Study

Overcoming the limits to growth

Exploiting economies of scale, avoiding diseconomies of scale

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Editorial

In the spring of 2004, our study on "Finding the formula for growth" highlighted two aspects that are key to corporate growth:

> Firstly, companies are being forced to grow. Yet the "traditional" V curve no longer applies, where a phase of restructuring is followed by a phase of growth and vice versa. Nowadays, the connection is usually a different one. Because free cashflow is the basic requirement for investing in growth, companies are compelled to strive for operational excellence. Broad-based restructuring programs and growth strategies do not, therefore, represent a contradiction in terms. On the contrary, they are a must for generating cashflow fast.

> Secondly, corporate growth rests on two things, namely the ability and the willingness to grow. A company's ability to grow lies, for example, in quickly available extra capacities, in access to capital, in a clear strategy and in a market-driven innovation pipeline. Equally, companies need an inner readiness to grow – a culture that gives employees the commitment and motivation to apply their capabilities. This means that growth is essentially a challenge for management, whose job it is to communicate and embed the right mindset in the organization.

We wanted to explore these findings in more detail. We therefore carried out two studies, which we would like to present to you here:

> This paper, "Overcoming the limits to growth", looks at how to realize economies of scale and scope – the key growth enablers – in the best possible way to eliminate the limits to growth.

> Our second study, entitled "Growth through trust", which we will be pleased to send you upon request, discusses how to simultaneously mobilize and motivate the workforce to achieve the dual goal of restructuring and growth. We present the trust-based organization as an integrative concept designed to achieve exactly that.

We hope you find our analyses and observations interesting and look forward to a productive dialog with you.

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Proper management of transaction costs is crucial to exploit economies of scale to the full

Economies of scale and scope are generated by growth. They are efficiency advantages that allow companies that have achieved sufficient critical mass (exactly how big depends on the type of business) to improve their operational performance and efficiency even further.

At the same time, economies of scale and scope provide the fuel for additional corporate growth. They represent the basis for generating higher free cashflows, which can in turn be invested in more growth and greater operational excellence.

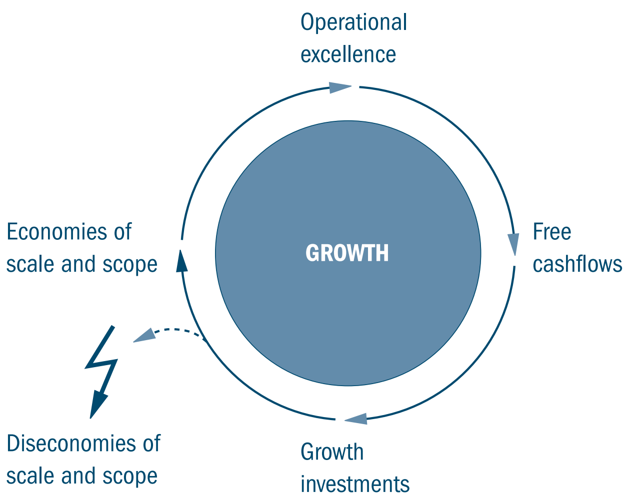
However, economies of scale and scope cannot be taken for granted. Many businesses face diseconomies of scale and scope, or disadvantages resulting from the growth process.

> A well known and telling fact is that more than 50 percent of mergers fail to achieve their growth and efficiency targets. After the initial euphoria, the stark realities of business set in.

> But even internally driven growth can bring disadvantages, which all too often destroy any economies of scale and scope.

In both cases, companies risk being knocked out of the self-perpetuating cycle of growth. And this is precisely what the optimum management of growth is designed to avoid.

The Roland Berger growth algorithm



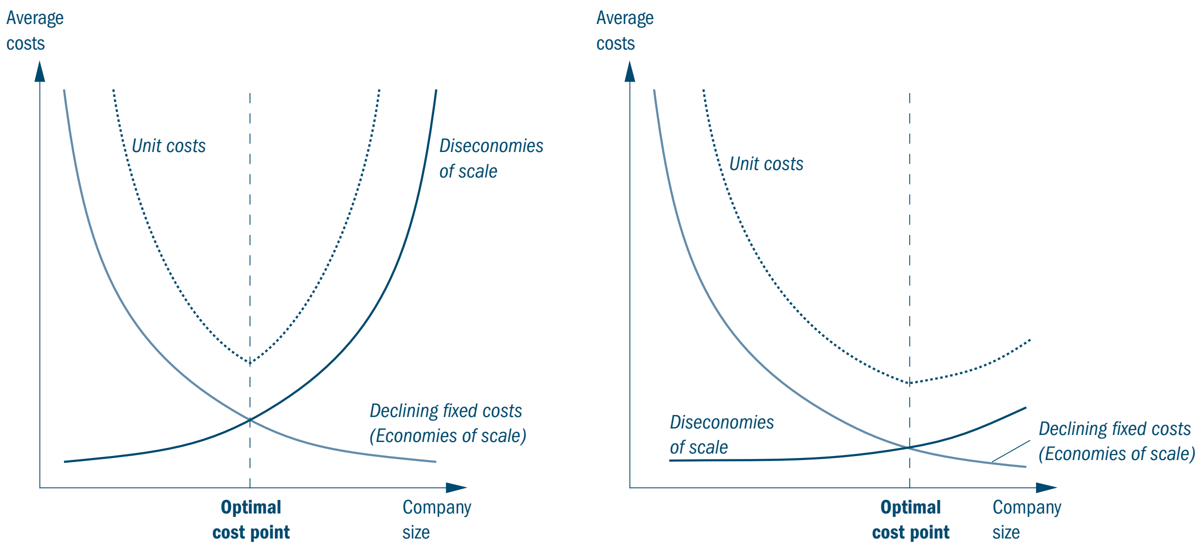
Our analyses have identified two effects:

> In production costs, economies of scale are common: average production costs fall as production volumes rise.

> Diseconomies of scale mostly arise when transaction costs grow disproportionately fast in the wake of company growth. Transaction costs are all costs involved in coordinating business activities. They incorporate the cost of initiating, agreeing, monitoring and modifying business transactions. Transaction costs arise both within a company and in business activities between partners in the marketplace.

In other words, companies that manage to keep their transaction costs low, or even reduce them, improve their growth options.

Costs are lower when diseconomies are reduced



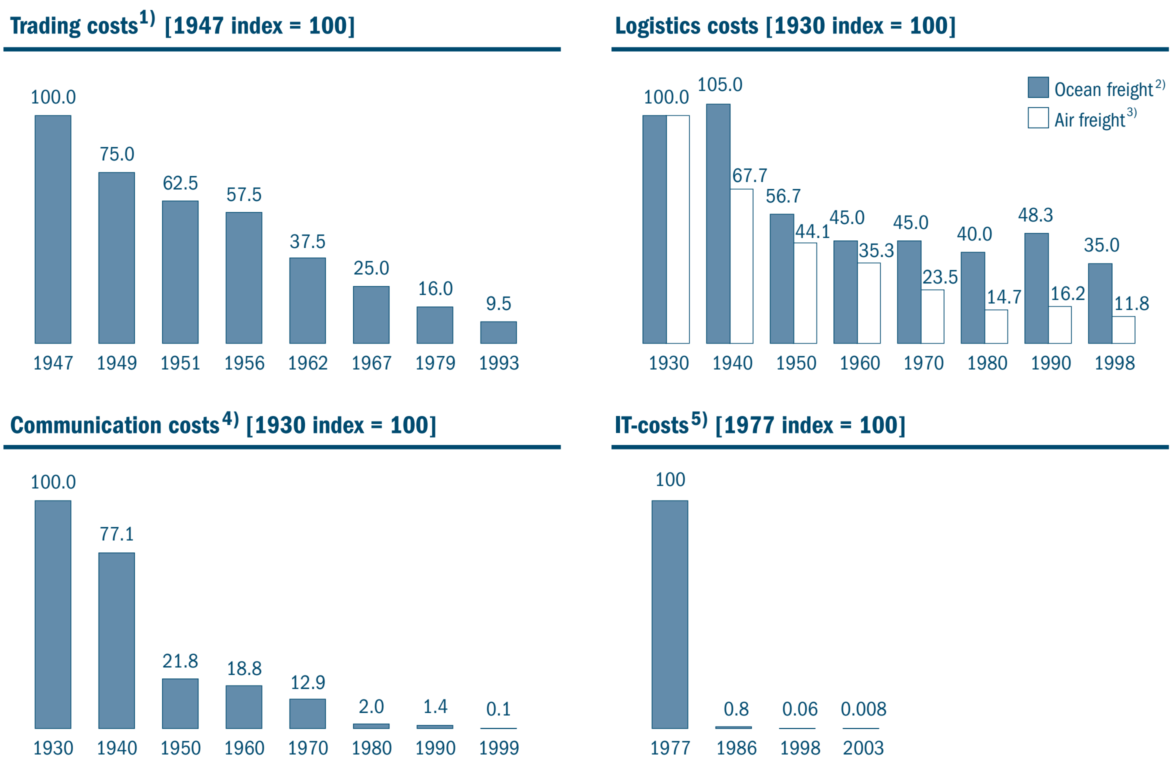
The stage is set. Numerous indicators confirm that transaction costs have fallen continually and dramatically in the past years and decades. The prospects are better than ever before for companies to push forward into new dimensions of scale.

> Information and communication costs have plummeted while hardware and software capabilities have soared. The massive expansion in infrastructure and the competition that has evolved in the wake of liberalized telecommunications combine to squeeze prices. The standardization of services as well as hardware and software reduces the number of interface problems, enables networking economies and thereby cuts costs.

> Logistics costs – for air and ocean freight, for example – have declined radically in recent years.

> Multinational trade agreements – such as GATT and WTO – and bigger free economic zones like the EU and NAFTA serve to cut customs duties and reduce non-tariff barriers to trade.

Transaction costs have fallen permanently



1) Average customs rate in GATT
2) Average ocean transportation costs and harbor fees for import- and export-freight per short ton
3) Average air freight turnover per passenger and mile
4) Cost of a 3-minute telephone call NY–London
5) Cost of 1 gigabyte RAM

Source: HWWA, TimesTen

If, as forecast, transaction costs continue to decline, a major test of successful management will be whether companies manage to turn these external effects into internal advantages.

Our aim in this brochure is to demonstrate the areas in which management must take action in order to master these challenges.

1. Management must rigorously drive economies of scale and scope.

2. Management must keep potential diseconomies of scale and scope to a minimum.

3. Management must create an organizational structure that provides a suitable framework for growth.

Economies and diseconomies of scale and scope

Economies of scale and scope are a company's growth bonus. Economies of scale are achieved when unit costs decline as output rises. Internal economies of scale can be achieved when the productivity of machinery is optimized, when price discounts are obtained on bulk purchase orders or when a company is granted better terms on a loan due to the size of its organization, for example. External economies of scale come into play when companies profit from the geographical concentration of their industry or from the local population density. In that case they have access to a wide range of suppliers, partners and potential new employees and can take advantage of the greater provision of government infrastructure, such as roads, universities and schools. Economies of scope occur when producing two different products together is cheaper than producing them separately. These kinds of synergy effects frequently result from the joint use of centralized functions or the use of the same machinery platform in the manufacturing process.

Diseconomies of scale and scope are the opposite of economies of scale and scope. They can occur at all stages of the value chain, including the support activities (such as finance, accounting, controlling and HR). Diseconomies of scale materialize when unit costs rise as output increases. This can happen when machinery is operated in excess of its optimum level (internal diseconomies of scale) or when the above-mentioned geographical concentration leads to an excessive burden on the infrastructure (external diseconomies of scale), for example. Internal diseconomies of scale are caused by the increased complexity of large organizations. Diseconomies of scope can occur, for example, if the cultures of two merged companies are incompatible.

Rigorously driving economies of scale and scope

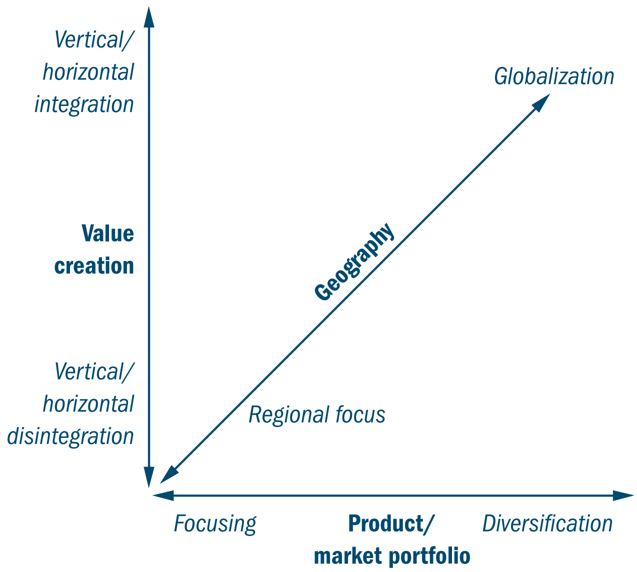
Economies of scale and scope do not appear as if by magic. They are the result of a targeted management process that uses a series of sound analyses and calculations. This process defines clearly quantified values for the expected development of the company and subsequently ensures their realization.

Managers today usually know how economies of scale and scope can be realized. We will therefore limit our observations to a systematic summary and then turn to the real challenge for growing companies: avoiding diseconomies of scale and scope.

But first a word on how to achieve the highest possible economies of scale and scope. Three dimensions need to be considered:

> Along the value chain: Integration versus disintegration
> Regional alignment: Concentration versus expansion
> Product/market portfolio: Focusing versus diversification

Economies of scale and scope can be realized in three dimensions



Determining the degree of vertical and horizontal integration

Economies of scale and scope can be realized at any point in the value chain. It is therefore crucial that companies analyze and determine the particular value chain configuration that brings the greatest economies of scale and scope.

In the majority of cases, companies endeavor to attain economies of scale within their existing value chain structure. They attempt to bring about a dramatic increase in scale in one or more of the links in their value chain. In recent years, firms have therefore tended to base most of their external growth on acquiring and integrating other companies operating in the same part of the value chain. This is known as horizontal integration.

With vertical integration, on the other hand, companies extend their value chain by taking on additional activities in upstream or downstream areas. A common aim in doing so is to safeguard supply sources or distribution channels. Equally, economies of scope can arise if the new value chain activities also make use of the existing administrative functions, thereby spreading the fixed costs of these functions over a broader base.

The capabilities of today's information and communications technologies go much further than simply enabling companies to grow in size internally. Nowadays, firms can outsource services without giving up control of their value chain. Professional outsourcing providers can achieve economies of scale that the companies they work for would be hard-pressed to accomplish. For instance, a large partner working within a network could bundle administrative activities and free the smaller partners from the burden of administration. So vertical or horizontal disintegration does not mean giving up the prospect of economies of scale or scope. Far from it. It offers firms the chance to participate in other companies' economies. In deciding on the optimum value chain configuration, management must consider two aspects:

> What economies of scale and scope can be realized in terms of production costs (especially by achieving scale in the different links in the value chain)?

> How can transaction costs be kept under control (and diseconomies of scale avoided) if complexity rises with the increased company size and longer value chain?

Determining the regional alignment of business activities
In most cases, the goals of low transaction costs and growth through regional expansion are mutually exclusive:

> Limiting business activities to one region keeps complexity – and the danger of diseconomies of scale – to a minimum. However, a strong regional focus also limits the growth potential. This, in turn, prevents economies of scale and scope from being exploited to the full by precluding, for instance, the exploitation of bulk-buying economies on the purchasing side.

> With geographical expansion, on the other hand, the risk of diseconomies of scale and scope tends to be greater. But expansion or even globalization can go a long way to increasing efficiency levels. When companies globalize their business activities, they penetrate a global sales market and new customers. This can also help them optimize their value chain: through global sourcing, for example, or global brand development, by manufacturing in countries where cost structures are better, or even by moving their R&D operations to wherever the best knowledge infrastructure is available.

Companies must manage their presence in different markets efficiently. If growth ambitions and cost optimization go hand in hand with regional expansion, the company will profit. This is precisely the strategic recipe for success employed by companies that achieve above-average growth in our study on "Finding the formula for growth".

Optimizing the product/market portfolio
The third dimension for achieving economies of scale and scope is the product/market portfolio. Ansoff's matrix identifies four strategies for exploiting growth potential.

> Existing product, existing market: Here the aim is to generate growth and hence economies of scale and scope out of the existing business system or service spectrum. Typical operational levers include new branding and marketing activities (such as relaunches, brand profiling), pricing activities, introducing CRM systems, optimizing existing products and services, improving the sales organization and Sales-Up programs. Strategically, the focus is on introducing new rules, consolidating markets through mergers and acquisitions or establishing networks and cooperative arrangements. The goal is to better penetrate existing markets and customers. However, in view of the fact that markets are largely saturated and highly competitive, only incremental growth can usually be expected here – unless the M&A path is taken. The opportunity to exploit economies of scale and scope is therefore limited.

> Existing product, new market: The goal here is to take existing products and services into new markets, i.e. serving new groups of customers. The focus is on globalization. Operationally, this is achieved by establishing a local base, expanding the sales organization and entering into cooperative ventures. Strategically, mergers and acquisitions are a particularly good way of conquering new markets. Market expansion activities therefore overlap quite considerably with market penetration activities. However, growth opportunities are much greater – the potential economies of scale and scope are significantly higher.

> New product, existing market: This is the classic area for product innovation, with growth being achieved through developing and launching new products. Key here is a mastery of the three dimensions of speed, share and scope. This means launching the product on the market fast, quickly achieving significant market share through intelligent pricing and marketing, and thus realizing economies of scale faster than others.

> New product, new market: This entails diversification in the classic sense. Corporate growth is achieved by establishing new products or services that are not directly related to the existing product or service spectrum. Suitable levers include establishing new business segments independently, entering into joint ventures with venture capital firms for instance, or buying other companies. Diversification offers major opportunities for growth but it is also a risky business, as synergies with the core business are limited by definition. But they can be realized if the company is in a position to apply certain strategic or business competencies right across all areas of the business.

Exploiting economies of scale and scope in all dimensions
Companies can and must achieve economies of scale and scope in all three of these dimensions. Technological progress and the resulting reduction in transaction costs are allowing firms to move into new dimensions in terms of scale. Production plants and transportation capacities can be expanded without any negative impact on their efficiency or safety. Information and communications technologies are almost infinitely scalable these days. Companies can sell their products worldwide on the Internet with relatively low investments. It is no surprise, therefore, that many firms have internationalized at least their sales activities.

Avoiding diseconomies of scale and scope

The section above illustrates that economies of scale and scope can be achieved in several dimensions. Active management, however, is an absolute must for turning potential economies into reality. Economies of scale and scope cannot be taken for granted. This is clearly shown in the debate about the failure of many corporate mergers and the major differences in cost structures between industries.

Our analyses have led us to conclude that it is not just realizing the existing potential that is crucial to success. On the contrary, many companies have disproportionately low growth levels because they cannot control their diseconomies of scale and scope. Therefore we should not judge managers solely by their ability to exploit economies of scale and scope.

What we need to do is identify, and consistently avoid, the negative effects of scale and scope as barriers to theoretically unlimited corporate growth. Since economies and diseconomies arise on different levels, the two aspects need to be managed concurrently.

With increasing scale, the complexity and inflexibility of an organization escalate and the transaction costs rise accordingly. In the case of internally driven growth, diseconomies of scale are common, while growth through acquisition usually creates diseconomies of scope. Here, the task is to reconcile the different structures, processes, systems and, most of all, cultures.

However, both types of diseconomies can be avoided. Appropriate countermeasures taken at the right time can stop a company from being knocked out of the growth cycle. Transaction costs usually fall, which gives management new opportunities to combine scale and efficiency. Our goal is to demonstrate what a strategy to avoid diseconomies of scale and scope must accomplish. We therefore present the challenges for management in respect of the three main types of the negative effects, namely cultural, technical and administrative diseconomies.

Preventing cultural diseconomies
Growth often puts the corporate culture under pressure. Employees need to do their bit, they must be mobilized to participate in the growth process – especially in view of the fact that familiar contexts and internal rules may be about to change.

If growth is also being combined with a restructuring program, as is often the case these days, the company needs people who will give their full commitment to both processes without losing their trust in the organization, or even leaving the company.

Cultural diseconomies can occur on many levels. This makes it difficult to formulate and implement specific answers and solutions. For example, parts of the workforce in a highly specialized work environment may feel that their contribution is no longer relevant because it is not visible in the end product. Or, the larger an organization is, the more difficult it is to create and live out a genuine corporate culture that everyone can identify with. Some divisions and departments may see fragmented subcultures developing, which may influence staff more strongly than the corporate culture itself.

Similar problems can occur in post-merger integration, where peripheral values and objectives may contradict the overriding vision. This is an issue that requires a lot of leadership to prevent it jeopardizing the company's efficiency. Likewise, there can often be discrepancies in the culture of innovation that is so essential for continuous growth. Innovation requires both money and innovative spirit. The crux of the matter is that while big companies may have the money to fund major innovation projects, they often lack the right kind of spirit to bring them about. This is the kind of innovative spirit usually found in smaller companies, which often have a distinct culture of risk taking and an unmistakable management commitment to innovation.

Furthermore, growth often brings distinct hierarchies in its wake. In many cases, new departments are set up to assist in the organizational aspects of expansion but are not closed down when their job is done. In addition, excessively complex organizations often make communication difficult: if too many people have a right to their say, the message becomes distorted and the office grapevine becomes faster than the official channels.

Avoiding technical diseconomies

Every company's technical infrastructure has certain optimum operating levels. Operating in excess of these levels causes costs to rise disproportionately: a piece of machinery working at the point of overload causes higher repair costs and raises energy consumption. What's more, fixed costs may skyrocket if production exceeds capacity to the extent that the only option is to invest in additional plant. In the short term at least, technical diseconomies of scale result. Technical diseconomies of scope result from incompatible technical infrastructure, a common problem if companies grow through mergers or acquisitions.

Technical diseconomies of scale and scope are easy to measure and relatively easy to ward off. Commissioning a new piece of machinery to increase capacity does cost money, but it is something that can usually be done quickly and without affecting the business processes, structure or culture. But technical progress also opens up new dimensions, allowing economies to be exploited and diseconomies avoided: a variable and modular infrastructure (machinery, IT networks) enables capacities to be increased flexibly and prevents fixed costs skyrocketing.

Counteracting administrative diseconomies

The bigger the company, the greater the risk of administrative inefficiency, especially since internal bureaucracies have a tendency to grow faster than the company itself. The restructuring efforts of recent years may have succeeded in identifying numerous cost drivers in administration and bringing them back down to an appropriate (that is, manageable) level. But our consulting projects show that many companies still have complicated and lengthy decision-making processes. This is often due to the fact that there are no simple metrics to channel the most important management processes.

Our recent analyses have found that too much administration can also substantially hamper customer relations. The "customer-driven organization" that almost every company professes to have appears to be little more than lip service. Turning it into a reality is a task that many companies still have before them: what are the needs of our customers? How do the different target groups want to be addressed and served? How should we steer their feedback so that all the relevant organizational units receive it? These are the questions that need to be answered. In the real world, though, this is often hampered by red tape.

Another problem is the different management cultures that often establish themselves in the different areas of a large corporation. This leads to inefficiency as a result of incompatible processes, systems and structures (diseconomies of scope).

Recognizing that these diseconomies exist is usually half the battle. If top management tackles these administrative hindrances with a strong enough hand, success can frequently be attained with relatively simple means.

Methods include having clear responsibilities at all levels of the corporation, properly structured incentive systems and transparent and logical reporting systems.

All of these actions help keep transaction costs down, even in a large company. The general principle for big corporations is to seize all of the advantages that small companies have and combine them with their own advantages of size.

Decentralizing to embed growth in corporate structures

Regardless of whether a company's growth is internally driven or the result of acquisition, the sine qua non, as we have shown, is to exploit economies of scale and scope without falling prey to diseconomies. That is why successful firms combine growth with restructuring and so manage to raise their productivity in a targeted manner even in times of intense growth. But they can only be successful in this approach if they constantly impress upon their workforce the importance of being cost-conscious in their work while at the same time delivering new impulses for growth, such as creative ideas.

To achieve this dual goal, companies must be both capable of growth and ready for growth:

> Companies are capable of growth if they have the right strategy, organization and structures for growth. This may be in the form of a mature growth strategy or the ability to take new products to market quickly.

> Companies are ready for growth if they think and live the principle of growth with optimism and believe in their own strengths.

A decentralized organization with elements of centralization is the best structure for making a company truly capably of and ready for growth. This is also borne out by the findings of a recent Roland Berger Strategy Consultants study. We interviewed some 150 top managers on the success factors and prerequisites for value-based growth. We found that decentralized organization is seen as a key organizational requirement for growth. Interestingly, both functional and matrix organization play no significant role: neither is seen as particularly conducive to growth.

Using the advantages of decentralization
Many companies have centralized their structures and decision-making processes in recent years, in the form of global sales management, for instance. The cost benefit of doing so is obvious. But centralization is no longer enough. In order to grow, firms must devolve responsibility to their grass roots. Decentralized structures are particularly suitable for achieving this because they allow for the following:

> **P&L responsibility**: Managers of the business units act as entrepreneurs within the organization if they have the power to make their own decisions and are responsible for their unit's profit and loss. These are

incredibly strong motivating factors, especially if the manager's pay is linked to the division's performance.

> **Speed and flexibility**: Besides direct communication, decentralized units are marked by short decision and implementation channels. Small, homogeneous units are also more flexible than large ones: both their structures and their processes are more compact and can therefore adapt to changes more easily and faster.

> **Market proximity**: Decentrally organized units are closer to the markets they serve, irrespective of whether they are organized along regional, product or customer lines. This enables them to formulate their growth strategies in accordance with the specific needs of their relevant markets.

> **Transparency**: A decentralized structure makes the markets that each business unit serves more transparent. This ensures that managers are always aware of their high-growth and low-growth areas. Companies can thus manage growth through the structure of their business portfolio.

> **Team spirit**: In small, homogeneous units it is easier to motivate staff to work together to achieve the common goals than in larger, more anonymous work environments. The culture that unites people is more tangible in decentralized units and is much easier to actually experience.

> **Freedom and incentives**: Certainly, growth depends on innovation. But innovation only comes about when the conditions are right. It requires the optimal balance between freedom on the one hand and specific timetables, priorities and budgets on the other. And because the managers of decentralized units are closer to their employees than top management is, they are able to create the necessary degree of freedom more quickly and with less bureaucracy. They also have a better understanding than head office has of what motivations their people need.

> **Integration of other companies**: Because decentralized corporations consist of a series of 'modules', it is easier to incorporate another company in the case of a merger or acquisition.

These factors increase a company's capacity and readiness for growth because they boost motivation levels, which is what really counts. A workforce that is prepared to work and is conscious of costs can guarantee growth and operational excellence.

Designing decentralized structures

So what form should the decentralized structures take? Our analyses identified five decisive factors:

> It is important to tailor the decentralized structure to the company's specific situation. Decentralization can take many forms, from legally independent divisions to a holding company concept or an integrated network of closely linked business units, each with its own special resources and skills. There is no such thing as the ideal organizational form. Whether a company's top-level divisional organization is structured on the basis of product segments, regions or customer groups depends on the overall corporate strategy and on how well the different segments lend themselves to being split. A company pursuing a strategy of internationalization, for example, would be well advised to structure its activities along regional lines. Nevertheless, in the early stages of internationalization, it may be advantageous to house all international activities in one division to start with. However, companies must continually review their chosen organizational form and adapt it to subsequent changes in the strategy or business framework.

> Decentralization must be tangible in the divisions lower down the corporate structure in particular. It is a major motivator for employees o assume responsibility for their direct sphere of work and get direct feedback on their performance. However, decentralized units must be at least big enough to enable them to take responsibility for their own profit and loss.

> Decentralized units must be able to focus on their core business activities, such as marketing, production or R&D. Conversely, all other functions, particularly the administrative ones, should be bundled. This prevents the formation of 'decentralized fiefdoms' and helps improve cost structures as internal services can realize their own economies of scale and scope.

> Decentralized divisions with specialist know-how that may be relevant to other business units or to the company in general should be set up as centers of excellence. This makes particular sense where one country has especially strong expertise in one area, such as the USA has in regard to product trends. Under the lead country concept, one company develops the corporation's marketing approach, for example, while another handles purchasing activities and so on. This approach reflects the idea of integrated networks but can also be transferred to divisional structures.

> And finally, the decentralized managers need to be integrated in the overall company framework. This can be done by including them in a group executive committee, for instance. Top management benefits as they are kept directly informed of the status quo in the business units and can help steer them in the right direction if required. Divisional managers, for their part, are better able to see where their activities come in the overall strategic framework and may have the opportunity to influence corporate strategy.

Decentralized companies with high-performance organizational structures and smooth reporting systems are, on the whole, easier to manage than largely centralized firms. This is because the top managers are freed from the responsibility of day-to-day operations, leaving them to concentrate fully on the management of the company as a whole.

These days it is easier to link centralized and decentralized elements together and embed them in an overall organization. The ever-increasing capabilities of information and communications technologies and the resulting drop in the cost of transactions between business units make sure of that. In other words, a decentralized organization utilizes the opportunities that declining transaction costs bring.

Adding elements of centralization to decentralized structures
Decentralization is a crucial ingredient in a company's efforts to embed its growth course in the internal structures. But if management wants to achieve the optimum balance between growth strategies and operational excellence, it is vital not to miss out on the cost benefits that centralization brings. So what they need to do is add elements of centralization to the decentralized structure.

As outlined briefly above, it is important to take all of the administrative functions out of the decentralized business units and bundle them. Only then can the departments concentrate on their key business activities. Thanks to the outstanding levels of functionality provided by today's IT systems, linking up the functions in this way is quite feasible. But processes and systems need to be standardized in advance. This is especially critical for companies that have gone down the decentralization road without a centralized point of coordination, as they often have a wide variety of different software standards, organizational procedures, etc.

In organizational terms, administrative functions are best incorporated in a corporate service center responsible for all the decentralized business units. And from this starting point, service functions can then be outsourced wherever the market offers cheaper solutions for a service of the same quality. The recent rise in competition between service providers from different countries has led to an increase in offshoring, with companies relocating their services to low-wage countries. A study carried out by Roland Berger Strategy Consultants in conjunction with UNCTAD found that service offshoring can save companies 30 percent on average, without impacting quality in any way. More than 80 percent of European companies rate their offshoring projects as "successful" or "very successful".

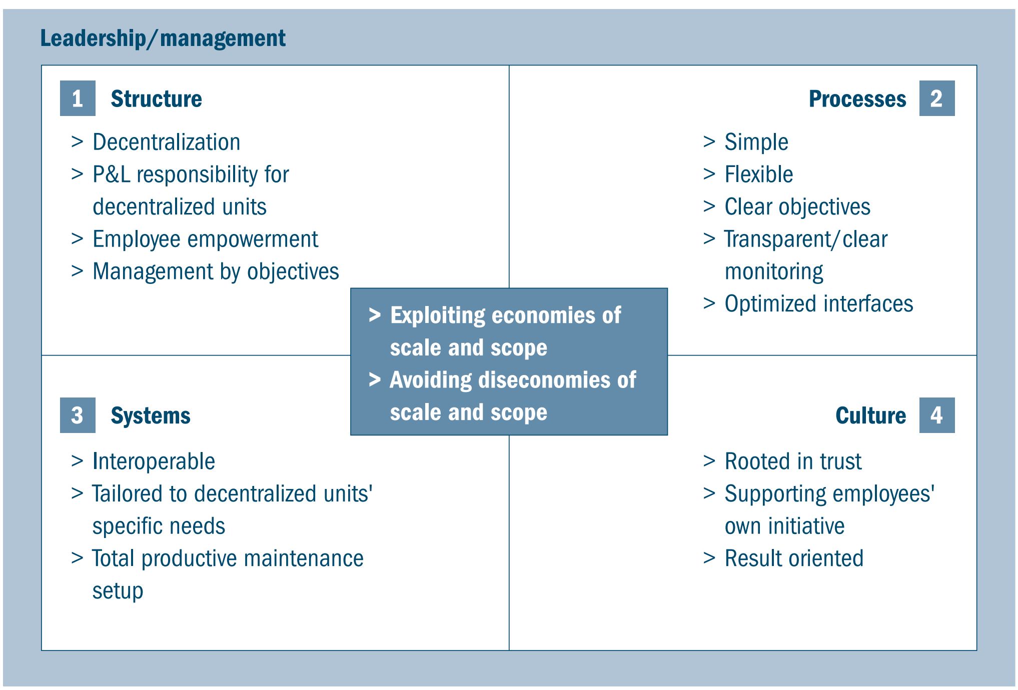
Here, too, falling transaction costs make offshoring attractive. Not only because low communication costs mean huge amounts of production data can be easily shared, for example, but also because logistics costs have fallen and global trade barriers have been reduced.

Establishing a culture of trust as a unifying element
Structures, processes and infrastructure are an organization's hard facts, they are what make it capable of growth. They only come into their own, though, when the company also has an inherent readiness for change – in other words, when the soft facts, or the corporate culture and the workforce's mindset, are ready for change. Corporate culture and corporate strategy must be in harmony.

In our study on "Growth through trust", published in parallel to this paper, we demonstrate that an organization based on trust is the best way of supporting a company's growth course. For trust implies transparency, credibility and reliability in the entire organization – and it therefore wins over the minds of employees and external stakeholders alike. A motivated workforce supplies customers with products of a more reliable quality, relationships with business partners are based on honest, verifiable contractual terms and investors have access to sound information about the company. Moreover, trust removes the need for monitoring. This is because employees' performance is reviewed by assessing how well they achieved the goals they were set; how they achieved them does not matter. And less monitoring also means lower transaction costs, giving trust-based organizations a distinct advantage in terms of transaction costs.

The key to establishing a decentralized, trust-based organization is the workforce itself. If large corporations want to transfer the entrepreneurial spirit prevalent in small companies onto their own organization, they need to mobilize their employees and make them ready for growth. The employees must fully commit to the realization process. Since the advantages of a decentralized organization generally have a positive impact on motivation and communication, this should not be too difficult. But there are certain success factors to take into account.

The four dimensions of managing economies of scale and scope



> **Motivating the workforce**: Achieving economies of scale and avoiding diseconomies calls for commitment on the part of all employees. Working in a decentralized organization that can adapt to changes in the market faster than a centralized company can demands flexibility and an openness to structural, process and cultural change.

And this positive attitude to change is not something that can simply expected of employees. Management must involve the staff as active participants and inspire them to want the change. True commitment can only come from people who have a say in the direction the company is headed in and who have internalized the goals of the organization. Commitment is created through involvement. Another important aspect is that each member of the workforce must feel that their contribution counts. That they can work independently under the scope of the company's goals and take personal responsibility. That they are given ambitious but achievable goals. And that they are rewarded when they achieve their targets. And not in any arbitrary way, but under the same transparent incentive system that the whole company is judged by.

> **Providing managers and employees with the necessary skills**: Speed must not take precedence over prudence. If changes are not understood, they cannot be lived. If targets are prescribed that require the use of tools employees are not familiar with or cannot master, frustration is quick to follow. Managers and employees alike must therefore be equipped with the skills necessary for the change process. A phased training process can be employed here, with project managers being coached first, possibly with the help of external coaches or consultants. The project managers then take on the role of coach and instruct the staff. A program of employee exchange between decentralized units is also useful in this context. This not only drives the development of know-how, but also strengthens cooperation within the company.

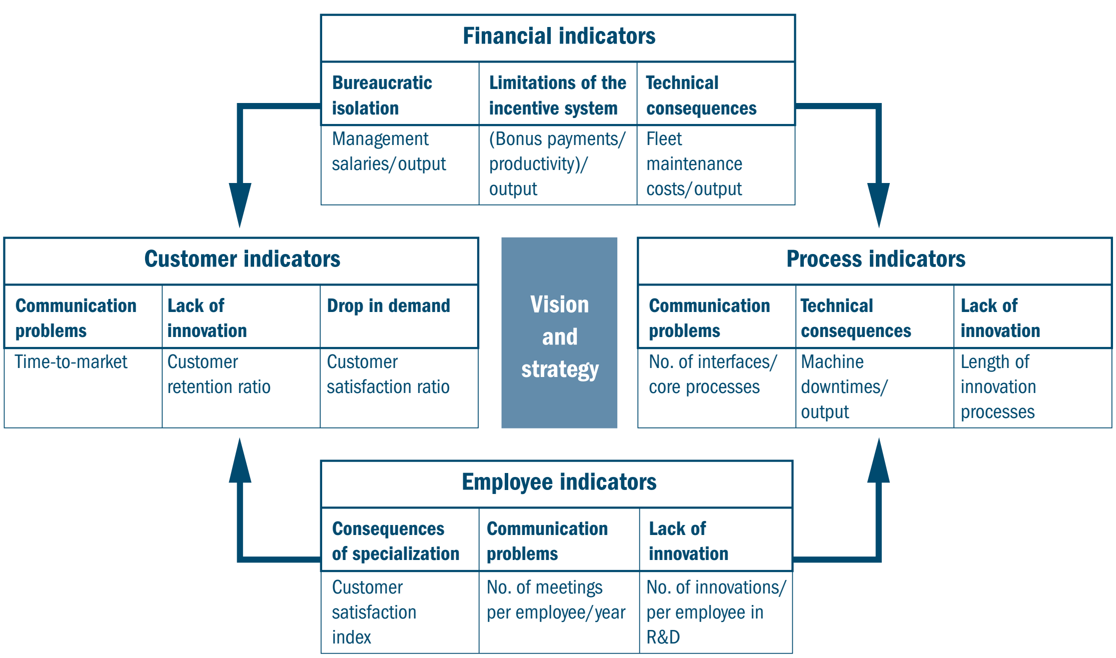
> **Communicating successes**: Reports about successful projects always have the effect of motivating staff. So companies should not just report on the actions they take to implement the decentralized, trust-based organization. They should also report on the results. A climate where staff can address problems openly and where actions are modified if necessary is also important. Transparency and transparency alone creates trust.

Managing and controlling scale

So we know what a decentralized, trust-based organization looks like. We know, too, how it can successfully mobilize its workforce. The question is, how can a company manage and control this kind of organization? Economies and diseconomies of scale and scope can arise at any point in the value chain. They include administrative, technical and cultural economies and diseconomies. But in most cases, companies only set targets for the savings they want to achieve, concentrating primarily or exclusively on ensuring that the positive effects are achieved according to plan. The anticipated negative effects are often granted too little attention. This is something that must change.

What we need is a checklist or a method that quantifies the parameters for measuring economies and diseconomies of scale and scope, and that gives managers a reliable basis for comparison. Only when they have this basis can managers view the actual situation against the targets and define suitable actions. What they need to measure are the key performance indicators of scale and scope. The familiar balanced scorecard can be adapted to serve this purpose. It combines four perspectives: financial indicators, process efficiency and effectiveness, the customer perspective and the employee perspective. Differentiated key performance indicators of scale and scope are then defined for each of these perspectives and targets assigned individually. Target achievement is monitored regularly and incentives are designed to encourage fulfillment. This gives companies their very own 'balanced scorecard of scale and scope'.

Balanced scorecard of scale and scope (showing selected diseconomies of scale and scope)



A balanced scorecard like this provides an effective early warning system. Certain trigger points can be included to help highlight potential diseconomies. When one of these trigger points is reached, a predefined set of actions is taken automatically, and management is put on the alert. Targets should be defined roughly in line with benchmark values from major competitors.

Since the balanced scorecard measures the targets achieved without prescribing the actions and methods to be used to get to that point, it gives employees a substantial degree of responsibility in the true sense of a decentralized, trust-based organization. The targets should not be seen as permanent, fixed figures. They should be regularly adjusted to the changes taking place in the company, for instance as new opportunities for growth arise or a new business unit is acquired.

Summary

Companies charting a course to growth and scale are doing exactly the right thing. They are exploiting economies of scale and scope and creating additional free cashflow for subsequent investment in growth and more operational excellence. The only condition is that they must succeed in dealing with the diseconomies just as systematically as they handle the economies. The key is to create an efficient, decentralized organizational structure, with elements of both centralization and outsourcing. The massive increase in IT capabilities and the corresponding reduction in transaction costs help keep this kind of organization manageable as it grows more complex.

An external audit of your company can be extremely helpful if you want to know where you stand in terms of your capability and readiness for growth. It shows you where you could exploit economies even more efficiently and avoid diseconomies even better. This will help you overcome the limits to growth.

Roland Berger's growth studies

Over the past two years, Roland Berger Strategy Consultants has studied the main challenges facing management in some detail: How can companies get on track for growth? Our investigations and talks have resulted in four studies, in which we analyze the issues from different perspectives and derive practical recommendations. We will be pleased to send you all of our studies upon request.

Finding the formula for growth: This study presents an introduction to the fundamental elements of the Roland Berger growth model. We demonstrate how the parallel pursuit of growth strategies and efficiency enhancement leads to self-propelling growth.

Overcoming the limits to growth: This study analyzes how companies can grow successfully if they succeed in exploiting economies of scale and scope without falling prey to diseconomies of scale and scope.

Growth through trust: In this study, we describe how organizations based on trust offer their employees direction through clear norms and standards, and why ever more companies will turn themselves into trust-based organizations in the coming years.

Managing for growth (available in German only): This study presents the findings of a survey of top managers, conducted in 2004. The key finding is that growth is driven by people at the head of the company. Only managers who create a corresponding culture of performance in their company can put and keep the firm on a sustainable path to higher growth and greater value.

The project team

Under the leadership of Dr. Burkhard Schwenker and Dr. Stefan Bötzel, an international Roland Berger project team carried out a range of extensive analyses on the business aspects of growth. The key findings are presented in this brochure.

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