

## Success Factor for Marketing in Monopolistic Markets

# The Sustainable Corporate Strategy in Industrial Goods Markets

Classical management thinking and traditional manufacturing processes will reach their limits soon. There is a great need for innovative sustainability-orientated business models. Has a market-oriented, sustainability-oriented corporate strategy the potential for successful marketing of industrial goods in a monopolistic market?

By Alfred Niski, Stefanie Krause and Olaf Drusche

**S**ustainable future technologies are considered to drive above-average growth in demand, the same applies to required sub-technologies, such as neodymium-iron-boron magnets (NdFeB) in wind turbine generators or in electric vehicle drives (Marscheider-Weidemann et al. 2016). This forecast positions the review of market entry potentials at the very top when it comes to strategic decision-making. However, the market entry is characterized by major challenges: A near-monopoly situation caused by Chinese suppliers has to be overcome in the first place. At the same time, it is essential to use the sustainability aspect as distinguishing feature. And this in addition, given the fact that a true sustainability of high-performance permanent magnets is not present in principle. In this context, the innovation of a sustainable business model offers the potential to shift the market constellation that has hitherto been regarded as insoluble, resulting in a socially beneficial win-win situation. The feasibility will be examined with the aid of a case study, the BMBF research project REGINA (*Rare Earth Global Industry and New Applications*), which aims to establish a sustainability-oriented value chain transforming Brazilian rare earth elements (REE) from rare earth oxide (REO) into rare earth permanent magnets (REPM), and into the so-called “Green Magnets”. The product “Green Magnet” is a rare earth-based high-performance permanent magnet, in this case didymium, iron and boron magnet, that aims to be the least polluting for the environment in its capacity as supplier of natural resources and as storage medium for harmful and toxic waste from mining, production and consumption and at the same time is technically and economically unique and competitive with existing products from Chinese (or rather currently existing) production. Furthermore, social aspects have to be considered along the entire value chain.

This approach will provide both an alternative procurement source for ingredients of future technologies, and at the same time also offers long-term alternatives to extractivist thinking

patterns in the emerging economies such as Brazil. Of central importance is the question of whether a market-oriented and sustainable corporate strategy or sustainability can be a factor that seems suitable for breaking through monopolistic structures. It is important to note that for the authors, sustainability-oriented strategies as an approach for a market-oriented company must comply with the requirements and approach of the “triple bottom line”. Only the strict and stringent consideration of the economic, ecological and social dimensions justifies the “Green” labelling.

## Potential Success Factors in monopolistic Market Structures

The rare earth market – more specifically the derivative markets for NdFeB magnets – are ideally suited to investigate the dismantling of monopolistic market structures through sustainability-oriented strategy sets and business models. The elasticity of supply in terms of pricing is almost always inelastic (in many cases a dominant position is already achieved between 30 to 40% share of the total production). Thus, the existence of a single large-scale producer induces monopolistic market structures (Gocht 1983). Currently, the value chain from REO to REPM is dominated by Chinese suppliers. China possesses more than 55 million tonnes of REO reserves and its market share amounts to 83.2% (in 2016) (USGS 2017). Other references even anticipate a market share of up to 97%. According to Preiser, these circumstances result in a near-monopoly; although there is competition among the providers, the result for the large number of customers is similar to the supply situation in a real monopoly: the price is fixed by the “merger” of suppliers (Piekenbrock 2018). The resulting market failure leads to an artificial price increase of these commodities.

A market study within the German industry reveals promising potentials for sustainably manufactured REE and derivative REPM from Brazilian production. 60% of the enterprises are receptive to this issue and one in two is even willing to pay a price premium of up to 10%, provided environmental, social, technological and qualitative standards are met or rather exceeded throughout the entire REE value chain. This makes sustainability-oriented product and process design a key competitive advantage. 53% of the enterprises expect a short-term increase in demand for REPM. 91% of the respondents expect the demand for premium RE magnets to increase or at least to remain constant. These findings justify the focus on the premium market segment. The market study also confirms a good

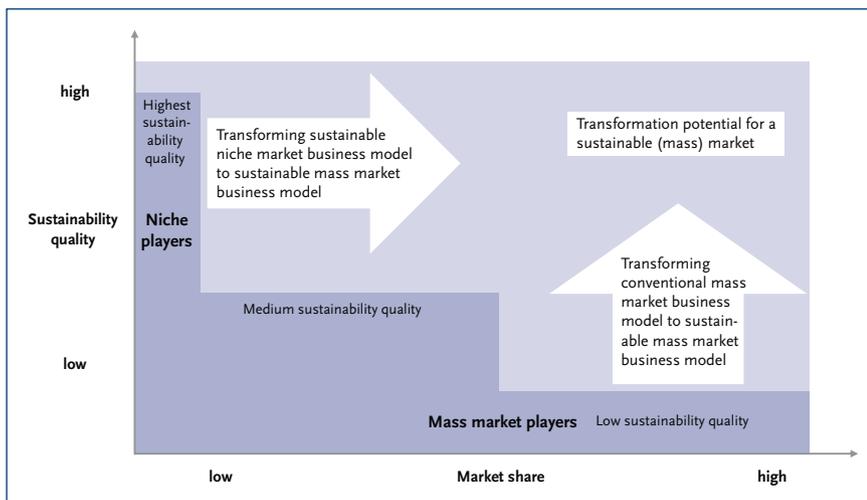


Figure 1: Sustainability Transformation Potential for Sustainable Entrepreneurship (Hockerts et al. 2010; Wüstenhagen 1998) and required orientation of Business Model Innovation.

core businesses provide effective solutions to environmental and social problems. Porter and Kramer's "shared value concept" introduces a strategic approach that takes this thinking pattern into account by no longer perceiving social concerns as decoupled problems, but rather as opportunities or success factors closely linked to corporate strategy (Wójcik 2016). In this case, however, it is important to note that sustainability issues also pose challenges whose solutions do not only result in win-win situations for companies.

Figure 1 visualizes the potential of a well-thought-out sustainability management. The theoretically possible market space is spanned on the basis of the dimensions "market share" and "sustainability quality". The ordinate axis visual-

izes the sustainability quality and the abscissa axis shows the market share. Accordingly, markets are generally characterized by the fact that some small companies offer products and services with high sustainability quality only in a small niche (large, narrow area on the left of Figure 1), while large companies or the majority of competitors provide large market shares with only medium or low sustainability quality (broader area in the lower part of Figure 1) (Schaltegger et al. 2016). So far, sustainability-oriented companies have focused less on cost leadership. Most of them strive to increase efficiency levels in order to gain competitive advantage and, as a result, increase their market share. It has to be noted, that this singular approach is not sufficient in terms of achieving "true business sustainability" as it excludes the other sustainable strategies of consistency and sufficiency. Still, it is good to see, that companies recognize the potential of sustainability-oriented product differentiation; the solution of sustainability-related problems offers the opportunity to develop appropriate solutions or value propositions and market them as innovations. New business segments are established through the newly created awareness. From now on, competitors must copy or exceed the newly established sustainable quality standard (e. g. product characteristics of the "Green Magnet") (Schaltegger et al. 2003). As will be shown in the next sections, the transformation from the niche to a mass market is possible as a result.

## Sustainable Corporate and Competitive Strategies

By analogy with the process of strategic management, there are no contradictions in terms of the selection of a classic sustainability strategy (efficiency, consistency and sufficiency). Generally it is the strategic mix that provides the optimal result. The design of a sustainability-oriented value chain also has to meet the company's requirements to become differentiator in the competition. The required process starts with the sustainability assessment, followed by a stakeholder dialogue. The materiality analysis provides indications for various strategic approaches – taking into account the individual company's interests and those of various stakeholders (Schulz 2015). The discussion of sustainability dimensions strives for preferably equal consideration of the ecological, economic and social component to achieve maximum contribution to sustainable development, resulting in various business cases (Dyllick 2002). This raises the following questions:

- How can the company best integrate the individual aspects strategically and operationally into its management, taking into account the "triple bottom line" approach?
- How can the company achieve an adequate transfer of these aspects to the competitive strategic level and at same time stay in line with the requirements of its environment (stakeholders) (Elkington 1997; Gminder 2006)?

It should be noted that the sustainability challenges vary according to the industrial sector and branch of trade; both industrial and company contexts determine the specific characteristics of corporate sustainability management and the sustainability strategy (Gminder 2006). In general, companies achieve maximum contribution to sustainable development when their

In competition, sustainable corporate activities aim at the three areas planning security, securing acceptance and legitimacy as well as exploiting differentiation and market potential (Gminder 2006), as depicted in Figure 2. Future-oriented strategy development shows how companies can become increasingly flexible in their forms, functions and business models, making them difficult to imitate; sustainability-oriented business models play a significant role in this context. Despite more recent concepts and strategies, sustainability and its management are still equated with philanthropy and therefore are con-

starting position for Brazil to become country of origin for the "Green Magnet" (Niski et al. 2018).

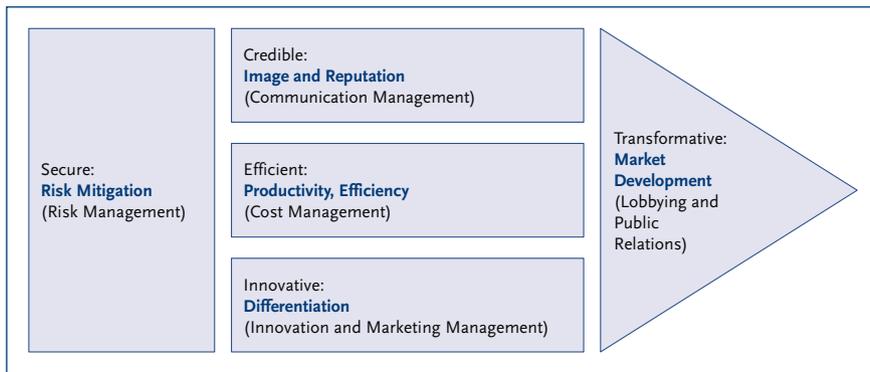


Figure 2: Logical sequence of Sustainability-oriented Competitive Strategies (Gminder 2006)

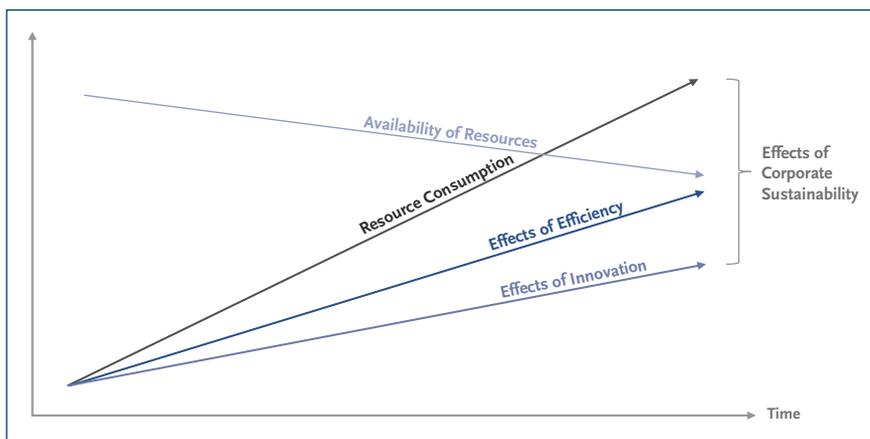


Figure 3: As resource consumption increases, resource availability decreases. Corporate sustainability provides the context to drive efficiency and innovation. (McGill 2011)

sidered separately from the core business. In this sense, the result will be a self-fulfilling prophecy; according to this reactive thinking pattern, sustainability actually only causes costs, since it is an unsystematic approach (Schaltegger 2017).

This misconception proves to be wrong both empirically and conceptually. Of course, as with other management tasks, an inadequately reflected approach can cause high costs; however, this does not correspond to the latest findings of Corporate Social Responsibility (CSR) 3.0 (Schneider 2015), and therefore does not lead to “True Business Sustainability” (Dyllick et al. 2015). Business practice shows that intelligent consideration of sustainability aspects enables e. g. cost savings and provides a substantial contribution to corporate success. This requires a differentiated approach to sustainability issues: Sustainability measures should be further developed and differentiated so that they contribute to risk reduction, utilization of opportunities, cost reduction, enhancement of innovation or reputation or develop new business segments with aid of a business model innovation. Direct integration into the core business is expedient, e. g. by selecting potential business segments and innovative, sustainable business models based on them.

Sustainability-induced cost reductions can be traced back to the triad of sustainable strategies and not – as perhaps ini-

tially suspected – only to improvements in efficiency, increase the transformation potential towards a mass market. Opportunities are increased by adequate framework conditions in the political environment (Figure 1). This requires a new understanding of how markets and companies work and how companies become viable. Enterprises have the potential to play a significant role in addressing urgent ecological and social issues: They are not only, as is often denounced, partly responsible for the emergence of global social grievances; but with their financial resources, management capacities and their problem-solving skills they can make an equally effective contribution to solving them as well as securing the future of society like hardly any other economic participant (Elkington et al. 2014; Wunder 2017). This amendment goes far beyond the economic primacy of profit-driven prosperity growth. It requires the value-oriented development of value creation networks and -cycles that replace the poor and harmful growth of short-term business models with smart growth. The key drivers of sustainability are the beliefs of management and the motivation of employees to do something meaningful, the legislation, and the needs of cus-

tomers and their customers (Hort 2008; Willée et al. 2014). Companies are increasingly focusing on customers and their benefits and are working closely with many interest groups (Freeman 1984). The probability of increased cooperation with customers for reasons of sustainability is 80 % higher than with traditional companies (Kiron et al. 2013). Sustainability is promoted through intelligent organizational changes in the value chain or rather value circle, as it represents the backbone of the company. Implementing CSR and related approaches primarily means implementing it in products and the value chain (D’heur 2014). Innovations throughout the value chain and the target segment are not the only source of sustainability gains and competitive advantages. Sound skills in Change Management and innovative leadership of the firm and human resources lead to a high level of employee commitment.

### Market Orientation of Sustainability-oriented Business Models

The connection between corporate sustainability and the innovation of sustainability-oriented business models contains explainable competitive advantages. Sustainable business models systematically shape the symbiosis of economic and social

added value (Wunder 2016). The consideration of sustainability extends the company's strategic scope of action, as demonstrated by more recent concepts such as Creating Shared Value (CSV). Social and ecological concerns are placed at the core of the company's activities and are raised to the strategic level. As early as 2001, the EU came to the conclusion that the competitiveness of a company could be enhanced if the CSR activities implemented went beyond mere legal compliance (EU Green Paper). Such commitment could make the Union the most competitive and dynamic, knowledge-based economy in the world – an economic space capable of achieving sustained economic growth with more and better jobs and greater social cohesion (Bergmann 2013). The business relevance of Corporate Social Responsibility

(CSR) and Corporate Sustainability (CS) has recently increased significantly (Figure 3). New innovative business models both support and promote the implementation of CSR management and the CS idea. Companies rethink their value creation architecture and achieve considerable competitive advantages that outshine process, product or sales market innovations (Afuah 2004; Zott et al. 2010). Ideally, this includes parallel innovations of all these elements and thus has a systemic character. Business model innovations have therefore become a central topic in research and practice (Gassmann et al. 2013). It is precisely for this reason that business model innovations, i. e. the development and implementation of new value creation architectures, play a major role from the viewpoint of CSR and sustainability management (Lüdeke-Freund 2018, S. 37). The development of new business models provides the required enhancement of the competitive approach, which in many cases has traditionally focused on product or process innovations, for the future viability of companies.

The focus on innovations outside the established competitive arena is sharpened and the creative design of market-changing value innovations is fostered.

Profitability enables companies to contribute to the prosperity of the economy and society. A “sustainable” core business is seen as an entrepreneurial opportunity with which a company can improve its long-term competitiveness and generate profits, inter alia by opening up previously neglected target groups, e. g. using the bottom-of-the-pyramid approach (Prahalad 2010). State-of-the-art CSR strategies create concrete innovation opportunities and new competitive advantages for companies by increasing the social added value of entrepreneurial activity. Enterprises have a competitive advantage when integrated economic, environmental and social benefits are greater than those of their competitors (Wunder, 2017). According to a study conducted by

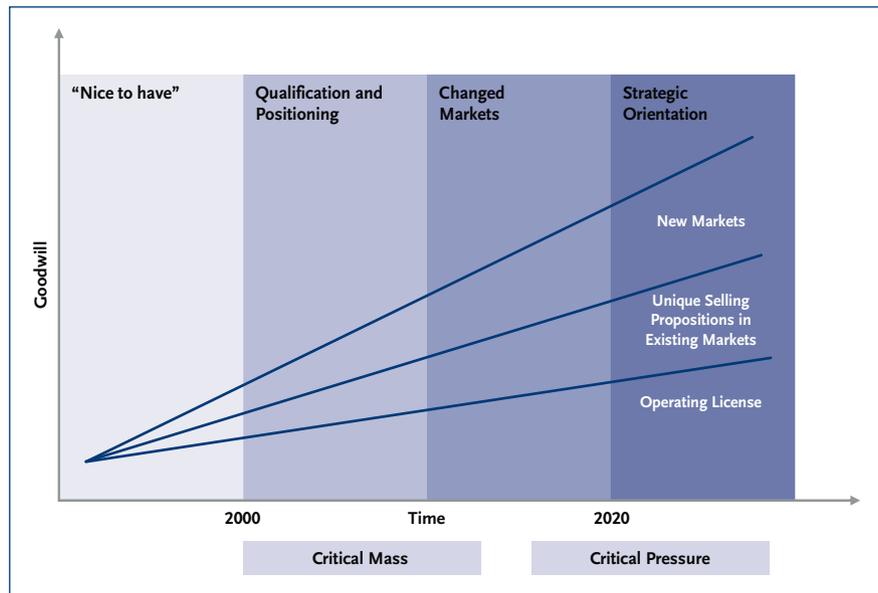


Figure 4: Sustainability/CSR and its Relevance to the Business

(Bergmann 2013)

the Boston Consulting Group, 67% of the companies surveyed see an innovation advantage in achieving profits through sustainability orientation. Around 50% of each company recognize cost advantages and intangible benefits (Kiron et al. 2013). Compliance with the principles of responsibility requires structural changes that can lead to competitive advantages like technological innovation. For example, environmental protection programs can promote innovations that partially offset or even outweigh the costs of implementing them. The use of indicators to measure Corporate Sustainability Performance (CSP) is complex and requires individualization. A different perspective on the concept of success is required. Currently, problems exist in the overall performance of the integrated measurement and consolidation of the various sustainability dimensions (Wunder 2017). Amongst others, these difficulties result from different interpretations of the CSR approaches, the diversity of the indicators to be measured individually, the transdisciplinarity of sustainability science, and the highly individualized business model innovations themselves.

## Measurement

Different perspectives are conceivable for assessing the success of sustainability-oriented strategies:

- added value: the offer creates more value for the customers than that of its competitors;
- economic result variables: the economic profitability (e. g. return on capital or sales) is higher than the industry-specific average;
- shareholder value: profit exceeds the cost of capital employed (e. g. Weighted Average Cost of Capital (WACC));
- CSP: the integrated performance of the triple bottom line is greater than that of competitors.

Types of strategies	Strategy alternatives / Strategy Set			
<b>Corporate strategies</b>				
Norm strategy	● Investment and growth strategy	Selective Strategy	Skimming and divestment strategy	
Product/Market strategy	Market penetration strategy	Product development strategy	Market development strategy	● Diversification strategy
Internationalisation strategies				
Market entry strategy	● Export	Licensing	Direct investment	
Target market strategy	Market presence strategy	● Market selection strategy	Market segmentation strategy	
Timing strategy I	First mover strategy	● Follower strategy	Me too strategy	
Timing strategy II	Waterfall strategy	● Sprinkler strategy	Combined waterfall sprinkler strategy	
<b>Business unit strategies</b>				
Market behavior	Offensive	● Displacement	Status quo	Avoidance
Market and competitive strategies	● Differentiation	Cost and price leadership	Hybrid competitive strategy	
Differentiation	Quality	Time	● Brand/Brand Value (Sustainability)	Customer relationship
Market parcelling	Total market	● Selective market choice	Niche	
Value creation strategy	Layer Player	Market Maker	Orchestrator	● Integrator
<b>Functional Area Strategies</b>				
Focus	Technology strategy	Procurement strategy	● Production strategy	
<b>Sustainability strategies</b>				
Focus	● Efficiency strategy	● Sufficiency strategy	● Consistency strategy	

Figure 5: Strategy set for a Brazilian company

The first three approaches are established approaches to measure competitive advantage because they are clearly quantifiable. What is new, however, is the use of CSP indicators. One challenge is the integrated measurement and consolidation of the various sustainability dimensions into a company's overall performance [1]. The maxim "If you can't measure it, you can't manage it" requires a broader perspective. Classical target-performance comparisons can, in the context of sustainability, lead to their instrumentalization in comparison with the competition. There is also the difficulty that only material or monetary variables can be measured, but not the handling of intangible resources. Müller-Christ therefore proposes substituting target/actual-comparisons with entrepreneurial self-observation. This approach follows the principle of decision premises. Which decision premise should therefore guide action (Müller-Christ 2014)? The company/business model should not only provide economic benefits, but also ecological and social added value. But how can the ecological or social added value or benefit be evaluated?

In principle, catalogues of criteria can be differentiated according to the following factors:

- on the basis of the political goals of supranational institutions, states, federal states or municipalities;
- on the basis of standardization and standardization objectives of standards institutes and international organizations;

- on the basis of comparison and valuation targets, in particular those of auditing firms, rating institutions, funds and asset managers, and
- based on objectives to improve sustainable corporate management of corporate or industry associations, research institutes and consulting firms.

In some cases, the criteria are only singularly aimed at measuring environmental or social criteria. Within the framework of the CSP, there are a large number of criteria catalogues. In principle, every approach can be used for the development and comparison of sustainability-oriented business models. According to Colman, the criteria of EFFAS and DVFA as well as SASB have a methodical advantage (Colman 2016). They allow for assessment of sustainability in relation to a specific industry. This leads to a significantly higher practicability and proximity to reality than cross-industry criteria catalogues (Ahrend 2016).

### Case Study: Project "REGINA"

The REE value chain – currently dominated by Chinese enterprises – is associated with severe environmental impacts. NdFeB magnets are therefore attributed with a "negative ecological footprint" that also massively affects those of the final

application (Gauß et al. 2016). A paradox becomes apparent: The use of these magnets stands in contradiction to their application in sustainable technologies (e. g. wind energy, e-mobility). There is a real challenge and at the same time an opportunity to derive and create competitive advantage or a business model that is difficult to copy or, moreover, from a purely cost-relevant perspective: Negative external effects play an important role, as the production and refinement of raw materials are usually linked to these. The extent of the negative externalities is determined by the quality of the environmental and social standards (Gandenberger et al. 2012) and causes further costs.

The core task is the development and selection of strategies. The strategic analysis should identify a strategy set for the relevant Brazilian companies that takes into account the internal and external framework conditions (at the levels of the company as a whole, the strategic business areas and the functional levels). The customer benefit and the cost position are of crucial significance. Even if there is no additional customer benefit, a more favorable cost structure can lead to a relatively better competitiveness compared to competitors. Durability refers to the period of validity and the ability to defend a competitive advantage against changes in the environment or attacks from competitors. The table in Figure 5 shows the chosen strategy set/path for companies within the Brazilian REE value chain.

Sustainable, strategic planning and orientation in industrial goods segments must therefore take into account these factors:

- the selection of the optimal strategy set;
- the optimal mix of sustainability strategies and sustainability-oriented competitive strategies, taking into account the capacity principle;
- the special characteristics of industrial goods marketing and the related derivative demand (here: REE sector).

## Discussion

Strong market forces and political frameworks prevent the solution of structural problems within the REE sector. Chinese companies control the entire global value chain, from mineral extraction to NdFeB magnets, accounting for 70–85 % of the total value chain. The reason lies in the competition between the social market economy and China's state capitalism. This results in mutually reinforcing problems of resource nationalism, market opacity, lack of trust and weak cooperation (Klossek et al. 2016). Western economies and their companies are not able to overcome these on their own (due to political-economic systems). From a realistic perspective, this happens in a rather protracted process of iteratively softening market entry barriers.

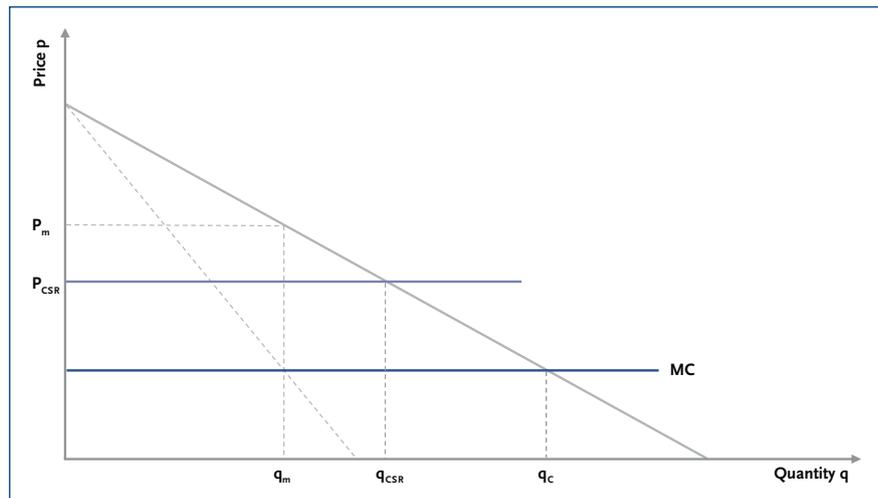


Figure 6: Price and Quantity in Monopoly and CSR-Pricing

Sustainable differentiation approaches initially lead to establishment in a market niche and have the potential to develop a mass market, depending on the intensity of pursuit and the support available from other interest groups. Voluntary environmental and social measures have an impact on the economic success of a company in terms of risks and costs as well as opportunities and returns. Taking technical risks and reacting late to social and legal demands can, for example, drive up costs. On the other hand, corporate environmental and social measures can strengthen a company's success if, for example, they result in cost reductions through improved energy efficiency. This relationship can be theoretically answered using a price-selling function (Figure 6).

Companies maximize profit without CSR measures only in a monopolistic way (price  $p_m$ ). This price is both the short-term and the long-term profit-maximizing price (provided there is no conflict between shareholders and management). CSR can result in reduction or redistribution of returns. The effect of yield reduction results from the fact that the incentives of both shareholders and management to take care of the company's profits are diluted: Shareholders could reduce their spending on management control and management could reduce its cost containment efforts because some of the benefits are distributed to stakeholders. A different view: Due to stakeholder activity, the company must reduce the price of goods from  $P_m$  to  $P_{CSR}$ , which means that the amount of  $q_{CSR}$  available in the market may and also will increase. Due to the CAGR -8 % in terms of the demand for magnets (Prinz 2017) the market will offset a potential price reduction of the Chinese competitors.

Schlinkert et al. (2015) outline a scenario resulting in a long-term oligopoly in the REE market. According to this scenario, Chinese suppliers experience the loss of market power after the exploitation of their power position; eventually the market will be transformed. The above-mentioned CSR measures strongly support the individual process steps or are even decisive. The scenario leads to an increased security of supply, lower prices

*“Local sourcing or regional production are opportunities to contribute to compliance with both environmental and social requirements.”*

and a larger market volume due to the diversification of production and at the same time takes into account the promotion of sustainable development.

## Conclusion

The strategy path consolidates relevant strategy alternatives and provides a holistic picture of the optimal strategy set. In relation to the case study, the brand value “Sustainability” allows for a differentiation within the REE market. The primary objective of the REGINA project is to establish a sustainable value chain for REE and derivative products, especially REPM. The choice of the value creation architecture is of central significance. The company should act as an “integrator”. This role takes over control throughout the entire value chain and optimizes the transactions between different stages. One of the objectives is to optimally integrate upstream stages of the value chain. Local sourcing or regional production are opportunities to contribute to compliance with both environmental and social requirements, e. g. by reducing CO<sub>2</sub>-emissions or stabilizing regional labor markets (Zentes et al. 2011, p. 199 ff.).

Companies in the REE or raw materials sector must internalize downstream production stages (production or trade stages) in a production process. Horizontal or forward integration must take place. It is a tailored combination of supplier's defined activities and resources and their integration into the individual customer's process that allows for sustainable competitive advantages for the supplier and a long-term business relationship with the customer. This is a very central aspect of the logic, in which service is understood as an “application of specialized competences” and operant resources in the form of “knowledge and skills” are considered indispensable for gaining competitive advantages. This is precisely the value proposition for the customer, because the provider may perform better in terms of service integration (due to his sound experiences) than the customer whose core competencies are aligned to other focal points (Bruhn et al. 2014).

By reconsidering and evaluating the environment of the companies, we observe a fostered innovative strength. Future developments can be anticipated more quickly, resulting in a new, sustainability-oriented business model for companies.

Generally, innovative developments can also be used excellently for promoting one's own brand and its perception in society. In addition to resource advantages, the cost approach offers innovation potential for new, promising products and processes. In the context of corporate management, growth has so far mostly been understood as size growth. However, there is a second, just as important meaning of the term growth: growth as a development process through which an increase in quality can be achieved. Qualitative growth can create competitive advantages, generate additional customer benefits, lead to higher enforceable prices and contribution margins, make companies more sustainable and, last but not least, provide a sense of purpose.

The concept of qualitative growth clearly differs from traditional management approaches. The aim of qualitative growth is to achieve unique selling propositions and competitive advantages through comprehensive quality leadership and not, as usually understood in quality management, to meet certain requirements through conformity with standards (Sternad et al. 2018).

To grow quantitatively means to become larger. To grow qualitatively means to go through a development process. This is the basic recommendation for a green product. The design of promising business models is more likely based on these development or deployment processes, that aim to develop both resource-conserving and ecological manufacturing processes as well as fair and ethical employee and business relationships.

## Annotation

- [1] Exemplary approaches: Total Impact Measurement and Management (TIMM) (PWC 2015) or Social Return on Investment (SROI) (Social Value UK 2015).

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## AUTHORS + CONTACT

**Dr. Alfred Niski** is Professor of Economics at Technical University of Applied Sciences Georg Agricola in Bochum.

Georg Agricola University of Applied Sciences,  
Herner Str. 45, 44787 Bochum. Tel.: +49 234 9683260,  
E-Mail: [alfred.niski@thga.de](mailto:alfred.niski@thga.de),  
Website: <https://www.thga.de/en/>

**Stefanie Krause** is research assistant at Technical University of Applied Sciences Georg Agricola in Bochum.

E-Mail: [stefanie.krause@thga.de](mailto:stefanie.krause@thga.de)

**Olaf Drusche** is research assistant and PhD student at Technical University of Applied Sciences Georg Agricola in Bochum.

E-Mail: [olaf.drusche@thga.de](mailto:olaf.drusche@thga.de)

