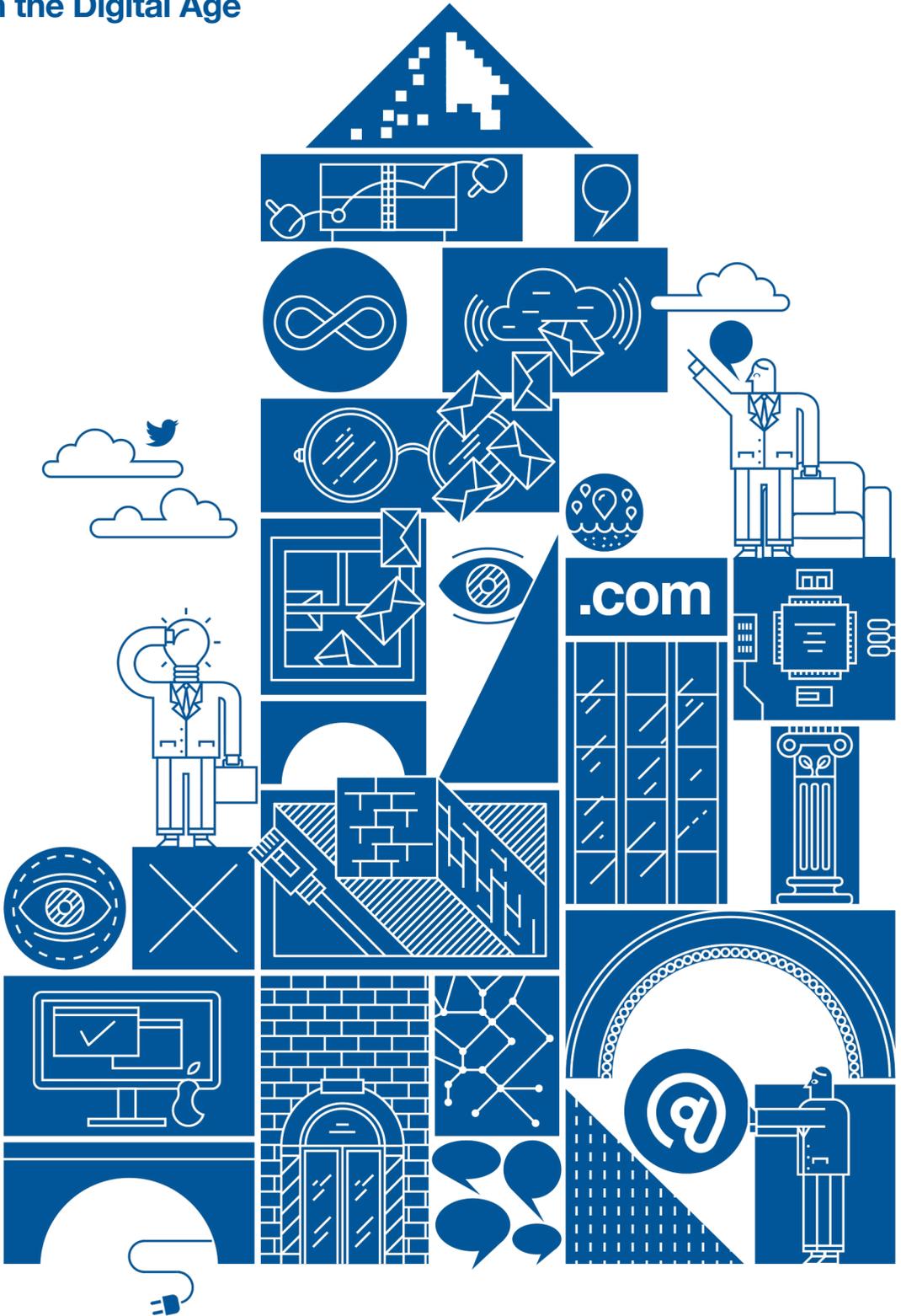


Reinventing the Company

in the Digital Age



Reinventing the Company

in the Digital Age

The Nature of the Firm—75 Years Later

Geoffrey Moore

Geoffrey Moore looks at Coase's influential 1937 article "The Nature of the Firm" and applies it to business leaders in 2014 looking to shape the future of their firms.

Among many findings he sees profound changes in the structure of the firm itself, as in the digital economy most of the resources will be contractors working outside the firm. This will be deeply disruptive to the hierarchical management structures that provided middle-management, middle-class jobs for most of the twentieth century.

As a result, more generally middle-class employment will shift from an economy dominated by its largest institutions to one where smaller, more agile firms will take up more of the burden; subsequently governments will struggle to deal with the impact caused by this new geometry.

Geoffrey Moore

Geoffrey Moore Consulting



Dr Geoffrey Moore is an author, speaker, and advisor to start-up companies in the Mohr Davidow portfolio and established high-tech enterprises, including Salesforce, Microsoft, Intel, Box, Aruba, Cognizant, and Rackspace. His life's work has focused on the market dynamics surrounding disruptive innovations. His first book, *Crossing the Chasm* (1991), sold over a million copies; his most recent work, *Escape Velocity* (2011), which addresses the challenge large enterprises face when they seek to add a new line of business to their established portfolio, has been the basis of much of his recent consulting. He is now chairman emeritus of three firms he helped found: The Chasm Group, Chasm Institute, and TCG Advisors.

Key Features for the Company of the Future:

Re-architect Your Firm from the Outside In

Begin by clarifying everyone's understanding of how the overall value chain and ecosystem that serves your customer creates value. Then circumscribe your role within that ecosystem and describe its interfaces both to the customer and to the other members. Then design your organization to deliver value to and through those interfaces. Finally, back everything up with a productivity capability to improve your capacity, efficiency, and effectiveness. Now you are ready to take on an ever-changing world.

Explicitly Distinguish Between the Roles of Manager and Leader

Management is the key to success in stable markets where the value proposition, the value chain, and your role within the chain all remain constant from year to year. Leadership, by contrast, is required when your market gets disrupted and you have to throw out the old playbook and make a series of high-risk, low-data decisions which then have to be adjusted in flight as you discover how the emerging new dynamics are actually playing out. Both management and leadership are key to a successful enterprise, but each is a mismatch for the other's job.

Redefine the Role of the Middle Manager

Abandon the notion of a hierarchical model where the middle manager takes instructions from above to deploy below and takes data from below to inform above. Instead, position the middle manager as master of the interfaces with the customer and the partners, empowering them to detect, analyze, and address mismatches through negotiation, adjustment, and reform. Let them own the customer and partner experience end to end, and have everyone else above and below support them in the effort.

The Nature of the Firm—75 Years Later

In 1937, Ronald Coase published a seminal article titled “The Nature of the Firm.” In it he posed a couple of deceptively simple questions:

- Why do successful firms grow larger?
- Why does the growth in size of a successful firm at some point level out?

He answered both of these questions with a theory of *transaction costs*. In this context, he pointed out that doing any kind of non-core work outside the firm has the advantages of leveraging someone else’s capital investment and expertise, but that procuring the right product or service from the right vendor as well as managing the relationship with that vendor and the workflow connecting the two companies imposes a transaction cost. When that transaction cost exceeds the benefits of outsourcing, then it behooves the successful company to bring the function in house. That, of course, increases the size of the firm.

At some point, however, the transaction costs of performing a function inside the company also begin to increase. The larger size of the organization and the bureaucratic processes that govern internal transactions begin to impinge on

the benefits gained. Eventually a point of equilibrium is reached where the cost to do the transaction internally approximates the cost to do it externally, and the growth of the firm attributable to internalizing non-core workloads levels out.

This is a very elegant idea, and it sheds important light on changes in the global business landscape over the past fifty years. In the era from 1965 to 1990, Western developed economies enjoyed a prolonged period of economic expansion meeting primarily domestic demands for modern industrial production capabilities and a higher quality of consumer life. Demand, in general, exceeded supply, putting the power of the economy in the hands of whoever deployed investment capital. The canonical successful firm of this era was a vertically integrated enterprise run by a hierarchy of executives and managers following a command-and-control paradigm familiar to many through exposure to military, church, or government organizations.

What the technology sector learned along the way was that it could respond much faster to disruptive innovations through the disaggregated model than it could through the older vertically integrated one

In the last decade of the twentieth century, developments in information technology began to erode the power base of this model. Within the tech sector, the vertically integrated “stack” of computing resources was becoming horizontally disaggregated. That is, a computing company in the 1970s and 1980s made all its own subsystems—from the CPU and memory chips and the printed circuit boards they plugged into, on up through the storage devices, networking equipment, operating systems, databases, and management systems, all the way up to and including the business application programs. By contrast, during the 1990s, first in the PC industry, then in the minicomputer industry, and finally globally across all IT platforms, these various domains were standardized and then outsourced to companies that specialized in just one level of the stack. This occasioned enormously rapid growth to the benefit of, among others, Intel in microprocessors, Samsung in memory chips, the Taiwanese manufacturing sector in printed circuit boards, EMC in storage, Cisco in networking, Microsoft in operating systems, Oracle in databases, IBM and others in management systems, and SAP in business applications. What the technology sector learned along the way was that it could respond much faster to disruptive innovations through this disaggregated model than it could through the older vertically integrated one. It was able to do this by standardizing the interfaces among the various layers of the stack so that transaction costs could be reduced in multiple ways—fewer design decisions, more vendors competing, less technical risk, faster time to market.

Interesting though these developments might have been had they simply been confined to the tech sector itself, in fact they were exported across the entire manufacturing sector, both industrial and consumer, primarily by leveraging the deployment of global ERP business applications enabled by internet connectivity. This IT infrastructure, initially trumpeted as an Information Highway, turned out to be a Work Transport Highway, and within the space of a decade enabled a massive shift in economic output from the developed economies to Asia, most notably China for manufacturing services, and India for English-speaking business services. No program of foreign aid has ever remotely accomplished the social good that this shift has engendered, so while it has created subsequent challenges for developed economies which have yet to fully come to grips with its destabilizing effects, nonetheless in itself it must be deeply honored.

To return to Coase's model, universal adoption of ERP systems dramatically reduced the transaction costs of outsourcing non-core business workloads across a global landscape. By using technology to provide round-the-clock visibility and timeliness of response, the new infrastructure enabled outsourcing to migrate from low-risk, low-value workloads to high-value, mission-critical processes, ones that not only generated massive savings in operational costs but also allowed enormous amounts of time, talent, and management attention to be redirected to innovations in the client companies' differentiating core.

That said, these global IT systems that drive both private and public enterprises are not without their drawbacks. They are complex to deploy, complicated to use, and challenging to maintain. This ultimately led to a leveling off at a new point of equilibrium during the first decade of the twenty-first century. Meanwhile, however, venture investment in computing technologies had already migrated away from the enterprise to explore and exploit a whole new sector of opportunity—consumers.

Led by Facebook, Google, Apple, and Amazon, consumer IT has arguably had an even more revolutionary impact on personal, social, and cultural life than industrial IT has had on global commerce. Smartphones and tablets are reengineering whole swaths of the consumer economy, from information access (Google) to communication (Facebook and Twitter) to media and entertainment (YouTube) to transportation (Uber) to hospitality (Airbnb) to dining (OpenTable and Yelp), and beyond. And in the process they are also reengineering our very selves as human beings, as anyone with a child or grandchild under the age of six can testify.

In the first decade of the twenty-first century venture investment in computing technologies had already migrated away from the enterprise to explore and exploit a whole new sector of opportunity—consumer

Most importantly for our discussion here, these facilities are so compelling they have demanded—and secured—representation in the enterprise, which means that the client end of the old client-server stack is being completely revamped by mobile and social technologies. At the same time, the big data analytics and cloud computing that enabled consumer IT to scale are now also being coopted by enterprises to help them scale their reach and increase their efficiency and effectiveness.

The end result is an IT infrastructure that is transforming before our very eyes, which in turn, perhaps less noticeably but no less profoundly, is transforming the way private and public enterprises will conduct their affairs going forward. And that is what this chapter is really all about:

What happens to the transaction costs of an enterprise once it has adopted both the global systems of record deployed in the 1990s and the human-centric systems of engagement deployed during the current decade?

Business Model Migration

Not surprisingly, transaction costs decrease—dramatically! All the overhead, all the delays, all the errors, all the confusion created by complex systems and well-intentioned but imperfectly informed human beings—all that sludge is being flushed from the system. The work has just started, of course, but wherever the pipes have been cleared, the money has flowed with abandon.

Interestingly, as transaction costs decrease, the value of services relative to products increases. That is because one of the key selling points of a product is that it eliminates future transaction costs once it has been purchased (exclusive of any ongoing maintenance). You buy a car so that you don't have to keep on renting one. But in a digitally instrumented economy, renting on demand becomes a much more viable alternative, not just for the occasional ad hoc requirement but for recurrent usage. Software as a service, media as a service, transportation as a service, manufacturing as a service—these are the engines driving economic growth in a digital economy. Their rise to prominence entails a shift to *consumption economics* as chronicled by J.B. Wood and Todd Hewlin in their book of the same name, a world in which risk has been transferred from the buyer to the seller—*caveat vendor!*

Developments of this sort should put every product company on notice to answer two questions:

- What is it about our product model that leads us to believe it can hold its own against rival service models?
- To what degree would our customers prefer us to recraft our offer into a service, and what would be the gains and risks of such a move?

A well-crafted hybrid model would almost certainly outperform a pure play, but it is far from obvious today what “well-crafted” should look like. Brick and mortar retailers, for example, are trying to sort this out in their competition with e-commerce giants like Amazon, and intellectual property owners in media and entertainment are seeking a comparable outcome with respect to licensed product versus subscriber service fees. In the short term, these dislocations can be excruciatingly painful as the shift in model, even if done on equal pricing footing, creates a major divot in cash flows.

As products become services, the value of the product’s functionality itself commoditizes, and differentiation shifts to the experience of using the offer rather than the performance attributes of the offer itself. This is giving rise to an experiential economy first written about by Joe Pine in 1998

A second form of migration follows shortly upon the heels of this one as well. As products become services, the value of the product’s functionality itself commoditizes, and differentiation shifts to the experience of using the offer rather than the performance attributes of the offer itself. This is giving rise to an experiential economy first written about by Joe Pine in 1998. As consumer preferences become increasingly determined by experiences, and as the landscape of experience becomes increasingly mediated by digital devices and communications, the zone of untapped value that future innovations can exploit is falling to a new job category—*user experience design*—with companies like IDEO and others capturing the early mindshare. It is now no longer just the “out-of-box” experience that warrants consumer product vendors’ attention but the ongoing convenience and simplicity across the entire length of the consumption to disposal chain.

Finally, an indirect consequence of embedding digitally automated services into the consumption chain is a pronounced shift in power from the vendors and retailers to the consumers themselves. Competitive advantages based on price, availability, and selection—historically the three king-making elements of a successful wholesale-retail value chain—are largely neutralized in a digitally mediated landscape, allowing consumers themselves to become the new king-makers. To be sure, experiential innovation still holds power, but that experience is itself a negotiated outcome in which the consumer brings as much to the table as the service provider. This, in turn, is transforming marketing from a mono-directional broadcast affair in which the sponsor controls the content of the exchange end to end to a dialogue in which even such precious elements as brand attributes must be negotiated socially if they are to truly register and stick.

The Impact on the Firm

The net of all the above is that the very structure of the firm is evolving, its boundaries becoming more porous and less defined, as a digital value chain readily allows not only third parties but even consumers themselves to participate in the overall value creation effort. No doubt this will create a new generation of liability cases focused on determining the boundaries of accountability, and I do not envy the adjudicators of these cases as those boundaries are inherently fuzzy.

The structure of the firm is evolving, its boundaries becoming more porous and less defined, as a digital value chain readily allows consumers themselves to participate in the overall value creation effort

That said, we have learned something important from the world of marketing about fuzzy boundaries and how to manage them. For the world of market segmentation is just that—no market segment has a firm and fixed boundary. Every segment is a fuzzy set, in which any particular prospect participates to some degree, from 100% dead center to 1% at the absurdly lunatic fringe, with most of the “interesting” prospects being around 80% or more “inside” the set. But there is no line to be inside. Instead there is a center point in relation to which your “closeness” is assessed. And that is the key to managing fuzzy boundaries—keep your focus on the center point instead of arguing about the edge.

Applying this notion to the evolution of the firm, the digital reengineering of the global economy is driving a migration of the firm’s center point from the means of production to the means of distribution and from management of its physical assets to management of its intellectual property. That is, in a world of pervasively outsourced manufacturing, power shifts from control of supply to control of demand, and the company that “owns” the relationship with the end customer prevails over the other members of the value chain, as we witnessed so dramatically in the rise of Apple first in the music business and then in smartphones. And if you look to Apple’s power, or Amazon’s or Facebook’s or Google’s or any other of the new digital powerhouses, it is in their intellectual property, be that patented technology or closely guarded trade secrets, far more than in the physical assets they control.

Now, to be sure, some sectors of the world economy are as yet still highly insulated from these effects. The energy sector, in particular, continues to value itself appropriately on physical assets almost entirely, although even there one can find digital disrupters reengineering energy storage and distribution in a variety of technologically enabled ways. And food, as long as we live on this earth, can never

be digital, nor can clothes, housing, and the other necessities of daily life. But all these things can be and are being transformed experientially via digital facilities. What you eat and how you procure it, whether you are buying baby clothes or sharing them, where you stay when you travel—all are fair game for being recast in the digital age. Firms which are able to pull these levers can be expected to outperform their peers considerably even in undisrupted sectors of the economy.

Taking Stock: 2014 and Beyond

What does all this mean for business leaders in 2014 looking to shape the future of their firms? First and foremost, it means rethinking the structure of the firm itself. Historically, as firms have scaled, they have done so hierarchically—meaning that they develop a management system that extends its span of control over larger and larger reporting structures. But in the digital economy, where a network of specialists trumps a cohort of employees, many if not most of the resources working on your behalf will be contractors working outside the firm.

Contracted services still require management, but of a very different kind. One is still responsible for what the contractors are doing but not for how they are doing it. This puts much more emphasis on framing and negotiating service level agreements at the beginning of work orders, insisting on monitoring systems to

In the digital economy, where a network of specialists trumps a cohort of employees, many if not most of the resources working on your behalf will be contractors working outside the firm

give visibility into work in process, and developing test and acceptance systems for signing off on the work at the end. The whole relationship is much more horizontal, more peer to peer, than managing an in-house team.

This change in orientation is having its primary impact on the middle of the organization. Top executives continue to focus on strategy, resource allocation, performance commitments and the like.

And entry level workers continue to manage the transactional work that represents the day to day interactions with customers and suppliers, partners and employees, regulatory agencies and tax authorities. But the people we used to call “middle managers” are now finding themselves with fewer and fewer people to manage.

At the same time, however, this middle cohort has in its hands the core implementation of the enterprise’s annual plan. To succeed they need to become more outward facing, more entrepreneurial, and more engaging than their parents’ generation, and this in turn will require universities and graduate schools, as well as enterprise training and development programs, to revamp their curricula to build the new muscles required.

More generally, the whole underpinnings of middle class employment are shifting from an economy dominated by its largest institutions to one where smaller, more agile firms will take up more of the burden. Even the most successful specialist contractors will not scale to anything like the size of today's behemoths—that would only increase their transaction costs. The optimum configuration of resources will be one which maximizes its number of external touch points and minimizes its internal overhead. Think of this as a geometric figure that maximizes its surface area while minimizing its volume—something much more like a bunch of grapes than a watermelon.

The optimum configuration of resources will be one which maximizes its number of external touch points and minimizes its internal overhead

Governments will be puzzled and frustrated by this new geometry. They are large-scale institutions designed to interface with other large institutions—plate to plate, as it were—particularly in relation to matters of economic policy and social welfare. Public/private partnerships are increasingly likely to stumble because the emerging economic units, the active ingredients of the new economy, are too granular and changeable to engage with a large, command-and-control infrastructure. Government hierarchies do not match up well with the smaller economic entities, nor does their funding and fund-raising. As a result, governmental policies are more likely to focus on propping up large decaying incumbents than accelerating economic growth by supporting the new crop of winners—not a recipe for success.

This in turn has serious implications for middle-class welfare. As we have noted, the digital economy is deeply disruptive to the hierarchical management structures that provided middle management, middle-class jobs for most of the twentieth century. Where will middle-class incomes come from in the future? And can we reasonably expect our governments to even be looking in the right places, given their structural tilt in the wrong direction?

To sum up, taking stock of both the opportunities and the challenges digital disruption is bringing forth, here are some key implications for business leaders and investors to contemplate as we migrate toward a post-industrial economy:

- Low-cost operational excellence based on supply chain efficiencies is becoming sufficiently universal as to no longer be a strategy for differentiation in a developed economy. It will still be possible to differentiate on price, but this will largely be based on revamping sales, marketing, and distribution processes leveraging big data and analytics—things outboard of the bill of materials.

- Product innovation will continue to be rewarded under this new system, but the length of time differentiation can be maintained will be shortened by virtue of an increasingly quick to respond supply chain. Products themselves, as we have noted, will be reconfigured as services wherever that is to the benefit of the customer, something which will also entail considerable use of big data and analytics.
- Digitally enabled customer service on the demand side is the new battleground, where companies can seek to neutralize (e.g. catch up) or differentiate (get a competitive advantage). Mobile devices and social communications networks have become pervasive and powerful. Firms cannot afford to stand pat with their old non-digital approaches, regardless of how successful they have been in the past.
- Removing the cost of the middle man will be the primary source of funding to pay back investment in this next generation of digitally enabled customer service. Service providers whose primary differentiation has been helping customers navigate the complexities of an inefficient marketplace will find themselves disintermediated by digitally enabled systems that either mask this complexity or bypass it altogether. This is already commonplace in financial services and high tech, is well under way in retail and media & advertising, and is on the horizon for health care, education, and other citizen services.

These are not new ideas. Prognosticators have been forecasting much of this for decades. The whole dot.com fiasco was based on making big early bets on just these trends. But as with all things disruptive, we humans tend to overestimate the impact in the short term and underestimate in the long term. All we are saying now is that the long term is arriving.

OpenMind Channel



Article

- The Nature of the Firm—75 Years Later

About the Author

Geoffrey Moore

Related Articles

- Transforming an Analog Company into a Digital Company: The Case of BBVA
 - The Internet and Business
- Innovation Inside and Outside the Company: How Markets for Technology Encourage Open Innovation

Read the Full Book

- Reinventing the Company in the Digital Age

Other Books



Share

