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Does corporate size matter?

ESSAY/ **Why do companies merge?** Mergers and acquisitions are a continuing source of controversy in both business and politics. On balance, they are beneficial, otherwise they would not happen. Yet size does not determine the success of a business—and many mergers fail. Understanding when mergers and acquisitions make sense and how to mitigate their sometimes negative impact on society is of critical importance in a globalised age.

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I grew up in Västerås, a company town in Sweden. Västerås was dominated by Asea, a large electrical equipment manufacturer. In 1987, Asea merged with the Swiss–German company Brown Boveri to form ABB. It was at the time one of the largest mergers in Europe. Soon after the merger, employment at ABB in Västerås declined. The corporate headquarters moved to Zürich and cost cutting reduced staffs. In many ways, it was the classical approach to post-merger management.

For Västerås, this in many ways proved to be a blessing. After the initial adjustment following the merger, the city started growing quickly. While the city had stagnated during the 1980s (before the merger), it now became one of the fastest growing cities in Sweden. Why did this happen? One part of the answer, to my mind, is that many talented people started their own entrepreneurial activities outside ABB. Freed from the diseconomies of scale of a large organisation, they and their new companies thrived. The city gradually built a much more diverse and robust business community than it had when it was dominated by one employer. Meanwhile, ABB made a string of ill-conceived acquisitions, starting with Combustion Engineering in the United States. By 2002, the company was close to bankruptcy.*

* ABB has since, under new management, made an admirable attempt at recovery.

The example illustrates the mysterious ways by which mergers and acquisitions work. It shows the importance of pursuing acquisitions for the right reasons, and it shows how a community can be reinvigorated after a sudden shock. It behoves business and community leaders to make mergers and acquisitions even more precise and productive.

RONALD COASE—Nobel Prize in Economics laureate and one of the most influential economists of the 20th century—once famously asked[1] "Why is not all production carried on by one big firm?" and "Why is there any organisation?" He was struggling with the fundamental question of why large and small companies exist at the same time.

If there are major benefits to being large, then presumably all companies would merge over time and the world would see one Brobdingnagian company with more than two billion employees. On the other hand, if it does not make sense to organise economic activity in large companies, then why have any companies at all? Why is not every working-age person self-employed?

Many people believe that companies are becoming fewer and larger and that we are gradually seeing a concentration of corporate power into a few global behemoths. However, there is no evidence of this happening. As Joseph Stigler,[2] another Nobel Prize laureate, wrote: "if size were a great advantage, the smaller companies would soon lose the unequal race and disappear."

Take the case of the United States. The US has, in many ways, the most dynamic and competitive corporate sector in the world. Thirty-four of the world's one hundred largest companies are American. Over the past ten years, merger and acquisition activity has been at an all time high with trillions of dollars of assets changing ownership in wave after wave of industry consolidation. Yet the largest one hundred companies in the US in 2004 made up the same proportion of the workforce as the largest one hundred companies did in 1994: 9.2 percent. Yes, the companies have grown, but so has the overall economy. Moreover, large companies have held a constant share of the US economy since at least 1970.

Thus, the answers to the two questions Coase posed appear to be that companies can be of any size and that on average there are neither advantages nor disadvantages to being large or small. This essay expands on this idea. It builds on the author's research into the advantages and disadvantages of corporate size and the outcome of merger and acquisition activity.[3] It is anchored in the author's belief that mergers and acquisitions should be evaluated against one criterion: do they increase economic efficiency to the benefit of consumers?

WHY DO companies merge? The positive arguments are found in most press releases announcing the latest and greatest mergers; the negative arguments are often put forth by stakeholders interested in maintaining the status quo, such as labour unions intent on protecting jobs.

Economies of scale and scope certainly play a major role. This is invariably the argument put forward by corporate executives and their advisors when a deal is announced. By combining two companies, fewer employees and less capital are needed to serve the new entity's customers. Evidence, however, shows that the scale and scope economies tend to be quite small. This is especially true for large, headline-grabbing mergers such as the DaimlerChrysler merger. Large companies have usually exploited all scale advantages long before the acquisition.

Another argument for mergers is that the combined entity will be able to innovate more and bring new products and services to market, to the benefit of consumers. During the 1990s, this argument was presented time and time again by merging banks. Evidence, however, suggests that the level of innovation declines after mergers.

Yet another argument is that good management buys bad management. This argument is seldom mentioned as a rationale for mergers. After all, which acquirer wants to insult the target company by claiming that management of the new company is somewhat incompetent? Research shows that successful deals implicitly build on this argument, though, and that the scale economies argument is used as a euphemism for the acquirer being better managed.

Financial motives sometimes underpin mergers. In the 1960s and 1970s, acquisitions were often described as the product of financial engineering legerdemain. It did not matter all that much what was bought as long as the combined financial statements looked attractive. This resulted in the creation of conglomerates such as ITT or Swedish Match, which did not make any sense from an industrial perspective. Today, most such conglomerates are long gone and there are few corporate leaders who pursue deals based on finances alone.

Occasionally, mergers happen because the participants in the merger believe the whole industry they participate in will change its behaviour. One dysfunctional expression of this is the creation of monopolies or near-monopolies. A more benign expression can be vertical integration where supply-chain coordination problems are eliminated. FedEx's acquisition of Kinko's is an illustration of this strategy succeeding. In reality, many mergers that try to improve industry dynamics fail.

Finally, managerial self-interest may be a driver. It has long been argued that mergers and acquisitions happen not because of economic arguments, but because managers want to build empires. Michael Jensen, a leading proponent of this argument, said that "managers have incentives to cause their firms to grow beyond optimal size. Growth increases managers' power by increasing the resources under their control. It is also associated with increases in managers' compensation."[4] Evidence suggests that there is some merit to the argument, especially in countries where capital markets are inefficient, as in much of Europe. For example, German banks for many years had large industrial holdings and some *Bundesländer*-dominated banks still do.

A PROBLEM with the arguments put forth above is that they do not fit into an organising framework. They may have merit on a standalone basis, but taken jointly it is impossible to assess their validity beyond a superficial level that builds on anecdotes and qualitative arguments. Further, they do not paint a complete picture.

Returning to Ronald Coase and injecting the thinking of Oliver Williamson, it is possible to create a framework with which it is possible to understand the logic behind mergers and acquisitions. The framework builds on what is known as transaction cost economics. Transaction cost economics stipulates, in contrast to classical economic theory, that the internal workings of companies matter and can be understood. The classical approach is essentially to look at companies as black boxes that interact based on economic laws. What happens within such a black box is of limited or no concern. However, as John Child observed,[5] "it is people who are organised," and understanding this organisation within companies helps us elucidate the pros and cons of mergers and acquisitions.

Again we ask ourselves "Why is not all production carried on by one big firm?" and "Why is there any organisation?" Coase answered these questions by emphasising transaction costs, which determine what is done in the market—where price is the regulating mechanism, and what is done inside the corporation—where bureaucracy is the regulator. Coase pointed out that "the distinguishing mark of the firm is the supersession of the price mechanism."

To Coase, all transactions carry a cost, whether it is an external market transaction cost or one that accrues from an internal bureaucratic transaction: "The limit to the size of the firm would be set when the scope of its operations had expanded to a point at which the costs of organising additional transactions within the firm exceeded the costs of carrying out the same transactions through the market or within another firm."[6]

With this as a backdrop, Williamson[7] found that there are limits to corporate size and that the diseconomies of scale are bureaucratic in origin. If there were no such limits to size, then all mergers would make sense. However, this author's empirical research based on a sample of 784 companies shows that the limits are real and make it difficult for large companies (typically companies with more than 20,000 employees) to prosper and grow.

DISECONOMIES OF SCALE fall into four main categories: atmospheric consequences due to specialisation, bureaucratic insularity, incentive limits, and communication distortion [nomenclature according to Williamson].

Atmospheric consequences. As companies expand, there will be increased specialisation leading to efficiencies, but also less commitment on the part of employees. In such companies, the employees often have a hard time understanding the purpose of corporate activities, as well as the small contribution each of them makes to the whole. Thus, employee alienation is more likely to occur in large companies.

Commensurately, employees in large companies are paid significantly more than those in small companies. The reason usually given for this disparity is that higher compensation makes up for a less-satisfying work environment. Frederic Scherer's work[8] is representative of the extensive research done on this topic. He concluded that worker satisfaction was thirty percent lower in large companies compared to small companies. Meanwhile, compensation was more than fifteen per cent higher for equivalent job descriptions. This problem was succinctly summarised by Ernst Schumacher:[9] "for a large organisation, with its bureaucracies, its remote and impersonal controls, its many abstract rules and regulations, and above all the relative incomprehensibility that stems from its very size, motivation is the central problem."

Bureaucratic insularity. As companies increase in size, senior managers are typically less accountable to the lower ranks of the organisation and to shareholders. They in a way become insulated from reality and will, given opportunistic behaviour, strive to maximise their personal benefits rather than overall corporate performance. Empirical evidence shows that bureaucratic insularity is most common in old companies—and large companies are invariably fairly old, and in companies where senior management has been around for a long time. Recent corporate scandals such as Skandia and WorldCom are illustrations of this phenomenon.

Incentive limits. The structure of incentives large companies offer employees is limited by a number of factors. First, bonus schemes may threaten senior managers. An example is when a successful sales person would make more than the CEO, if the sales commission was the same for all levels of sales. Second, performance-related bonuses may encourage less-than-optimal employee behaviour in large companies. Employees may pursue risky activities to maximise their short-term performance. Therefore, large companies tend to base incentives on tenure and position rather than on merit.

Such limitations especially affect executive positions and product development functions, putting large companies at a disadvantage when compared with smaller enterprises. Not surprisingly, R&D productivity is significantly lower in large companies. For example, it can be argued that Microsoft's relative level of innovation has declined substantially as the company has grown. AC Cooper surprised business leaders and academics in 1964 with his pioneering article[10] "R&D Is More Efficient in Small Companies." He argued that small companies have three to ten times higher productivity in development than large companies. Later research has confirmed Cooper's anecdotal evidence. For example, Jacob Schmookler[11] quantified Cooper's initial findings, noting that "big firms tend to provide a haven for the mediocre in search of anonymity." Again, mergers tend to exacerbate these problems.

Communication distortion. Because a single manager has cognitive limits and cannot understand every aspect of a complex organisation, it is impossible to expand a company without adding hierarchical layers. Information passed between layers inevitably becomes distorted. This reduces the ability of high-level executives to make decisions based on facts and negatively impacts their ability to strategise and respond directly to the market. As companies grow through merger or otherwise, this problem becomes more and more palpable.

An extreme example is the Soviet Union. In certain respects, the Soviet economy was a giant company governed by a vast bureaucracy. Layer upon layer of bureaucrats shuffled information back and forth within and between the central planning authority Gosplan, ministries, and local planning organisations to make sure production quotas were met. Not surprisingly, products never seemed to end up in the right quantity at the right place at the right time.

Economies of scale offset the diseconomies of scale. If they did not, then presumably no merger activity would make sense, since it would only lead to increasing diseconomies of scale. However, economies of scale are probably not as important in the business world as executives believe. Most academic authorities believe scale economies are either small or that they can be reaped by all players in an industry; small in the sense that they are fully exhausted already within smaller companies or organisational units (typically units with around 400 employees); reaped by all players by, for example, outsourcing or subcontracting scale-intense activities.

Joe Bain[12] pioneered this line of research in the 1950s and 1960s. He noted that "where economies of the multi-plant firm are encountered, they are ordinarily quite slight in magnitude." Bain quantified economies of scale in twelve industries. Of these twelve industries, none exhibited even moderate scale effects.

Later research essentially confirms Bain's findings. This has led a number of anti-bigness ideologues to make pronouncements such as "technology and brainware's dominance is taking the scale out of everything,"[13] or it is "the quintessential myth of America's corporate culture that industrial giantism is the handmaiden of economic efficiency."[14]

Economies of scale should not be trivialised, however. This author, for example, found evidence of economies of scale, especially within administrative functions. While they do not seem to be as all-encompassing as corporate press releases announcing mergers would make us believe, they are not negligible. Even weak scale economies can have a major impact on corporate performance.

Two moderating factors also play a role in determining the impact of mergers. Economies and diseconomies of scale are in a continuous tug-of-war. Sometimes the rope is pulled in one direction, other times in the other. Most of the time the rope is in equilibrium. Two moderating forces tend to move this equilibrium: organisational structure and degree of focus.

Organisational structure. Williamson recognised that diseconomies of scale can be reduced by organising appropriately. Multidivisional organisations are usually more efficient than functional organisations. They are so for a key reason. The multidivisional structure allows senior executives to focus on high-level issues rather than day-to-day operational details, making the whole greater than the sum of its parts. Researchers have shown that multidivisional companies with a reasonable degree of decentralisation are at least 2 percentage points more profitable than functionally organised, centralised companies.

Degree of focus. As companies merge, they tend to expand their geographic footprint, broaden their product scope, or integrate forward into their distribution channels or backwards into their suppliers. As companies are extended, they are said to lose asset specificity. This loss of asset specificity comes at a cost. In most cases, it leads to worse performance. There are notable exceptions such as General Electric—which is active in many countries of the world and has acquired businesses ranging from appliances, to television networks, to financial services—and is still doing well. But in most cases it does not make sense to be a conglomerate.

In sum, as companies contemplate mergers or acquisitions, they have to take into account not only the economies of scale they so often have as an underpinning for the proposed deal, but also how to avoid the diseconomies of scale, how to organise for the future, and how to make sure they maintain focus. Unfortunately, the understanding of these issues is often weak or non-existent among both executives and their advisors.

WHAT DOES THIS mean for mergers and acquisitions? As companies grow through merger, the diseconomies of scale tend to grow as well. If the economies of scale, as expressed by synergy estimates, are not larger than the diseconomies of scale, then the new company is worse off than before the *ur*-companies merged. Is this really the case? Many executives doubt it. They find it hard to grapple with concepts as abstract as atmospheric consequences, bureaucratic insularity, incentive limits, and communication distortion. True, maybe the labels are unnecessarily abstract, but the underlying phenomena are real. They may be difficult to put in a financial statement, but this does not reduce their impact on day-to-day activities.

What we observe is what Coase and Williamson predict. First, while mergers and acquisitions tend to create value (60–70% of them succeed), large mergers do not. When two large companies merge, value is likely destroyed and everyone is worse off. This is not surprising when we consider that communication lines in the new company become even longer, that motivation is even harder to maintain, and that innovation is stymied. Moreover, managerial tunnel vision often leads large companies to overestimate the benefits of the merger.

On the other hand, when a large company acquires a smaller company, or when small companies merge, the outcome is usually positive. This is because the dysfunctionalities introduced through diseconomies of scale are relatively small, comparatively speaking.

Second, as noted above, executives of large companies have a tendency to be insulated from reality. Usually not wilfully, but many years of work within the same company, with its set ways and practices, creates an environment where an executive's espoused theory of the world may deviate significantly from what is actually happening.

Such executives sometimes fall into the trap of pursuing "glamour deals." A glamour company is a company with a high relative valuation and where the executives are lauded by the business press and analysts. Unfortunately, real life is seldom as good as the hype would lead an executive to believe and reality usually catches up fairly soon. When a glamour company makes an acquisition, the performance afterwards is typically strongly negative. Hewlett-Packard's acquisition of Compaq is arguably a case in point.

Third, companies who forget about the importance of focus—be it geographic reach or product breadth—perform less well. Related acquisitions are more successful than diversifying deals. The days of conglomerates and diversification as a strategy are long gone, and focusing on the core business is the hallmark of most companies. This is understandable because unrelated acquisitions on average show negative returns of 14 per cent over a three-year period.

We also know that acquisitions aimed at geographic expansion are slightly less attractive than those aimed at product expansion, reducing the shareholder returns by 2–3 per cent. This is an important observation for European M&A-oriented companies that pursue cross-border deals. On the one hand, many sectors within the European economy contain an irrationally large number of companies. The reason is that until recently, national markets defined where companies were competing. As Europe continues to integrate, the (at least temporary) rejection of the European Constitution notwithstanding, there will be a natural consolidation in many industries. But these cross-border deals are inherently difficult to make. Pan-European companies such as Electrolux have struggled with this issue for a long time.

Finally, the forces that reduce the likelihood of success for mergers or acquisitions work the other way around as well. Divestitures often make sense for large companies. Indeed, we have observed an unprecedented number of divestitures over the last ten years. Witness how the private equity market, dominated by leveraged buyout (LBO) firms, is blossoming. From having been a cottage industry, it is now a key driver of corporate restructuring, and LBO firms such as Bain Capital and BC Partners are among the most influential business organisations in the world.

Most of the businesses bought by LBO specialists are divested by large companies. The LBO firms tend to work magic with their acquisitions, generating both wealth for investors and new employment opportunities (in contrast to often-held popular beliefs). A key reason why the businesses bought by LBO firms succeed is that they are suddenly unencumbered by the diseconomies of scale emanating from their former corporate parents. At the same time, large corporations that divest businesses reduce their diseconomies of scale and become more focused. Thus, many large companies are well advised to look for divestiture opportunities, rather than acquisitions.

COMMUNITIES, and society at large, are not passive observers of merger and acquisition activities. The reasoning above may apply to individual companies, but what about the broader impact on cities, regions, and countries? A common line of reasoning is that mergers lead to unnecessary lay-offs which are costly to society in the short term and deplete the human resources in the long run. On balance, mergers and acquisitions destroy more than they create.

This is clearly incorrect. Mergers mainly happen in democratic countries with free, but regulated, markets. If mergers truly destroy communities and society, then they would have been outlawed a long time ago. Voters would have rebelled and voted pro-business governments out of office. What is often forgotten when a merger or acquisition is attacked, is that while lay-offs affect an easily identifiable group of people—the employees of the companies involved, the benefits accrue to a much more diffuse group—the consumers.

This is not to say that mergers and acquisitions will not have a negative impact on local communities. The solution, however, is not to oppose mergers on principle. Instead, a more successful strategy appears to be to create the conditions that ensure that only meaningful mergers happen, and when they do, that the transitional phase with job losses is managed correctly.

On the first point, the entire community has to play a role. Evaluating the merits of a merger should not be left only to shareholders. Instead, community leaders, the local media, the business press, employees, and other interested parties have to play a role. Only a vigorous debate that examines the advantages and disadvantages from a business and a community perspective can help shape a deal so that it minimises unnecessary disruption to society. Just as the regulatory approval process takes a long time, this debate should be allowed to take its due time.

On the second point, much remains to be done, especially in continental European countries. Fundamentally, there are two ways for society to handle job losses. Either a country creates a labour market that dynamically adjusts to shifts in employment opportunities, or it creates public safeguards such as unemployment benefits and retraining opportunities. The United States is usually associated with the first model, continental Europe often with the second model.

The benefit of the American model is that it works well. Unemployment in the US has been low for many years and job creation is high. Income levels in the US far exceed income in large European nations. Moreover, there is almost unanimous support for the American way of running its economy among its citizens. When it comes to mergers and acquisitions, few believe there is a systemic problem.

The European model built on public safeguards, however, is broken. As companies merge, many former employees enter into long-term unemployment. This adds to the high level of unemployment and low level of job creation that has plagued European countries for more than a generation. Public opinion on the issue is deeply divided.

This essay cannot solve this problem. As long as there is a mismatch between corporate and societal interests, the problem will persist. We know that what works well in the US is not appealing to other countries. For mainly demographic reasons (the workforce is older in Europe than in the US), few European countries want to emulate the American labour market paradigm. Perhaps therein lies part of the solution. Is it inconceivable that European labour markets and tax codes should be differentiated by age: young people become part of a flexible labour market with fewer safeguards while paying lower taxes, while older people remain in the high safeguard/high tax system?

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Footnotes:

1. Coase, RH. 1937. The Nature of the Firm. *Economica* n.s., 4 (16): 386–405.

2. Stigler, GJ. 1974. *The Case against Big Business. In Monopoly Power and Economic Performance*, edited by E. Mansfield. New York: Norton.

3. Canbäck, S. 2002. *Bureaucratic Limits of Firm Size: Empirical Analysis Using Transaction Cost Economics*. Henley-on-Thames: Henley Management College, Brunel University; and *The Science of Mergers and Acquisitions*. Boston: Pyx Institute.

4. Jensen, MC. 1986. Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review* 76 (4): 323–329.

5. Child, J. 1973. Predicting and Understanding Organisation Structure. *Administrative Science Quarterly* 18 (2): 168–185.

6. Coase, RH. 1993. *The Nature of the Firm: Meaning*. In *The Nature of the Firm: Origins, Evolution, and Development*, edited by O. E. Williamson and S. G. Winter. New York: Oxford University Press.

7. Williamson, OE. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*, Free Press: New York 1975 and *The Economic Institutions of Capitalism*. Free Press: New York 1985.

8. Scherer, FM. 1976. Industrial Structure, Scale Economies, and Worker Alienation. In *Essays on Industrial Organisation in Honor of Joe S. Bain*, edited by R. T. Masson and P. D. Qualls. Cambridge, Mass.: Ballinger.

9. Schumacher, EF. 1989. *Small Is Beautiful: Economics as if People Mattered.* Perennial Library ed. New York: HarperCollins.

10. Cooper, AC. 1964. R&D Is More Efficient in Small Companies. *Harvard Business Review* 42 (May-June): 75–83.

11. Schmookler, J. 1972. The Size of Firm and the Growth of Knowledge. In *Patents, Invention, and Economic Change*, edited by Z. Griliches and L. Hurwicz. Cambridge: Harvard University Press.

12. Bain, JS. 1968. *Industrial Organisation*. 2d ed. New York: Wiley.

13. Peters, T. 1992. Rethinking Scale. *California Management Review* 35 (1): 7–29.

14. Adams, W and JW Brock. 1986. *The Bigness Complex: Industry, Labor, and Government in the American Economy*. New York: Pantheon.
