

think:act CONTENT

Fresh thinking for decision makers

Apple, Bosch and Zara |

They may be in different industries, but they have one thing in common: |

They're using globalization to create jobs in high-wage countries

| What's their secret?

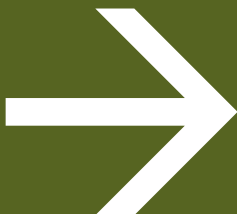
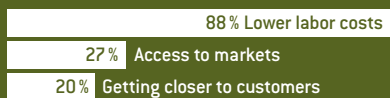
- Is it really possible to be globally competitive and create jobs at home at the same time?
- Is relocating jobs to low-wage countries the only way to succeed in the long run?
- Does the future of knowledge-intensive business functions lie abroad?
- What makes businesses more productive: cutting costs by relocating jobs abroad, or investing in their staff?



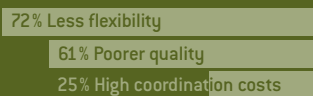
We know it pays to rethink the answers to these questions.



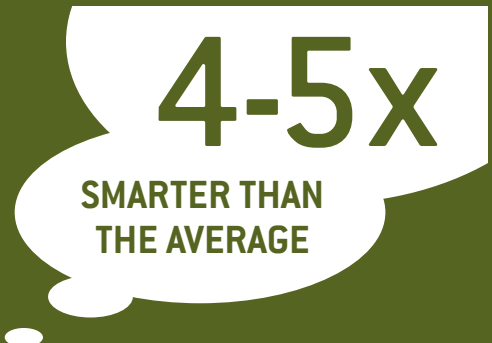
WHY BUSINESSES RELOCATE...



... AND WHY THEY COME BACK



Source: Fraunhofer Institute for System and Innovation Research 2006



R&D INVESTMENT COMPARED

EU 27	1.30% ¹⁾
OECD	1.95%
GERMANY	2.28%
USA	2.35%
BOSCH AUTOMOTIVE	10.08%
APPLE	12.35% ²⁾

On average, the most successful businesses invest 4-5 times more in R&D than businesses in their domestic markets.

THE MYTH OF DE-INDUSTRIALIZATION



The idea that developing nations are de-industrializing is a myth. Manufacturing's share of gross value added in the EU has risen considerably in the last 10 years.

INDUSTRY HAS A FUTURE!

Source: Prognos 2006

1) R&D spend/gross value added

2) R&D spend/sales

WHERE DO JOBS HAVE A FUTURE? [Fig. 1]

In a globalized economy where wage disparities have seen jobs relocate from Berlin to Bangalore, many have lost faith in the future of employment in developed economies. Employers are constantly trying to internationalize to optimize their value chain and generate growth. But must this necessarily come at the expense of domestic employees? International market leaders like Apple, Nintendo and Bosch would disagree. For years they have invested in employment at their headquarters, and relocated only select jobs abroad. Their goal: Maximizing comparative advantage by keeping key jobs at home. Are they isolated examples? How do these companies design their value chains to avoid the downside of globalization? How do they protect themselves at home and stay ahead of the global competition?

THE SYSTEM HEAD APPROACH [Fig. 2]

To answer this question, we examined the value chains of companies in Germany, the world's number one exporter. With the Federation of German Industry (BDI), we surveyed thousands of companies to identify the business functions they are keeping and developing at home to create more jobs. In a second step, we transferred our findings to the international stage, only to find that the same rules applied on a larger playing field.

As the global analysis shows, know-how in developed industrial countries is less mobile than most people think. It's precisely the high-value, knowledge-intensive tasks and functions which leading companies worldwide keep close to home. Around 43% of the staff at the companies we surveyed work in knowledge-intensive areas – R&D, production and sales management, marketing, branding and in high-value production. The future lies in these demanding functions: They are instrumental in controlling global production activities, maintaining the unique value of products and services (which guarantee higher prices) and safeguarding jobs at home.

These key knowledge-based functions give companies the edge. They are what we call "system head" functions: based on unique, intangible resources – know-how, competencies, fine-tuned processes and partnerships – competitors cannot imitate or replace them, at least not in the short term.

System head companies invest disproportionately in research and development: 70% of all system head companies are active in these areas, compared to only 57% of non-system head firms. In system heads, 23% of all staff work in R&D, design and construction. It comes as no surprise that one euro out of four is earned with unique products, whereas comparable businesses generate just 18% of their sales with unique products.

As a result, these businesses have a vested interest in hiring and training people locally for these key competitive areas and promoting them within the company.

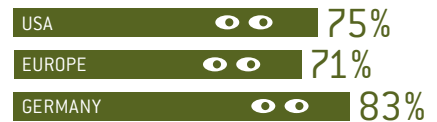
SYSTEM HEADS: THE PATH TOWARD GROWTH AND JOBS

Many of the world's leading companies operate as system heads, resisting pressure to cut jobs or outsource key areas completely. System head companies don't only invest in sustainable jobs at home, they excel in other areas as well: Their international expansion is carefully planned to maximize comparative advantage. They build strong national and international networks (with research institutions and partner companies) and know what their customers want. This calibrated strategy promises greater success than simply outsourcing costs to low-wage countries. They have realized that they need to develop and maintain those activities that are vital to their products' USPs at home.

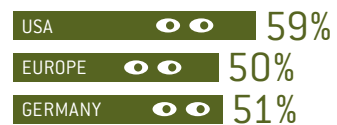
Fig. 1

FEAR OF GLOBALIZATION

In Europe and the USA, more than two-thirds of the population are in favor of global free trade:



At the same time, more than half the population are worried about losing their jobs to global competition:



Source: German Marshall Fund 2006

Fig. 2

THE SURVEY

5,889 For the "System Head Germany Plus" survey, 5,889 companies were interviewed in the first wave; 3,416 in the second.

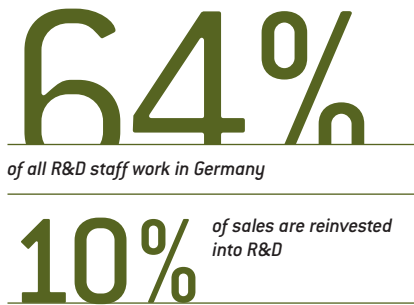
3,416

13 In 13 in-depth case studies, we examined the internationalization strategies of the most successful among our sample.

The survey was designed and conducted jointly by the Federation of German Industry, the Institut der Deutschen Wirtschaft Cologne, Roland Berger Strategy Consultants and the Bavarian Business Association. It was completed in March 2008.

Source: Roland Berger

Fig. 3



- Our study proves that although system head companies invest heavily in creating sustainable jobs at home, they are still strongly engaged in internationalization: Over two-thirds do business abroad; 27% of their sales come from abroad and a tenth of their overall staff are local employees. At the same time, they seem to make outsourcing decisions more carefully: While many companies jumped at the prospects of cheaper international production and are now regretting their choices, 80% of the system heads we surveyed were satisfied with production quality from abroad. They clearly excel at organizing global value creation networks – 90% of all system head companies make a profit on what they make abroad. So while key production functions are internationalized, the bulk of all knowledge-intensive functions remain close to home: less than 10% of these type of companies also maintain system head functions such as R&D or marketing and sales abroad.
- System head companies develop highly effective trust-based partnerships, clusters and networks with other companies, suppliers and research institutes: 27% believe in the importance of knowledge partnerships, compared to just 14% of other companies. Knowledge partnerships produce more innovative results than simple business networks. They often produce the kind of quality R&D that sets these companies apart and secure a unique international profile.
- System head companies look for interconnected business opportunities. They cater to today's discerning customer, by pairing one-of-a kind products with exceptional service solutions, creating high-quality all-in-one solutions.

Four leading global corporations from Germany, Europe, the USA and Japan are exemplary in the way that they have created international growth but have invested in jobs at home. Their optimized industry-specific system head strategies have put them ahead of the game.

Fig. 4



are spent on an item of clothing until it reaches one of the 3700 outlets in 68 countries. Their main competitor, H&M, takes four weeks

THE BEST SYSTEM HEADS IN THE WORLD

GERMANY: BOSCH AUTOMOTIVE TECHNOLOGY [Fig. 3]

"Germany will continue to spearhead our development"

The world market leader in the automotive supply industry makes three-quarters of its profits abroad, but it creates 40% of its global value-added at home in Stuttgart. With a few exceptions, platform development still takes place in Germany. Most recently, Bosch opened a new development center with 2,000 new jobs for highly qualified employees. Germany is equally important for the company when it comes to production. Bosch developed the concept of the so-called "lead plants" here. These define the processes for all international locations, setting the standard for the differentiated product and production know-how Bosch is known for. Once lead plants have developed new products successfully, they serve as mentors to other production facilities within the global network, passing on the production methods that have proven most successful. As part of its strategy, Bosch capitalizes on the extensive knowledge base it has in Germany, combined with the opportunities offered by production possibilities in low-wage countries. This makes Bosch the perfect example for the system head theory at work: It invests in jobs at home, forms strong networks and excels at steering its internationalization through central control.

Fig. 5



EUROPE: INDITEX [Fig. 4, 5]

"Spain is a healthy market for us. We know it well"

Speed and a high level of vertical integration are what puts Inditex a cut above the rest. Europe's largest clothing maker and retailer (parent group of brands such as Zara and Massimo Dutti) has seen its sales rise consistently by up to 25% over the past few years. Design and logistics – two key system head functions – are still located at the company headquarters in Spain, while the company itself is setting trends across the globe. Where fashion houses with a comparable market segment produce in Asia, Inditex still makes the bulk of its collection in Spain. This means it can supply its European shops with products within 24 hours, and its American and Asian stores within 40. Zara – the company's best known brand name – reinvents itself with new items added to current collections twice a week, with trends hot off the runway. The fact that over 40% of the range is still produced in Spain and Portugal is what makes this possible. All group designers work at the company headquarters, though they remain in constant dialogue with managers and specialists in each country. While domestic production is more costly, these costs are offset by the fact that Inditex can get new trends into the European and American stores twice as fast than if it had to wait for slow boats from Asia. With the skill of expert sewing and tailoring teams from Galicia, which work under direct company supervision, Inditex can turn around collections much faster than its main competitor H&M.

USA: APPLE [Fig. 6]

"Innovation is what distinguishes between a leader and a follower"

Innovation strengthens the domestic market, as vividly proven by Apple. The company stands out for its turnaround capabilities, innovation and growth. The iPod proves just how Apple creates value in the United States with each step in its production. Apple alone is responsible (working closely with the Product Design Program at Stanford University) for R&D, design, product and brand development, supply chain management and marketing – creating jobs in California. Other system head features include core technologies such as software and microprocessors, which are created by US partner companies, while the actual iPod is assembled in China. Thus, Apple has mastered the art of creating outstanding value domestically, with sustainable jobs and strong networks, but has internationalized where necessary.

Another system head discipline the company has perfected: developing integrated solutions. With the development of the iPod and its music distribution program, iTunes, it has created an interlinked system of products and services. This has proven extremely lucrative for Apple. Since iTunes was launched, users have downloaded five billion songs and are now buying fifty thousand films a day, irrespective of whether they are in San Diego or Singapore. 20% of Apple's sales now come from product-related services: good for Apple but even better for the US economy .

JAPAN: NINTENDO [Fig. 7]

"The key to our strategy lies in having ideas potential customers don't think of"

As a world leader in video games, Nintendo creates and markets both hardware and software. After a serious crisis early in 2000, the company implemented a strict restructuring program and achieved an unprecedented turnaround. Throughout the process it emphasized creative innovation and family-friendliness as core strategy elements. These values were echoed in



Fig. 6

USA BENEFITS

Breakdown of value created in making and selling an Apple 30 GB Video iPod (USD) Graph:

	USA [APPLE]	JAPAN	CHINA	KOREA
Manufacturing:	80	0	0	0
Retail/sales:	70	0	0	0
Supplying parts:	7	26	4	1

Source: Linden, Kraemer, Dedrick

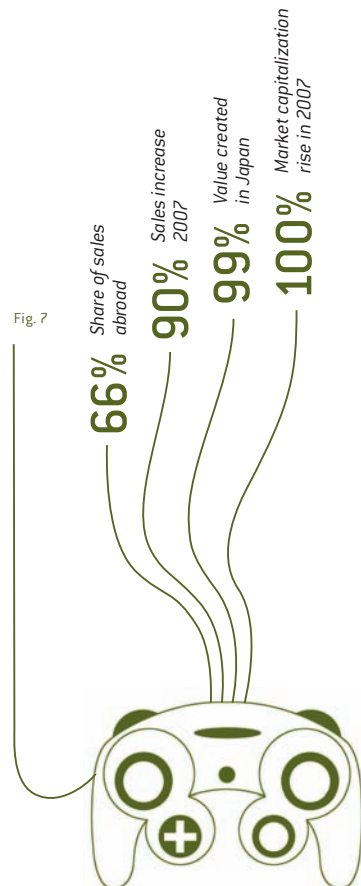
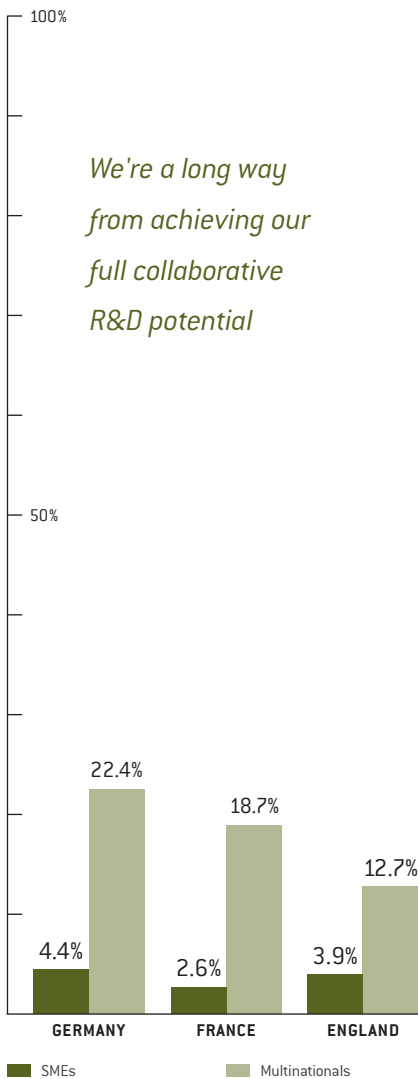


Fig. 7

Fig. 8

BRAINGAIN

Proportion of companies working with universities, colleges and research institutions in their innovation processes:



Source: OECD Science, Technology and Industry Scoreboard 2007

their products, ultimately attracting new target groups to video games. While highly innovative, its new game consoles are easier to use and much cheaper than those produced by the competition. The creative appeal of the new game formats have revolutionized the market.

The company's staff of 3370 – highly qualified designers, engineers and managers, all with a non-conformist streak – work mainly at its headquarters in Kyoto, in effective, tightly organized teams, focused on developing new hardware and software. Nintendo doesn't do market research. Instead, it focuses its energies on producing creative ideas in-house and grooming its closely knit network of external game developers. The hardware – made in China – is merely a vehicle for marketing profitable games. Only 1% of total value is created through hardware sales. Japan remains the hub of value – and job – creation. But Nintendo goes beyond simply investing in R&D jobs in Japan. As a system head company, it also capitalizes on international knowledge, through partnerships with specialized research universities such as the Massachusetts Institute of Technology (MIT).

FOUR STEPS TO A SUCCESSFUL SYSTEM HEAD COMPANY [Fig. 8]

As our international examples show, successful system heads come in different shapes and sizes. Companies must identify and invest in those system head functions which best fit their business model. By putting a premium on high-value added products and services, however, they will remain competitive in a globalized economy and create the jobs of the future.

1. IDENTIFY AND FOSTER SYSTEM HEAD FUNCTIONS

The most successful globally active system heads have done their homework. They have invested in their core competencies – through major restructuring in some cases, as in the case of Apple or Nintendo – and consistently invested in the right resources, both human and financial. To identify these functions, businesses need to analyze their value chain critically and ask themselves, "What are the resources that make my company unique? How can I capitalize on my comparative advantage and remain ahead of the competition?" Consistent investment in core strengths, not necessarily cost-cutting, is the way toward innovative best-in-class products and processes. The focus in sales must be on leading innovation and developing USPs. Product quality should not be sacrificed for the sake of efficiency. The centralization of system head functions is key. At the same time, operations that are crucial to individual markets can be steered locally.

2. OFFER SYSTEM SOLUTIONS

Demand for high-quality services is rising constantly. Today's discerning customers want integrated solutions or tailor-made products. Developing system solutions, similar to Apple's iPod and iTunes, can be one way to create long-term demand for both products and services. Crucial to developing the "right" combination is sound knowledge of what it is customers want. Success then comes through the close collaboration and communication between key system head functions: research and development, marketing, sales and after-sales services.

3. BUILD REGIONAL AND INTERNATIONAL NETWORKS

Efficient supply, production and R&D partnerships are often the key to unlocking the strength of the system head approach. Businesses actively engage in network building, both at the regional and international level. The benefit of regional partnerships lies in the possibility of local control and the personal trust they are built on, while international partnerships help businesses respond faster to challenges beyond the local markets. International collaborations are a staple of large multinationals, but are becoming increasingly important for small and medium-sized businesses producing high-value added goods. What sets system head companies apart is their close, ongoing, mutually-reinforcing relationships with outstanding research laboratories and leading universities. Apple, Nintendo and Bosch have succeeded at building both national and international partnerships with some of the world's top research facilities. Our survey shows: The more a company can integrate supply networks, external research and design and superior market research, the greater its degree of differentiation and success in developing functional, high-end products and services.

4. INVEST IN HUMAN CAPITAL

System head companies would be nothing without consistent investments in human resources. Research networks with top universities make sense, not least because they allow the best minds in independent R&D and company-owned production to inspire one another. The sooner a company can tap the resources of young researchers and allow them to develop concrete solutions, the more likely they are to join the ranks of the in-house R&D team upon graduation. A consistent stream of what are known as "high potentials" will allow for long-term value creation and will give companies the competitive edge. Creating an international team of the "best and brightest" at the core of key system head functions also pays off: It can be the hub for developing internationally successful products. Companies should invest in lifelong learning actions, highly specialized training and individual coaching to ensure their employees and managers are maximizing their potential.

At the same time, it is important to provide an environment that will allow creativity, personal responsibility and entrepreneurial energies to thrive. With performance-based incentives and flexible working hours that allow a good work-life balance, companies see a high return on investment, even in a traditionally difficult area such as human resource management. An added benefit: Being known as a good employer creates a virtuous circle, attracting the best and brightest for years to come.

CONCLUSION: KNOWLEDGE CREATES JOBS

Know-how, innovative skills and competitive advantages based on intelligent differentiation are the keys to success and job creation in high-wage economies. For the system head approach to work in these countries, though, business and government must work hand in hand. For companies, investing in safeguarding and developing system head functions must be a top priority. Government, in turn, must increase its investments in educational funding and research to create a fertile breeding ground for the best and brightest to succeed. Government and business need to develop a dialogue on educational needs and the know-how needed to foster sustainable domestic employment. Only then can they maintain their edge in a dramatically changing globalized world.

SHOULD YOU HAVE ANY QUESTIONS, PLEASE DON'T HESITATE TO CONTACT US:

Burkhard Schwenker, CEO
+49 (40) 37631 4100
Burkhard.Schwenker@de.rolandberger.com

Christian Kryz, Senior Expert
+49 (211) 4389 2917
Christian.Kryz@de.rolandberger.com

think:act CONTENT

Publishers: Burkhard Schwenker, António Bernardo
Overall responsibility: Torsten Oltmanns
Project management: Cathryn A. Clüver

Roland Berger Strategy Consultants
Am Sandtorkai 41
20457 Hamburg
+49 (40) 37631 40
news@rolandberger.com

