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Global innovation strategies of German hidden champions in key emerging markets

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Technology and Innovation Management

**WORKING PAPER /
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Global Innovation Strategies of German Hidden Champions in Key Emerging Markets

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Global Innovation Strategies of German Hidden Champions in Key Emerging Markets

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Abstract: Aim of this study is to analyse product-related innovation strategies of German Hidden Champions (globally leading, mid-sized companies) in the BRIC countries, especially in the fast growing and still unsaturated markets of China and India. With the help of an empirical survey we discover that the BRIC markets are perceived to be of high and growing strategic importance. An overwhelming majority of the surveyed firms market their global, adapted, or exclusively developed products in those countries. The survey reveals that companies very often target high-end, premium segments with global products developed at the headquarters. With such a strong focus on affluent customers Hidden Champions run the risk of ignoring very large customers groups that seek affordable excellence in products (“frugal innovation”).

Keywords: Global Innovation Management; Internationalization of R&D; Innovation Strategy; R&D-Strategy; Hidden Champions

Problem/ Current understanding

Growing importance of new economic powerhouses like Brazil, Russia, India and China (BRIC) as strategically highly important markets requires Western multinational companies (MNCs) to reassess their product-portfolio strategy as well as the innovation strategy. Customers in the Business-to-Business (B2B) as well as the Business-to-Consumer (B2C) segments of emerging economies may have very different expectations regarding product features and price owing to the prevailing socio-economic as well as geographic conditions. For example, Tiwari and Herstatt (2014: 6) cite the managing director of a German auto component supplier in India as saying that to succeed in that market “you need a product which costs 30 % of the global price and offers 95 % of the performance”. This behaviour is attributed by the R&D head of a global carmaker operating in India to the role of aspirations of the youth that is faced with limited purchasing power: “It’s about the aspirations of the youth in India. They want everything; they know everything; but they are not prepared to pay extra!” (Tiwari and Herstatt, 2014: 7).

Customers in emerging economies are increasingly looking for “low-cost, high-quality” products that meet the buyer’s *actual* needs while reducing the associated total cost of ownership (Prahalad and Mashelkar, 2010, Bound and Thornton, 2012). The past few years have seen an increasing role of such products (“frugal innovation”) in the emerging market countries. Companies offering frugal products are seen to be winning a disproportionately large market share. The reason is that frugal products enjoy an above-average share in the strong growth of the middle market segment. They also have a good chance of attracting some of the present or former customers of premium products owing to their attractive value proposition (cf. Rogers, 2003).

A confirmation of this trend can be found increasingly in the business headlines of respected newspapers in Germany and elsewhere. For example, daily newspaper “Die Welt” reported in April 2013 that German machines are often perceived as being “simply too good to succeed” in the global market (Dierig, 2013). A little earlier, the same newspaper reported that Siemens, a renowned German concern, had started a low-cost

campaign in Asia focusing on frugal medical devices. While Walter Märzendorfer, responsible for radio oncology and computer tomography business at Siemens, reportedly continued to see a demand for high-technology products, he specifically stressed the strategic importance of frugal solutions, not only for Asian markets, but also for Europe and the USA (Tauber, 2013).

The discussion above demonstrates the need for enhanced local responsiveness in the face of growing and unsaturated markets of the developing world, where the traditional approaches of international product life cycle (selling commoditized or stripped-down products) are no more functioning. On the other hand, such frugal innovations are finding their way to markets in the Western countries in the form of “reverse innovations” due to various socio-economic factors (Govindarajan and Trimble, 2012, Tauber, 2013, Tiwari and Herstatt, 2013).

This dynamic landscape raises the question that to what extent a global innovation strategy is needed to coordinate the market interfaces and to link diverse consumer expectations in new markets with the product portfolio of a company. Even though this question is relevant for all MNCs independent of size and industry, its significance for mid-sized companies in an export-driven economy like Germany can be hardly overstated. This is especially so since mid-sized companies in Germany (“Mittelstand”) accounts for the bulk of employment generation and constitutes the backbone of German economy (cf. Buse et al., 2010). A special role amongst the German Mittelstand can be attributed to firms known as “Hidden Champions”. According to Simon (2009), Hidden Champions are usually medium-sized companies that have been exceptionally successful in their business and fulfil three characteristics:

1. The firm should belong to the top-3 in the world market or be number 1 on its home continent,
2. The company’s annual turnover should usually not exceed € 5 billion,
3. The firm is rather unknown to the public in terms of low visibility.

These unknown world market leaders are often active in the B2B area so that their products are frequently unfamiliar to the end-consumer. Nevertheless, many final products would be almost unimaginable without the high-quality and innovative solutions

offered by Hidden Champions. Their number worldwide is estimated at 2,734, of which 48% are located in Germany (Simon, 2012), underscoring their special role for Germany's economy. Despite their importance for the national economy, so far there has been little research of global innovation strategies of Hidden Champions, especially in relation to emerging markets. The authors' interaction with a host of Hidden Champions in Germany and their ventures in emerging markets like China and India confirms this research gap. Hidden Champions are often reported to be losing market shares in the fast growing markets due to their often-exclusive focus on premium products and concentration of research and development (R&D) in the home country.

Research Question

Aim of this study is to analyse product-related innovation strategies of German Hidden Champions in the BRIC countries to take stock of the status-quo and to learn about their mid-term strategies. Especially China and India, the two most populous nations of the world and both home to fast growing and largely unsaturated markets, stand in the focus of the study. We investigate three research questions:

- What is the strategic relevance of the BRIC markets for German Hidden Champions today and how is it expected to develop in the next 5 years?
- What are the market-segments that German Hidden Champions seek to serve in China and India?
- What innovation strategies are pursued by these firms in China and India in terms of product development and R&D locations?

For the purpose of this study we define market segments in terms of the price/performance ratio and build three categories:

1. Premium Segment: The premium segment can be broadly understood as the high-end category targeted at affluent, financially-strong customers, where the best possible quality, high reliability and a broad range of features are demanded; state-of-the-art or even futuristic technology is integrated; and the products command a significant price premium especially in comparison to entry-level, standard products.

2. Medium Price-Performance Segment: This segment is characterized by relatively good quality of products whose performance and reliability usually well exceed the prevalent regulatory norms while complying with all relevant safety standards. The products may be based on ripe technologies resulting in lower unit costs for R&D. Furthermore, the deliberate renunciation of the *best possible* quality combined with the reduction in the number of features leads to a significant lowering of the product price, making it attractive for a larger group of customers.
3. Low Price-Performance Segment: This market segment still constitutes the largest group of (potential) customers in the developing world who tend to face severe resource constraints and are extremely price sensitive, willing to make compromises in terms of product performance and reliability. Products offered in this segment are generally characterized by their bare compliance of the safety & regulatory norms and in some cases even lack thereof. Often they rely on ripe, simple and/or partially outdated technologies. They usually offer only basic functionality leading to price-based competition in the market. Such products, more often than not, have a short life-span owing to compromises made in terms of input factors.

As a next step we define 3 product development strategies for the target markets in question.

1. Global Products: These are standardised products with largely identical features and are sold globally without any significant local market adaptation (e.g. most electronic consumer devices).
2. Adapted products: These are products in a firm's portfolio which were originally developed for some particular target market(s), often the primary market(s) of the firm. They are subsequently modified or adapted to meet the local demand conditions of some other sales region/market possibly with the intention of exploiting economies of scale and scope by varying the product features and performance criteria as suited for the individual markets while retaining the core functionality. For instance, an adapted product can have additional, modified or reduced functions and/or it may be composed of different materials.

3. **Exclusive Products:** These products are exclusively developed for a specific sales region/market to cater to the differing needs and preferences of a strategically important market.

The survey questions include the perceived current and mid-term strategic importance of the BRIC countries as well as the targeted market segments there. We also enquire about the locations at which significant value creation activity (R&D and production) takes place for the product categories discussed above. The respondents are asked whether this happens primarily at company headquarters in Germany or also abroad, particularly in the BRIC target markets. This helps to identify patterns of division of labour, if any, both between the company's international branches and with external partners at home and abroad.

Research Design

Our study reports preliminary results of an ongoing online survey which started in September 2013. The questionnaire was developed with the open source online survey application Lime Survey. The respondents were mainly R&D directors and heads of (international) sales & marketing divisions. In most cases, the participating persons were pre-contacted by telephone or email, followed by the provision of the e-questionnaire. The list of companies to be surveyed has been derived from the two latest books of Hidden Champions-researcher Hermann Simon (2009, 2012).

Findings

So far, 53 valid responses from the targeted group of German Hidden Champions have been received. The respondents came from branches as diverse as electrical engineering, pharmaceuticals, medical devices, automotive components, construction, and mechanical and plant engineering. Companies from the mechanical & plant engineering sector make up the largest group of survey participants (nearly 50%). On average, responding firms had a 90-year company tradition and employed 2,250 staff worldwide, while almost all generated a turnover of €1 billion or more. Most companies maintained production and R&D facilities in Germany as well as overseas, as can be seen in Table 1.

Table 1 Worldwide distribution of value chain activities of participant firms

<i>Country/Region</i>	<i>Basic/Applied Research</i>	<i>Product Development/ Adaption</i>	<i>Production</i>
Germany	50	50	51
Western Europe (without Germany)	12	20	28
Eastern Europe (without Russia)	0	10	19
North America	14	27	33
South America (without Brazil)	3	5	18
Japan	2	7	10
Brazil	4	7	19
Russia	1	1	10
India	2	8	15
China	4	15	32
Rest Asia	4	7	12

Surveyed Firms' Activities in the BRIC Countries

An overwhelming number of the responding firms (87%) was already active in the BRIC countries selling their products, with Russia and China being the top most host-nations. The firms had on average long experience in the BRIC countries. Close to 62% of the respondents had been active in at least one BRIC country for more than 10 years; in 24% cases it was between 5 and 10 years. China and Russia were again countries with the largest share of companies with 10+ years of engagement, with a share of 69% and 64% respectively.

Already today, the BRIC countries are perceived as strategically important or even very important by two-thirds of the respondents. This share increases to 88%, when the respondents are asked about the strategic importance of the BRIC markets for their firm in the coming five years (see Figure 1).

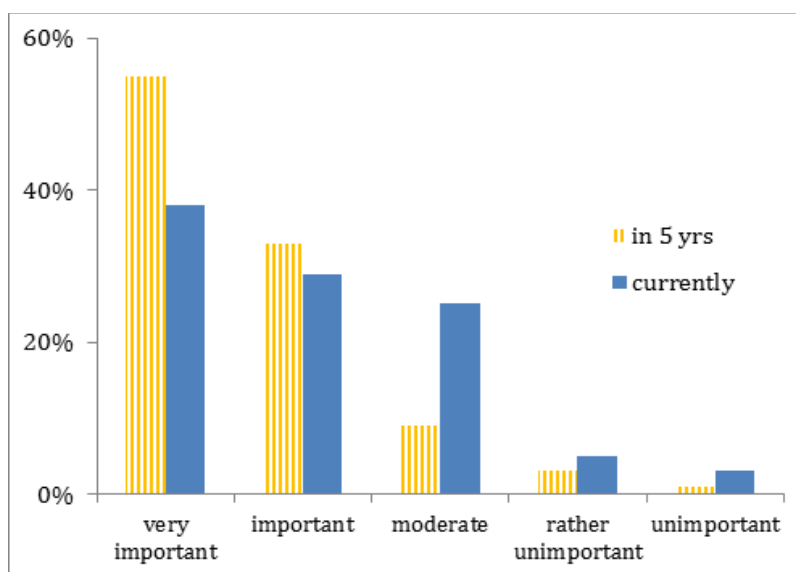


Figure 1 Strategic relevance of BRIC

Amongst the individual BRIC countries, China plays a clearly leading role with 87% considering it currently either a very important (62%) or important (25%) market. Brazil and Russia both score around 65% (market is important or very important), while India lags behind in their assessment. Only 47% rate the Indian subcontinent at present as a strategically very important or important market. The relative moderate importance of the Indian market at present could be explained in part by its currently low share in the company turnover. Participants estimated it as only 3.1% of their global turnover on average, compared with an average of 11.5 % for China (see Table 2). Some firms stated to generate as much as 50% of their annual turnover in one BRIC country.

Table 2 Level of the respondents' engagement in the BRIC nations

Country	Average Share in Turnover	Number of Associates
Brazil	4.8%	30
Russia	6.5%	25
India	3.1%	36
China	11.5%	160

As expected, the strategic relevance of the BRIC countries will increase further in future. The significance of China in five years' time is rated as very important by 74% of all companies responding (97% when the important rating is also included). The significance of the other countries could also increase greatly. This is especially true of the Indian market, whose future strategic relevance is rated as very important by 44% of the survey respondents and as important by a further 45%. Participating Hidden Champions estimated the Indian market to be strategically more important than the Russian (81% cumulative) or Brazilian (74% cumulative) markets. This evaluation by respondents also justifies the selection of China and India for the in-depth study of the targeted market segments and product development.

Targeted Market Segments in China and India

Forty-eight of the 53 responding firms were offering products in China, and 45 in India. The firms were primarily engaged in the premium segments of the two countries followed by the medium price-performance segment (see Figure 2). The low price-performance sector did not see any major presence of the firms participating in the survey. Only few companies had no products on offer in the respective markets.

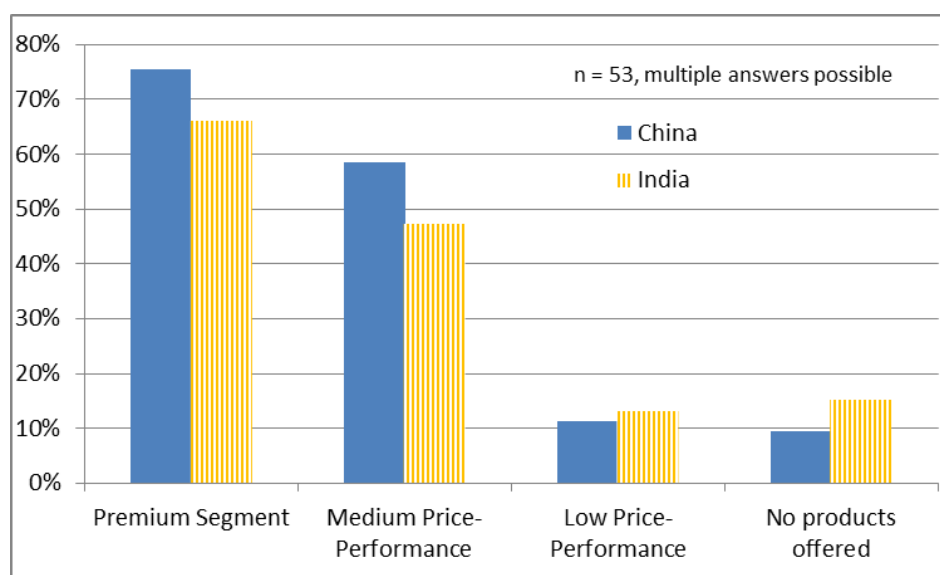


Figure 2 Targeted market segments in China and India

An interesting finding was that 16 firms in China and 19 in India offered products exclusively in the premium segment. While 6 firms in each country only had medium price-performance products on offer, there was one firm that stated to be solely offering products in the low price-performance segment in India. On the other hand, 20 firms in China and 13 in India offered products in both premium and medium price-performance segments. Only 3 firms in both markets offered products in the whole range across all the three segments. Three firms in India and two in China were engaged only in the medium and low price-performance segments. Remarkably, one company stated to offer products for the premium and low price-performance segments in China, ignoring the medium price-performance segment.

Most of the products which are available in these two markets are manufactured in cooperation between the German headquarters and local production sites in China or India. Furthermore, the results indicate that most Hidden Champions concentrate the production of their premium products at their home-base. Products belonging to the medium price-performance segment are mostly manufactured in cooperation between the headquarters and the host country for goods offered in China, whereas such products when sold in India witness a greater share of overseas production. In the low price-performance segment, the firms mostly manufacture exclusively in China while catering to the local market. For serving India's low price-performance segment the respondent firms stated to usually choose a cooperative production strategy between the headquarters and the local subsidiary.

Product development strategies in China and India

Survey participants were asked what products (global, adapted or exclusive) they were offering in the Chinese and Indian markets in the three market segments described earlier. Seen across all market segments global products dominated the product portfolio of the surveyed firms, followed by products adapted for these markets. The share of products developed exclusively for the respective local market was relatively low, see Figure 1.

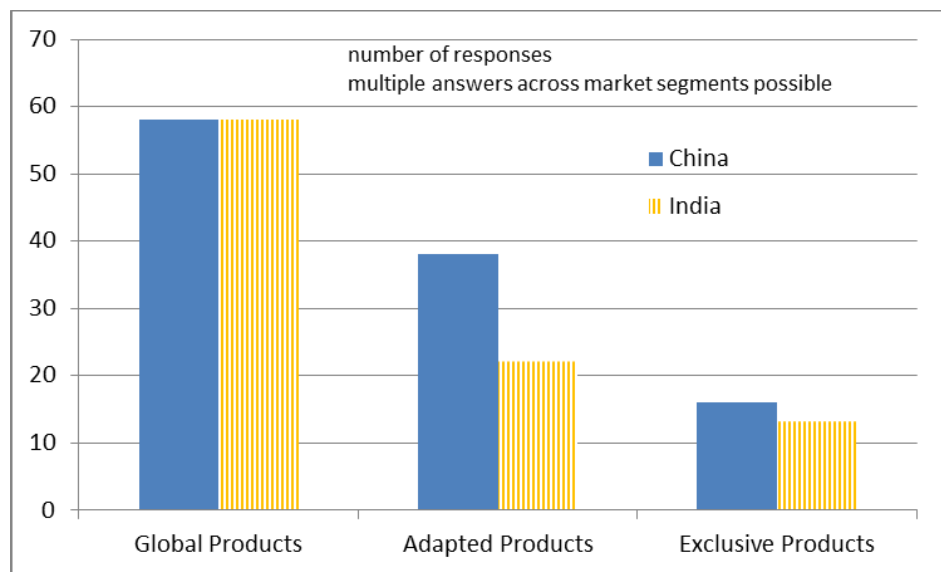


Figure 3 Product development strategies across market segments

Composition of company product portfolios in China

Differentiated across market segments, perhaps not surprisingly, it was the premium segment in China that was dominated by global products. Increasing pressure for price reduction tended to increase the level of local adaptation in China. Lower price-performance requirements caused many companies to develop products exclusively for the Chinese market, see Figure 4.

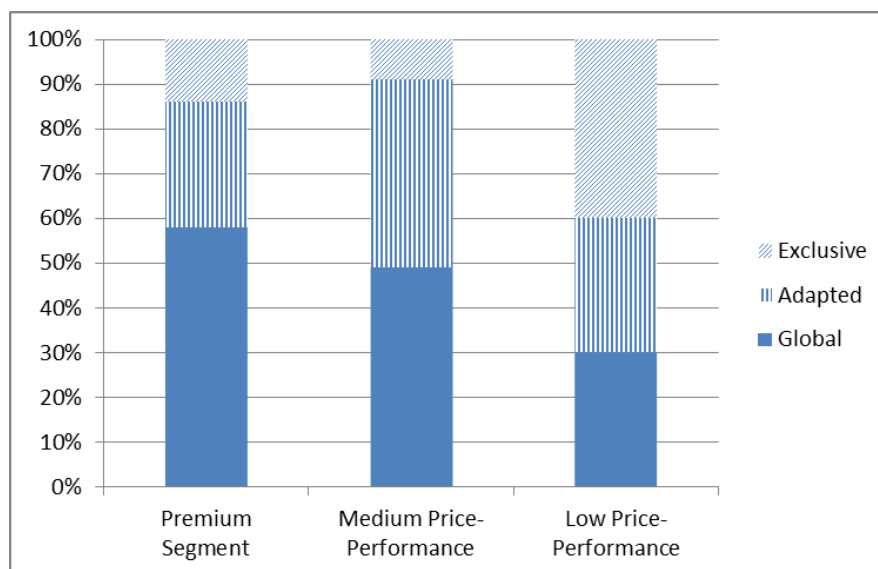


Figure 4 Composition of company product portfolios in China

Composition of company product portfolios in India

Similar to the company portfolios in China, also the Indian market was supplied predominantly by global products, however, on an even stronger scale, see Figure 5. The surveyed Hidden Champions relied heavily on their global and adapted products to serve the Indian market, which together accounted for somewhere between 67% and 90% of all products across the three market segments.

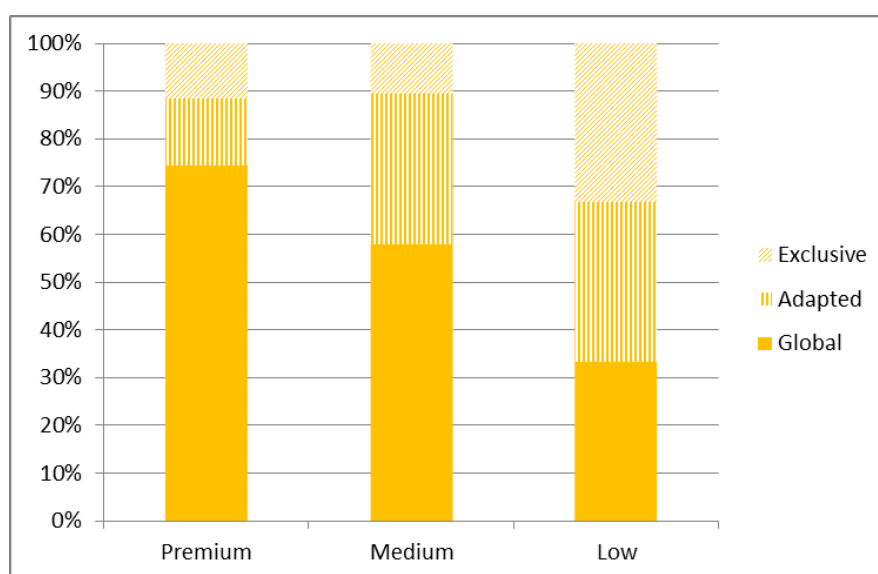


Figure 5 Composition of company product portfolios in India

This substantial reliance on global products might be explained by India's still low share in firm's global revenues (3.1%), limiting firms' motivation for developing/adapting products specific to market needs in India. An interesting question here however is whether India's low share in company turnover is not caused by a lack of products that better suit the market specific needs and preferences as discussed earlier (cf. Tiwari and Herstatt, 2014).

Role of China and India in Product Development

The survey revealed that the headquarters played an overwhelming role in the product development for all segments of the two markets surveyed here. Especially in the premium segment the headquarters was solely responsible for product development in 75% of the cases in China and in 80% of the cases in India. In another 17.5% cases (China) and 11.4% cases (India) it was involved in co-development of products. With

increasing price sensitivity and decreasing demand for prime quality the involvement of local subsidiaries tended to increase, see Table 3. Moreover, with increasing product adaption to local market requirements (e.g. exclusive products), cooperative development of the home and host country or sole development at an own R&D-location in the host country seem to be the most feasible innovation strategy for Hidden Champions.

Table 3 Responsibility of product development for the respective local markets in China and India

<i>Product Developer</i>	<i>Premium Segment</i>		<i>Medium price-performance Segment</i>		<i>Low price-performance Segment</i>	
	<i>China</i>	<i>India</i>	<i>China</i>	<i>India</i>	<i>China</i>	<i>India</i>
Headquarters (HQ) in Germany	75%	80%	38.7%	62.4%	16.7%	14.3%
HQ + Local subsidiary	17.5%	11.4%	38.7%	18.8%	50%	57.1%
Local subsidiary	0%	0%	3.2%	0%	33.3%	14.3%
Other countries	7.5%	8.6%	19.4%	18.8%	0%	14.3%

Table 3 also shows a greater role of the Chinese subsidiaries in product development and adaptation, especially in the medium and low price-performance segments, in comparison to India. A possible explanation for this might lie in the longer presence of the surveyed companies in China. While close to two-thirds of all surveyed firms active in China had been operational there for more than 10 years, this was true for only half of such firms in India. Probably as a result of this longer presence China had double the number of R&D and production units of the surveyed firms see Table 1. It is a well-established fact that product development capabilities tend to follow production (Gerybadze and Reger, 1999).

The study revealed that most participating Hidden Champions maintain basic and applied research as well as important parts of product development at headquarters in Germany. Still, there is a high concentration of R&D capabilities in North America and Western Europe with substantial and growing facilities in the emerging markets, especially the BRIC nations. Primary production bases for the surveyed companies are found in Germany, North America, China and Western Europe. Also in terms of production facilities, emerging market nations, including those in Eastern Europe, are gaining importance. The survey also discovered that Hidden Champions operate on a global

scale. Especially the BRIC markets are of strategic importance for these companies. Close to 90% of the responding firms market their products in those countries.

Contribution/ Practical implications

The survey results above make clear that a significant number of German Hidden Champions have already recognised the (growing) strategic importance of the BRIC nations, especially China and India, both for sales and also for other important value chain activities such as production; but lesser so for R&D. In keeping with their traditional product and marketing strategies, the majority of the companies surveyed focused essentially on the premium market segment. They still seem to have an undisputed competitive edge over competitors in this segment. However, as is well known, the demand for products in the medium price-performance segment has been growing disproportionately strongly in markets such as China and India (Tiwari and Herstatt, 2014, Govindarajan and Trimble, 2012, Bound and Thornton, 2012). This can be explained by various factors. Many customers in such markets are either unable or unwilling to (continue to) pay for high-priced industrial goods manufactured by Hidden Champions (Tiwari and Herstatt, 2013). This is further aggravated by the much less well developed brand loyalty in comparison to customers in established western markets (Dierig, 2013).

As a consequence, customers in the emerging economies are increasingly opting for products whose range of offered features meet the purchaser's *actual* needs while ensuring an attractive price-performance proposition culminating in substantial reduction in the total cost of ownership ("affordable excellence"). Companies offering frugal products (also known as "good enough" products) can win large market shares as long as they understand that frugal innovations, even though targeted at price-sensitive customers, clearly differentiate from products at the low price-performance segment. Frugal products do not make compromises on the quality, reliability and safety standards in order to lower the price point. They rather make use of R&D, state-of-the-art technologies, product analogies and open global innovation networks to achieve cost reductions (Tiwari and Herstatt, 2014).

What does this mean for German Hidden Champions which have been the object of investigation in this paper? We can observe that many companies, for a variety of

reasons, continue to focus singularly on the profit-rich premium segment and ignore other market segments that may have thin profit margins but large volumes that can offset the price “disadvantage”. Not only in our opinion, such firms run considerable risk of forfeiting their competitiveness to established or new competitors, often from emerging markets, who seek to achieve above-average economies of scale with an appropriate product and innovation strategy befitting the market requirements; since this allows them to participate in the enormously growing market segments in the key emerging economies. The competitors can use their thus generated profits to consolidate their competitiveness by upgrading to new and better (production) technologies, intensifying R&D efforts, reaching out to new markets to enhance economies of scale and achieve a more favourable cost structure and upgrade their product range to reach out to other market segments.

It may be interesting to quote the technology head of an Indian producer of generic drugs. Talking to these authors he stated: “Germans are innovative but they also need to understand the market requirements and cater to multiple segments through a multi-tier product approach and only this will enable them to re-establish the market they have lost to the competitors from the East”. However, it seems that at least some of the German Hidden Champions have recognized this trend. To give an example, Germany’s CLAAS Group, one of the world’s leading manufacturers of harvesting machines has developed a special combine harvester for India that has catapulted CLAAS to a leading position in the local market. This product can be categorized as a frugal innovation as discussed above. According to CLAAS, “The pressure on prices on the Indian market is immense. That’s something developers have come to realize when designing such things as an operator’s cab. Although this feature has long since been standard in European models, the price makes it impossible to sell it in India. Developing this component at a minimal price in such a manner that it still offers comfort under trying climatic conditions turned into a never-ending puzzle, even for engineers accustomed to working on high-tech projects. ‘Every step in design also has to answer the question: Is the customer willing to pay for it?’ says Malik [president and managing director of CLAAS India]. ‘The German standard of quality from CLASS is also valid in India. On this point, we are thinking and acting in the same direction.’” (Böttcher, 2012: 6). The authors’ long-term interaction with a host of Hidden Champions corroborates such anecdotal evidence.

To summarize, successful global marketing and sales activities require a well-considered product-portfolio strategy and therefore also a well-considered innovation strategy. Companies have to understand potentially diverging consumer needs and preferences in different countries. Especially the Hidden Champions need to better comprehend the dynamics and challenges of fast growing sales markets in the key emerging economies.

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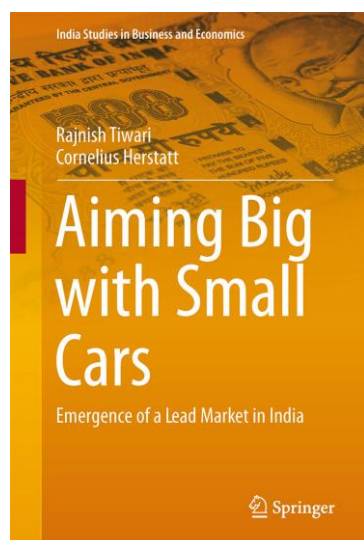
About the Authors

Dr. Stephan Buse is Deputy Director at the Institute for Technology and Innovation Management at Hamburg University of Technology (TUHH). Stephan's research interests are focused on areas related to "Global Innovation" and the strategies to benefit from internationally distributed research and development (R&D), frugal innovation, offshoring and outsourcing of R&D, and strategic alliances in R&D. He has a long teaching record in various areas of business administration. Additionally, he has long-time working experiences as a consultant and executive coach.

Dr. Rajnish Tiwari is a Senior Research Fellow at the Institute for Technology and Innovation Management at Hamburg University of Technology (TUHH). He has researched extensively on the emergence of "lead markets" in emerging economies and globalization of innovation including on recent trends like frugal innovation. Cross-cultural management & communication, overseas investments by Indian firms, Indo-German economic relations, and Mobile Commerce applications are further areas of his research and consultancy work. Rajnish leads Hamburg chapter of German-Indian Round Table (GIRT) and is a member of the Advisory Board of Deutsch-Indische Gesellschaft e.V. (Indo-German Society).

Together with **Prof. Cornelius Herstatt**, the authors have established a **Center for Frugal Innovation** that seeks to conduct and promote research, consulting, and education in the field of affordable and sustainable innovations by:

- Cooperating with leading research institutions to address existing and emerging issues;
- Providing consulting services to firms to develop and deliver useful, environment-friendly and affordable products with appealing design and "good enough" quality;
- Supporting policy makers in creating conducive framework conditions and assisting public authorities in promoting programs and actions leading to the greater good.



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