



Bulletin

Water
Energy
Retailing
Transport
Financial services
Healthcare
Telecoms
Media
Post
Competition policy
Policy analysis and design
Regulation
→ **Strategy**
Contract design and evaluation
Dispute support services
Market design and auctions

SEPTEMBER 2007

Sizing up expansion

THE RELEVANCE OF ECONOMIES OF SCALE

Understanding how costs change with output is important for any company. But when scale economies become the primary justification for merging and acquiring businesses, the results are often disappointing. This bulletin explores the circumstances in which getting bigger increases or decreases the chances of success.

When executives propose corporate acquisitions to their boards, “synergies” usually feature large in the argument. Chief amongst these are opportunities to achieve “economies of scale”. Bigger organisations, so the thinking goes, can have advantages ranging from lower procurement prices to a proportionately thinner layer of overheads. Big companies can operate in (and thus learn from) global markets, and buy out weaker rivals. Putting businesses together, therefore, seems like a good way of making two and two add up to more than four.

The lure is easy to see. But in reality, things are not always so simple. The scale benefits of M&A activity often fail to materialise, and every industry has had its giant-killers. So what is going on?



ECONOMIES AND DISECONOMIES

Scale economies occur when average unit costs fall as the business grows, usually when fixed costs are spread across greater volumes. This can happen either at the operations level (when, for example, the same number of cashiers are able to handle more customers) or at the firm level (when, for example, customer service can be provided centrally for all parts of the business). And there may be economies in both kinds of fixed costs: those which are one-offs, such as capital expenditure, and those which are recurrent, such as R&D and advertising.

Economies of scale may also come from:

- **specialisation** of staff and processes, leading to increased productivity;
- **learning effects**, when staff perform their work more efficiently as the level of activity rises; and
- **buyer power**, when the purchasing department achieves bigger discounts on higher volumes.

Scale economies can, in short, be achieved in different ways. And they can, on occasion, confer important advantages to larger companies. However, in practice, scale economies can often be hard to capture via the M&A route. For example, combining two large IT networks in a merger can often add more operational complexity and integration costs than it saves in lower operating costs.

Moreover, scale may lead to diseconomies, when average unit costs rise as the business grows. The sources of many scale diseconomies are the mirror image of the sources of scale economies. Diseconomies can arise at the operations level (when, for example, the number of cashiers has to increase by more than the increase in the amount of custom) or at the firm level (when, for example, a bigger business has to set up new departments to deal with issues previously part of the general management workload).

Bigger organisations may face diseconomies arising from, for example:

- **duplication** of roles, responsibilities and functions, costly in itself and also adding indirectly to cost through confusion and internal tensions;
- **monitoring, co-ordinating and internal communication costs**, which were not needed in a smaller organisation;
- **higher labour costs**, as the workforce becomes less flexible;
- **bottlenecks**, arising from pressure on specialised resources and senior management time;
- **conflicts**, if new customers don't want to deal with the same organisations as some of their close competitors; and
- **loss of focus**, particularly if growth has come in the form of adding new businesses to the mix.

So any analysis of the effects of scaling up a business must take both economies and diseconomies into account. However, such analysis is frequently biased in the positive direction. This is partly because management teams tend to see growth as in their own interests. It is also because they often under-rate the benefits of simplicity and flexibility, which can be lost with growth. It is, perhaps, because of these tendencies that the following errors are uncomfortably common.

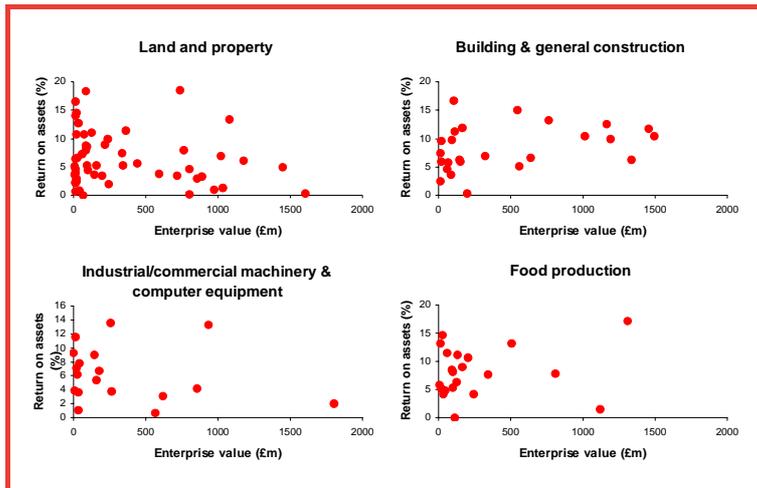
- **Reverse causality.** Because successful businesses tend to grow, many people come to imagine that it was the expansion that was the source of the success. Not all large organisations are successful because they're large; it's as likely that they are large because they are successful.
- **Over-estimating the advantages of scale.** If scale economies kick in early on the growth path, and then peter out, imagining that further scale offers a competitive advantage is then a mistake.
- **Ignoring materiality.** If scale economies only arise in a small part of the cost base, they are not going to make a dramatic difference to the company's ability to compete.
- **Under-estimating execution risk.** "Synergies" may be enticingly easy to calculate, but less easy to achieve, especially in line with the timetable laid out in the acquisition paper. And, as noted above, the complexities involved in bringing together different business units can outweigh the theoretical benefits of scale in its own right.

So it is hardly surprising that evidence on the benefits of scale economies is, at best, mixed. Over the past few decades, numerous studies of M&As have been made, by both academics and management consultants. They almost always arrive at the same conclusion: a significant proportion (typically 30-50%) of transactions fail to add value.

Our own research paints a similar picture. Using financial data on publicly listed companies in the UK, we've compared profitability (measured as return on assets) with company size (measured as enterprise value) in the financial year 2005-06. (Data on loss-making companies was excluded to avoid any bias from businesses in liquidation.) We found no clear relationship between scale and profitability, as the results for four sectors illustrate. The figure overleaf shows our results for food production, property, construction and a medium-weight manufacturing sector.

STAYING ON THE RIGHT PATH

Before embarking on a growth track (particularly an "inorganic" acquisition spree), it is, therefore, important to have a clear understanding of how costs in the business will change with output. The best way to start is to produce a "bottom up" value model that relates the costs of the organisation to different proxies for output and allows for sensitivity analysis, including how different costs are likely to vary over time.



Profitability and enterprise size for profitable publicly listed UK companies in 2005-06.

Source: Frontier analysis, Thomson Financial data for 2005-06

Meanwhile, a few simple sense-checks can be applied.

- **Are the expected savings driven by scale, or the application of best practice?** M&A often provides the impetus for stripping out dead-wood and improving processes but these effects should not be confused with scale.
- **What impact will scale economies have on prices and on the bottom line for the next 5 years?** One-off savings and percentage cost reductions can look impressive but don't always translate into long-term value.
- **How large are the diseconomies?** Trying to quantify the negative effects is a discipline that highlights areas commonly overlooked.
- **Could a smaller rival achieve a similar level of costs in a different way?** Thinking through the alternatives (such as out-sourcing, or adopting new technologies) can often reveal the weakness in the expansion case.
- **Is M&A the best route to achieving scale economies?** Operational complexity can prevent scale economies from being captured by M&A, and organic growth may be a more effective means of achieving them.

Getting honest answers to these questions is vital for developing profitable growth strategies; while understanding the true relationships between costs and scale can help to ensure that bigger really is better.

CONTACT	Simon Gaysford simon.gaysford@frontier-economics.com
	Simon Trussler simon.trussler@frontier-economics.com
	Frontier Economics Ltd
	FRONTIER ECONOMICS EUROPE BRUSSELS COLOGNE LONDON
	www.frontier-economics.com