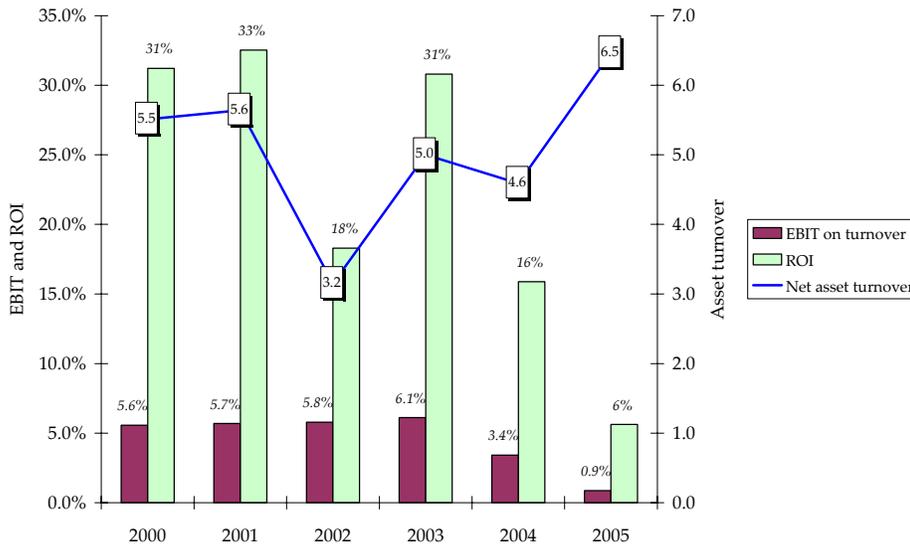
Figures 5 and 6 provide a snapshot of the economic and financial performance of Medion in the last years. Data reveal that, although positive and with a trend similar to that of main competitors, the performance of Medion in the very recent years has declined. Sales dropped by 3.7% in 2005 and, although the company maintained (or even improved slightly), its levels of efficiency, operating and net profits dropped as well.

FIGURE 5. Trend of Medion Sales (millions Euro)



Source: Medion's annual report and Amadeus European balance sheets database

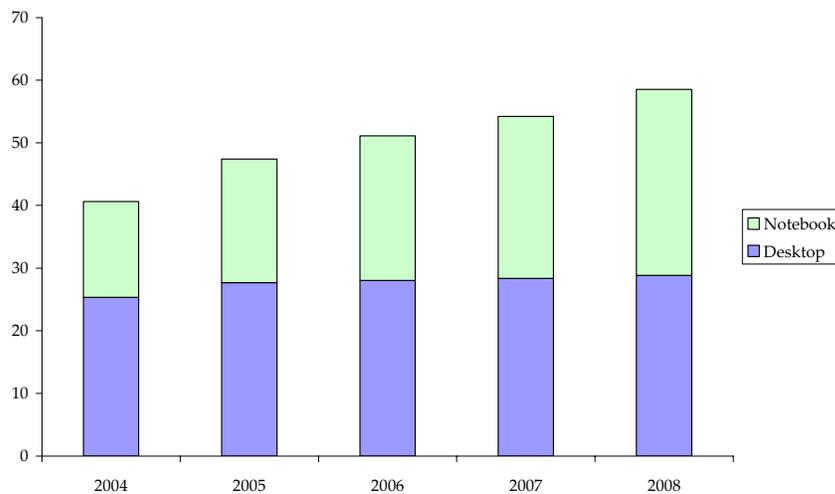
FIGURE 6. Main Indicators of Economic and Financial Performance



Source: Medion's annual report and Amadeus European balance sheets database

While the desktop is the traditional core product of the company, the evolution of the PC market seems to be moving more towards notebooks than desktops (Figure 7). At the same time, it is promising for Medion that consumption trends involve other segments of consumer electronics (mobile phones, handsets, etc.): all indications suggest how Medion might extend and/or restructure its product portfolio.

FIGURE 7. PC Shipment Forecasts (Western UE, millions)



Source: IDCb

In addition, there are some indications that, while generally still competitive, the strategic positioning and the consequent business model of Medion should be adjusted, in order to reduce the double-edged link with only a few large customers. The high sensitivity of Medion's performance to these customers, together with some imitation phenomena, raises some concerns about the long-term sustainability of such a closed model.

At the moment of writing the case, the management of Medion is questioning such (and other) issues, and some signals of change can be perceived. The interesting thing here is to observe the capability of a firm to re-discuss its successful strategies *before* their potential is completely exploited. This pro-active inclination which, according to management literature is always difficult to achieve since a success usually leads to core rigidities (Leonard-Barton, 1992), may be important for building dynamic capabilities and being able to absorb new market opportunities.

The case of Medion well illustrates the value of the so-called dynamic capabilities (Teece et al., 1997), namely those capabilities that help firms to alter existing routines in order to fit with the changed environment. Paradoxically, these capabilities may play a more relevant role in relatively 'stable' markets, where pro-active moves may lead to big changes and challenges to existing equilibrium, because they are undermined by incumbents and difficult to copy.

Only time will tell if the changes that Medion is discussing will be successful but, in this case, being able to change in such a situation can be already considered as a successful practice.

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