

# “High-tech for low-frills markets: new challenges for German high-tech companies”

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## High-tech for low-frills markets: new challenges for German high-tech companies

### Abstract

The paper “High-tech for low-frills markets” describes the competitive situation for German high-tech companies that realize the huge demand for industrial goods and services in emerging economies like India and China. While in the past many companies have neglected these opportunities, now they struggle with finding the right approach.

The paper is based on a series of interviews and case studies that we have conducted, researched and written over a two year period. Main focus of the interviews and cases was to get a better understanding of the challenges the companies are facing and to structure them accordingly.

As an underlying theme we found three particular challenges that were reported to us over and over again by almost all of the companies: Transparency in capital goods markets, balancing organizational structure, and the specific relationship between selling products vs. services.

The main implication of the paper is that often especially middle to upper management has to find the balance between internal cost synergies and external service differentiation when thinking about emerging markets opportunities. Additionally these managers have to take into account that the position of their existing premium products remains untouched. This is a tough call for executives.

**Keywords:** B2B, capital goods, emerging markets, competitive strategy, low-frills.

### Introduction

Technology industries play a key role in the German economy. The country leads in vehicle and machine manufacturing worldwide, and it is poised to take a leading position in environmental technology<sup>1</sup>. The ability to innovate is the cornerstone of the success and international competitiveness of German technology firms and lies at the heart of their competitive strategy. Achieving differentiation on the basis of technological innovation has allowed

German firms such as Howaldtswerke to build its fuel-cell-driven submarines, Trumpf to create its laser-based tool machines, and BASF to create its organic light-emitting diodes.

From a historical perspective, the high-quality product offerings of German technology firms have been directed primarily toward the needs of the high end of developed markets. Good sales results in emerging and developing markets were seen as a welcomed, but non-essential secondary business.

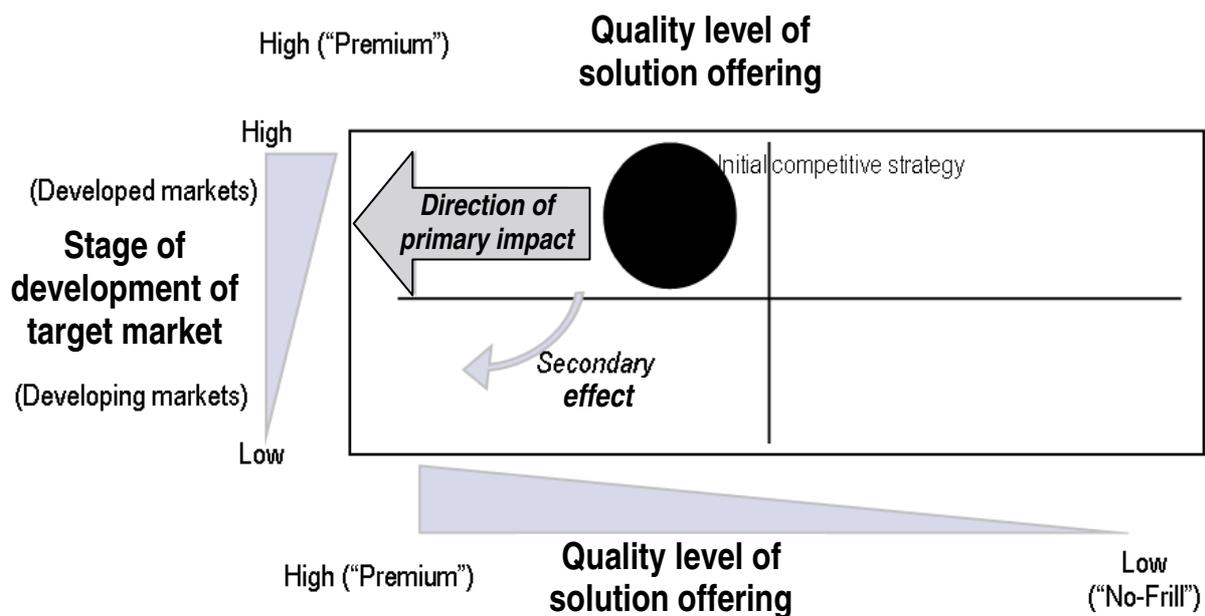


Fig. 1. Traditional competitive strategy of German technology firms

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<sup>1</sup> Van den Berg, W. and van der Slot, A (2009), *Clean Economy, Living Planet*, a report by Roland Berger and WWF, November 2009.

In a globalized market place, however, this rather narrow focus has come under increasing scrutiny. Over the long term, many German technology-based companies fear – and rightly so – that this path will lead to missing out on the growth markets in developing economies. It is estimated that over the next 15 years, 95% of the world's total population growth of 2 billion people will take place in developing and emerging countries. And as statistics in recent years already suggest, the regions that will continue to experience the strongest boost in wealth are the BRIC countries (Brazil, Russia, India, and China). The total gross national product of these four countries alone is expected to be larger in the next 25 years than all of the current G-8 countries combined.

The potential sales volumes of these countries have been a serious point of discussion since the late 1990s, particularly among consumer goods industries<sup>1</sup>. By comparison, the capital goods sector received relatively little attention. This is all the more surprising because the level of investment in infrastructure and production capacity greatly exceeds consumption. In fact, at the moment there is a high and growing demand in emerging and developing countries for products like lathes, switchgears, cranes and trucks. And it is here that customer demand differs from that of developed Western markets the most. This is because in emerging and developing countries, products are often distinguished by their robustness and ease of use rather than by their refined innovation. And above all, products in these markets must be affordable.

Until now, German high-tech manufacturers have largely left the market for simple, low-cost and low-frills solutions to local suppliers. The idea of developing simpler, lower-cost products has not meshed comfortably with their proven, time-honored, upmarket strategy of competitive advantage based upon innovation and differentiation. Yet in light of the high growth rates of many emerging and developing countries, and the emergence of local competition in countries such as China and India, this attitude is changing.

In addition, many established competitors to German-based high tech firms such as General Electric (GE), have moved to strengthen their local R&D and manufacturing capabilities in emerging and developing

markets<sup>2</sup>. Firms such as GE are actively moving to offer 'low-frills products' that are not simply based upon outdated technologies from developed markets, but which are developed specifically for local markets. While core architecture or components of these products might rely on existing, proven technologies, overall product design is driven by a desire to meet local market requirements – not simply to eliminate or reduce features from existing products marketed in the developed world to reach a lower price point.

And while existing literature on dual strategies (differentiation strategy for the high end of the market while cost leadership for the low end of the market) is focused on how to achieve this in the developed world, and often even in the same country/regional market, our research extends this literature by addressing the issue of dual strategies, but not within a market but across international boundaries<sup>3</sup>. It is this developing market focus which makes this issue so different to the well established dilemma of managing dual strategies within one country or market. The question of managing global dual strategies adds additional layers of complexity, especially through issues like technology transfer, technology loss, IP protection but also mindset issues like the recognition of capabilities and know-how of local employees and engineers. Especially technology loss and IP protection was mentioned over and over again in the interviews with senior R&D executives.

## 1. Current examples

One company that already has experience with this strategy is the acknowledged standard-bearer of fine engineering: Siemens AG. The company's many products include high-end solutions for power generation and distribution. Yet Siemens has recognized for several years that premium German products do not always address the needs of emerging and developing countries. This is why Siemens decided in 2007, for example, to start developing simpler products for its line of medium-voltage switchgears and to manufacture them in India. There and in similar target markets throughout the world, these products have eventually caught on. And thanks to positive business results, Siemens is very happy with its decision – in India at any rate.

In a similar move, MAN AG has also chosen to build trucks in India. Unlike their high-tech counterparts from Munich, these new trucks are much better suited to the road conditions of emerging and developing countries. MAN started a joint venture in 2006 for that

<sup>1</sup> See for example David Arnold and John A. Quelch (1998), *New Strategies in Emerging markets*, Sloan Management Review, 40 (1), Fall 1998, pp. 7-20; S. L. Hart (2005): *Capitalism at the crossroads: The unlimited business opportunities in solving the world's most difficult problems*, Upper Saddle River, NJ: Wharton School Publishing; London, T. and Hart, S. L. (2004), *Reinventing strategies for emerging markets: Beyond the transnational model*, Journal of International Business Studies, 35, pp. 350-370; Prahalad, C.K. and Hammond, A. (2002), *Serving the world's poor profitably*, Harvard Business Review, 80 (9), September 2002, pp. 48-57.

<sup>2</sup> Immelt, J., Govindarajan, V. and Trimble, C. (2009). *How GE is disrupting itself*, Harvard Business Review, October 2009, Vol. 87 Issue 10, pp. 56-65.

<sup>3</sup> See for example Charitou, C. and Markides, C. (2003), *Responses to Disruptive Strategic Innovation*, MIT Sloan Management Review, Winter 2003.

very purpose, and marketed these vehicles under the name “MAN CLA”. In countries with matching demand profiles like South Africa, for example, sellers do not hesitate to offer these low-frills trucks alongside premium vehicles. And although production in India has only been going at full speed since 2009, the results up until now have been strong. To better serve the Eastern European market, another assembly plant is already being planned for Uzbekistan.

The enormous growth potential for markets in Central and Eastern Europe also represents particularly attractive opportunities for ThyssenKrupp AG’s elevator business. Yet in the large elevator market segment for buildings with four to 10 floors, the company does not yet have a product with a low enough price for good selling potential. In Romania, for example, ThyssenKrupp is therefore considering developing a simpler model at a market-appropriate price point.

Bosch GmbH has gone even further. The company already successfully sells its new anti-lock braking systems (ABS) at prices up to 25-30 percent lower than those of premium products from Stuttgart. Doing so, however, has required a fundamental rethinking. In the past, products developed in Germany for China, for example, were merely adapted. Now, product development takes place in target markets on the basis of existing technologies. With its new low-cost ABS products, Bosch has thus succeeded in developing an entirely new product category. It has proven to be particularly attractive to Chinese and Indian firms who are completely reshaping the automobile market with the introduction of inexpensive models.

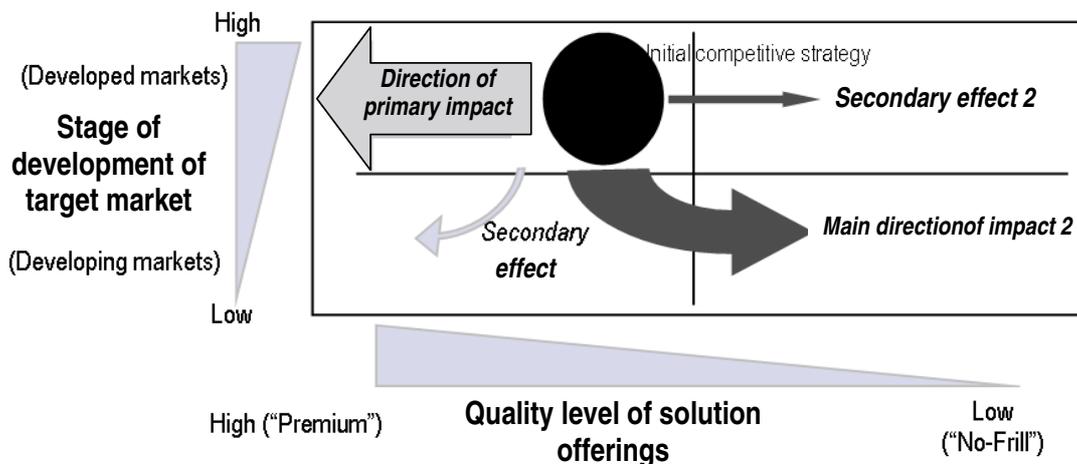
**2. Risks and opportunities**

The most important goal of low-frills products is to achieve revenue growth by tackling new high-growth

segments<sup>1</sup>. At the same time, firms also hope to achieve significant production cost advantages. And in the event that production cost-related synergies between low-frills and premium products materialize, the potential higher output volumes and resulting combined efficiencies could actually prove to be a win-win for both. The firm or firms that eventually achieve a superior cost position would also be poised to become dominant players across diverse market segments, thereby shifting entire competitive landscapes. At the very least, they could block the entry of new competitors – a problem that many Western technology firms are increasingly confronting<sup>2</sup>.

But even in mature markets like the United States, we see a strong growth in the low end of the market. And here, too, new customer segments can be won. This is exactly what Siemens Healthcare (formerly Siemens Medical Solutions) experienced when it developed a new magnetic resonance tomography (MRT) device specifically for the China market. The device was designed with limited functionality (low-frills) at a significantly lower price point. And it met the minimum revenue expectations for that market. Yet surprisingly, the low-cost MRT also generated high demand in the United States. Large clinics have been the traditional target customers for MRT devices in the U.S. But in this case, it was actually small clinics and large private medical practices that showed the greatest interest in the new models from China. As a result, Siemens was able to win over new customer groups who had not been previously addressed by existing product lines.

Figure 2 highlights the competitive strategy of firms who include low-frills products in their product portfolios.



**Fig. 2. New competitive strategies of German technology firms**

<sup>1</sup> Immelt, J., Govindarajan, V. and Trimble, C. (2009). *How GE is disrupting itself*, Harvard Business Review, October 2009, Vol. 87, Issue 10, pp. 56-65.

<sup>2</sup> Kumar, N. (2006), *Strategies how to fight low cost rivals*, Harvard Business Review, December 2006, Vol. 84 Issue 12, pp. 104-112.

Yet as promising as these advantages may be, the risks in pursuing these kinds of hybrid strategies are enormous. That is why companies like Voith Paper are reluctant to adopt them, even when their most important competitor, Metso in Finland, has already taken the first steps in that direction. In addition to the risks associated with failed market entry and capital investment loss, the potential negative impact of cannibalizing a core premium product business could irrevocably damage an entire firm. This may be one of the reasons that those companies who have recently adopted alternative strategies hesitate to discuss them.

### **3. Specific challenges of high-tech for low-frills markets**

In order to minimize the risks of developing appropriate high-tech strategies for developing markets, it is necessary to know specific market fundamentals and to pay close attention to strategy execution. In markets for technology-related capital goods, three aspects are critical:

#### **3.1. Transparency in capital goods markets.**

Buyers of capital goods are well informed and more professionally competent than buyers in consumer goods markets. They are better able, for example, to clearly differentiate product features and their related value. And because there are fewer B2B market participants, the exchange of information is much more transparent. In most respects, customers are very well informed of the activities of individual suppliers. In contrast to this, we can assume that the vast majority of Lufthansa's premium brand customers are, for example, largely unaware that the airline also operates the low-cost brand German Wings. This lack of information is almost unimaginable in the capital goods sector. Therefore, questions regarding the branding of high-tech solutions for low-frills markets is of crucial importance and even more so than on B2C markets.

#### **3.2. Implementing appropriate organizational structure.**

The technical design of capital goods is an important factor for market success, but it is also a cost driver. And it is here that R&D departments play a decisive role. Development teams typically thrive in working cultures that champion the highest levels of quality, innovation, and expertise. But while this mentality has served companies well in developing premium products, it is counterproductive in creating low-frills products. This is because the upside potential for achieving product development cost synergies can be outweighed by the difficulty in harnessing their value. This is not to say that a firm's existing know-how should not be used in overall technical

design. The ultimate responsibility for product development and design, however, must take place in the location that is closest to the customer: in the emerging or developing country itself. This is exactly the course that each of the above-mentioned practice examples have taken. MAN, for example, does indeed rely on the development know-how of its German headquarters. But the ultimate product responsibility lies with the Indian joint venture partner. This strategy, however, is not without its share of problems within the company. While in the past resources for production, sales and services were being built up locally, R&D was still organized centrally in Germany. With the introduction of low-frills products, however, that situation changed.

#### **3.3. Relationship between product sales and service.**

A third important characteristic of technology-driven capital goods is the close relationship between product sales and after-sales service. Maintenance, repair, and ongoing customer consulting have a major impact on the profits and earnings of a B2B company. In high-tech capital goods industries, they also play a much more prominent role in achieving competitive differentiation than they do in consumer goods industries. In technology firms, a large portion of the workforce typically consists of highly specialized service department workers. In many cases, these teams are based directly in the countries where their customers' businesses are located. Particularly because of their high costs, customer service organizations can actually offer significant potential synergies in the introduction of low-frills products. That is because the same employees who provide technical after-sales service for premium machines can also add value to the low-frills machine segment. Yet this approach, too, may annoy premium product customers. As a result, careful consideration must be paid to the actual product portfolio extension itself and also to any related services. Similarly, great care must be taken in the area of product development to achieve the right balance between cost synergies and service differentiation.

### **Conclusion**

For high-tech products and solutions, today's greatest growth potential is to be found in low-frills markets, market segments with a low to medium willingness to pay – very often in emerging and developing countries. As a result, a number of German capital goods companies who have traditionally been established in the premium segment are considering addressing these markets with customized products. In order to manage the

implementation-related risks and complexities, a very precise analysis of the unique characteristics of these markets is necessary.

The major challenge in extending an existing portfolio of high-tech products for high-tech markets with high-tech products for low-frills markets lies in finding a balance between internal

cost synergies and external service differentiation – and doing so in a way that leaves the marketing position of existing premium products untouched. It is this final point that may be making the majority of German technology firms reluctant to change their current strategy. Yet in the long term, this resistance may prove to be a great risk.

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