16 JUNE 2016 / PALAIS BRONGNIART PARIS

FORUM THEMES
Staying ahead of the curve

OPTIMAL ORGANISATION

- How can newcomers build an online marketplace?
- Centralisation vs decentralisation
- Avoiding the pitfalls of multi-sided markets

TRANSFORMING FIRMS

- How to manage transitions
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- Where will we find the jobs of the future?

COMMUNICATION REVOLUTION

- What are the consequences for economic growth, inequality and productivity?
- Attention allocation and its effect on organisational performance

Decentralisation of decision-making in a digital age

Any large organisation thinking about how effectively it delivers on its objectives faces an important question: whether it is better to have key decisions made at headquarters or instead to decentralise decision-making to lower-level managers.

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For multi-divisional and perhaps multinational organisations, that trade-off may well change following the adoption of digital technologies that facilitate easier flows of information as well as the delegation of routine decisions to software programs.

Speaking at the TSE Digital Forum in Paris in 2016, **Wouter DESSEIN** of Columbia Business School discussed his research findings on why and when to decentralise – and how the digital age affects the benefits of centralisation versus decentralisation. He cited Patrick Cescau, the former chief executive of Unilever, who in 2007 explained his view on when coordination of a multinational organisation requires centralisation thus:

'Historically, Unilever's business had been built up around highly autonomous operating companies, with their own portfolio priorities and all the resources they needed – marketing, development, supply chain – to develop their business in whatever way they saw fit. This was a highly effective way of building a truly multinational business almost 50 years before the term was invented.'

'But it had become less suited to an increasingly globalised, competitive landscape, where battles were being fought and won with global scale and know-how, and top-down, strategically driven allocation of resources. In today's world, a hundred different portfolio strategies run the risk of adding up to no strategy at all. It's not efficient, it doesn't leverage your best assets and it doesn't build strong global positions.'

When to decentralise: information versus incentives

The first question to ask is why it might not be desirable for headquarters to make all the key decisions. One basic principle of organisational design is to assign authority to those people who have relevant information – and that might not always be the boss. But while lower-level managers may be better informed than headquarters, they often might have an agenda that is different from the boss.

An example of such misaligned incentives would be division managers who maximise the profits of their own divisions but not the profits of the firm as a whole, perhaps by competing with other divisions for customers and resources. Similarly, purchasing managers might minimise costs rather than profits, perhaps by insisting on too much uniformity or by cutting costs excessively. And sales managers might maximise revenues but not profits, perhaps by cutting prices or customising products too much.

So if lower-level managers have superior information but the wrong objectives, why not centralise decision-making and let lower-level managers report their information to headquarters? One problem is managers' superior Information is often 'soft' or non-verifiable. The fact that managers can distort or exaggerate the information that they provide can result in a lack of trust between them and the boss.

This suggests that there is an organisational trade-off: delegation leads to biased decision-making based on superior information; while centralisation leads to unbiased but uninformed decision-making (Alonso et al, 2008a, 2008b).

An example would be banks that make loans to small and medium-sized enterprises, a business sector in which local, soft information is important. There is evidence for the United States that small, local banks are better at lending to small firms because they know the owners personally and understand the prospects for their businesses. Larger banks are typically too centralised to be successful at this kind of work.

One basic principle of organisational design is to assign authority to those people who have relevant information, and that might not always be the boss.

Digitalisation and decentralisation

Does the adoption of digital technologies change the nature of the organisational trade-off? It is certainly true that headquarters now have access to the same information as lower-level managers – and decision-making increasingly relies on quantifiable and easily accessible (digital) information. This reduces the informational advantage of lower-level managers and shifts power to headquarters.

But this is only one side of the story. Note that before the digital age, headquarters often had shallow but broad information, knowing a little about everything, while lower-level managers had deep but narrow (specialised) information, knowing a lot about a small part of the organisation but failing to coordinate their activities.

When, as in Unilever's case described by Patrick Cescau, each decision ideally depends on all other decisions and on information from across the organisation, coordination is very important, leading to centralisation. But if decisions are largely stand-alone and mainly depend on local information, decentralisation is preferable.

How does digitalisation affect coordination? It gives lower-level managers access to both deep (specialised) and broad (organisation-wide) information. This dilutes the 'coordination advantage' of headquarters because there is much more common information throughout the organisation and everyone works from the same facts.

Empirical evidence from manufacturing indicates that before the widespread adoption of digital technologies, there was more decentralisation of decision-making from headquarters to plant managers when plants were large and complex (with multiple hierarchical levels) and when headquarters lacked access to information. There was less decentralisation when plants were part of multi-establishment organisations and coordination was important.

The impact of digital technologies has been to increase centralisation in large and complex plants, which were previously more decentralised overall. But in small and less complex plants, which were previously more centralised overall, there has been an increase in decentralisation.

Organising to adapt and compete: implications for organisational practice

One key lesson for large organisations is to consider the implications of the adoption of new digital technologies for where key decisions are taken: at headquarters or by lower-level managers?

Increased digitalisation seems to favour greater centralisation and larger organisations if decisions were previously decentralised to take advantage of soft and local information even where there are misaligned incentives (Alonso et al, 2015). But increased digitalisation favours decentralisation and smaller organisations if decisions were previously centralised to achieve coordination among divisions.

FURTHER READING

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Management practices: the impact on organisational performance in the digital age

Over the last decade and a half, the World Management Survey has collected data on management practices across multiple organisations, sectors and countries. The survey was developed as a way to understand the large and persistent differences in performance across organisations and countries – and to explore options for improvement.

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Speaking at the TSE Digital Forum in Paris in 2016, **Raffaella SADUN** of Harvard Business School, one of the research team, described the survey, the key findings and their implications for organisational practice and public policy in the digital age.

Measuring management practices

The World Management Survey has worked with thousands of managers from nearly 40 countries to measure performance in their organisations – manufacturing firms, retail outlets, schools and hospitals. Managers are asked 18 open-ended questions about three practices that are generally considered to be the essential elements of good management and they are then scored on a five-point scale:

- Targets: does the organisation support long-term goals with tough but achievable short-term performance benchmarks?
- Incentives: does the organisation reward high performers with promotions and bonuses while retraining or moving underperformers?
- Monitoring: does the organisation rigorously collect and analyse performance data to identify opportunities for improvement?

Management and organisational performance

There are several headline findings from analysis of the survey results. First, according to the survey criteria for good management practices, many organisations around the world are very badly managed. Well-run companies set 'stretch' targets on productivity and other measures, base staff compensation and promotions on meeting those targets and constantly monitor the outcomes – but many firms do none of those things.

Second, the survey indicators of better management are strongly correlated with performance measures such as productivity, return on capital employed and firm survival. For example, a one-point increment on the five-point management scale – the equivalent of going from the bottom third of performers to the top third – is associated with 23% greater productivity.

Third, management makes a difference in shaping national performance. For example, variation in management accounts for nearly a quarter of the roughly 30% productivity gap between the United States and Europe.

Finally, not only does good management yield practical improvements in manufacturing firms and retail outlets, but it can also improve performance beyond the private sector. Schools and hospitals are typically more poorly managed than manufacturing firms, but they too show a positive correlation between performance and implementation of the three basic management principles.

Management in the digital age

What about the relationship between management and the digital revolution? There is growing evidence of the complementarity between information and communication technology (ICT) and organisational practices. It is the management and organisation of the establishment into which ICT is placed that determines whether productivity and other indicators of performance are improved.

> One key lesson for organisations is to consider the management implications surrounding the adoption of new technologies.

The necessary reorganisation of organisational processes around ICT can take time to implement. It is never just a case of plugging in a computer or installing sophisticated software systems such as enterprise resource planning (ERP) in firms or electronic medical records (EMR) in hospitals. There often need to be substantial changes in skills, organisational structure and allocation of work, all of which needs to be facilitated by effective management, especially people management.

Implications for organisational practice

One key lesson for organisations is to consider the management implications surrounding the adoption of new technologies. Complementary investments in skills and organisational processes may well be needed to unlock the returns to ICT.

There are also broader questions about why firms fail to improve their management practices and reap the performance benefits. One reason is that they cannot self-assess their own practices very effectively.

The last question in the survey asks managers: 'Excluding yourself, how well managed would you say your firm is on a scale of 1 to 10, where 1 is worst practice, 5 is average and 10 is best practice?' The results show both that organisations are too optimistic about the quality of their management, and that there is no relationship between their self-assessed scores and any indicators of organisational performance.

To see how far behind their organisations are, managers must rigorously evaluate their practices and compare themselves with others. Managers can easily benchmark themselves by country and industry on the World Management Survey scoring grid.

Having seen where they need to improve, managers should begin working towards slow but steady progress. Organisations can start by identifying which processes they need to change and then devising metrics for monitoring progress over the short and long terms. Ideally, goals should be visible to everyone and they should be translated into individual and organisational targets that are tracked frequently.

Implications for public policy

Are there any policies that governments could implement to encourage improved management practices and organisational performance?

One area is government policy on competition. Poor management is often reinforced by national policies such as production quotas and tariff barriers, which reduce competition. Governments can play a positive role by reducing subsidies for certain sectors, eliminating tax breaks for favoured companies and lowering barriers to trade. Lower regulation is also associated with more effective management practices.

Another area is the framework for organisational ownership. In the manufacturing sector at least, family-run and government firms typically have very poor management, while multinationals achieve good management practices wherever they locate.

Finally, improved education for non-managers and managers appears to be linked to better management.

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http://www.hbs.edu/faculty/Pages/profile.aspx?facId=541712

Platform shift: how new business models are changing the shape of industry

Facebook, PayPal, Alibaba, Uber – these seemingly disparate companies have up-ended entire industries by harnessing a single phenomenon: the platform business model. Platform firms have become an increasingly significant feature of the global economy, including three of the five biggest firms as measured by market capitalisation: Apple, Google and Microsoft are the giants of the internet era.

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Speaking at the TSE Digital Forum in Paris in 2016, **Marshall VAN ALSTYNE** of Boston University and MIT described how platforms use technology to match producers and consumers in a multi-sided marketplace - creating new forms of value and shifting fundamental assumptions about the way that companies think about marketing, operations, human resources, finance and strategy (Parker et al, 2016).

The power of network effects

The giants of the internet economy resemble those of the industrial economy but for contrasting reasons. The engine of the industrial economy is supply-side economies of scale. Massive fixed costs and low marginal costs mean that firms achieving higher sales volume than their competitors have a lower average cost of doing business. That allows them to reduce prices, which increases volume further, which permits more price cuts – a virtuous feedback loop that produces monopolies.

In supply-side economies, firms achieve market power by controlling resources, increasing efficiency and fending off the competitive forces described by Michael Porter: the threat of new entrants and substitute products or services; the bargaining power of customers and suppliers; and the intensity of competitive rivalry. The goal of strategy in this world is to protect the business from competition and channel it towards other firms.

Conversely, the driving force behind the internet economy is demand-side economies of scale, also known as 'network effects'. These are enhanced by technologies that create efficiencies in social networking, demand aggregation, app development and other phenomena that help networks to expand.

In the internet economy, firms that achieve higher 'volume' than competitors (that is, they attract more platform participants) offer a higher average value per transaction. This is because the larger the network, the better the matches between supply and demand and the richer the data that can be used to find matches. Greater scale generates more value, which attracts more participants, which creates more value – in another virtuous feedback loop that produces monopolies.

Supply economics gave us Carnegie Steel, Edison Electric (which became GE), Rockefeller's Standard Oil and many other industrial era giants. Network effects have given us Alibaba, which accounts for over 75% of Chinese e-commerce transactions; Google, which accounts for 82% of mobile operating systems and 94% of mobile search; and Facebook, the world's dominant social platform.

Implications for organisational change

How do organisations need to change in the internet age? The key is to recognise that in any market with network effects, the focus of attention needs to shift from inside the firm to outside the firm. This applies to all business functions.

Marketing

Marketing is no longer just about creating internally managed outbound messages. It now extends to the propagation of messages by consumers themselves. This shift is captured in am outline of the last four decades of consumer marketing by Coca Cola's chief information officer: in the 1980s, the key tool was the single message; in the 1990s, segmentation; in the 2000s, individual targeting; and now in the 2010s, social influence and 'virality'.

> **In the internet economy, firms that achieve higher 'volume' than competitors offer a higher average value per transaction.**

Operations and logistics

Operations and logistics traditionally emphasise the management of 'just-in-time' inventory. That function is increasingly being supplanted by the management of 'not-even-mine' inventory – whether rooms, apps or other assets owned by network participants.

The failure of existing firms to recognise the shift in value creation from internal to external servicing has provided the opportunity to new platform businesses. For example, if Marriott, Yellow Cab and NBC had added platforms to their value chains, then Airbnb, Uber and YouTube might never have emerged.

Tom Goodwin of Strategy Havas Media illustrates the change: 'Uber, the world's largest taxi company, owns no vehicles; Facebook, the world's most popular media owner, creates no content; Alibaba, the most valuable retailer, has no inventory; and Airbnb, the world's largest hotelier, owns no real estate.'

Human resources

With human resources, the emphasis shifts from employees to contractors, from internal experts to external crowds and from subordinate dictation to community persuasion. For example, enterprise software giant SAP opened the internal system on which its developers discuss problems to its external ecosystem – to developers at both its own partners and its partners' clients. Information sharing across this network has improved product development and productivity and reduced support costs.

Human resources functions at companies increasingly leverage the wisdom of networks to augment internal talent. Instagram sold for a billion dollars not because of the contributions from its 13 employees but from 30 million users. And even middle management can be outsourced with firms accessing 'cloud labour'.

At the same time, expensive gatekeepers are being replaced by crowds in some sector. For example, at TripAdvisor, advice from travellers replaces that of travel agents; and Rocket Lawyer provides crowdsourced advice on a wide range of legal matters, supplanting traditional law firms.

Finance

Finance, which historically has recorded its activities on private internal accounts, now records some transactions externally on public or 'distributed' ledgers. Organisations such as IBM, Intel and JPMorgan are adopting blockchain technology that allows ledgers to be securely shared and vetted by anyone with permission. Participants can inspect everything from aggregated accounts to individual transactions.

This shift allows firms to 'crowdsource' compliance with accounting principles, for example, or to seek input on their financial management from a broad network outside the company. Opening the books in this way taps the wisdom of crowds and signals trustworthiness.

Strategy

Thinking about competitive strategy is more complicated and dynamic in a platform world – more like three-dimensional chess. The competitive forces described by Michael Porter still apply, but on platforms, these forces behave differently and new factors come into play. To manage them, companies must pay close attention to the interactions on the platform, participants' access and new performance metrics.

In the near future, the platform shift will have an impact on additional areas of economic and social interaction: energy, education, healthcare, the internet of things, even cities can all be thought of as platforms.

FURTHER READING

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Marshall VAN ALSTYNE is a professor at Boston University and a Digital Fellow at MIT. His work concerns information economics, focusing mainly on competitive strategy, network effects and access to information. Marshall's work also balances open source principles against those that generate profits and stimulate innovation.

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Multi-sided platforms and control: redefining jobs and companies in the Uber age

Multi-sided platforms are online marketplaces that enable interactions between two or more distinct groups of individuals or organisations that value each other's participation. Examples of these new intermediaries between buyers and sellers of a growing range of products and services include Airbnb, Amazon, eBay, Google, Facebook, PlayStation and Uber.

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Speaking at the TSE Digital Forum in Paris in 2016, **Andrei HAGIU** of Harvard Business School outlined his research on the business strategies of entrepreneurs and established firms setting up multi-sided platforms. In particular, he explored whether a platform is really preferable to the traditional reseller model – and if so, whether the professionals that companies like Uber rely on to deliver services should be treated as employees or independent contractors.

Multi-sided platforms versus resellers

Most companies that serve as intermediaries between buyers and sellers face a fundamental strategy decision: should they be resellers (like supermarkets), acquiring and then reselling products or services? Should they operate as multi-sided platforms connecting buyers and sellers without controlling the offerings being sold? Or should they blend the two business models?

In many ways, online marketplaces are the perfect business model. Since they facilitate transactions between suppliers and customers rather than taking full responsibility for products or services, they have low cost structures and high gross margins. These marketplaces usually take a cut from each transaction, which goes almost straight to the bottom line.

They also benefit from 'network effects': the larger the network of buyers and sellers, the better the matches between supply and demand and the richer the data that can be used to find matches. Greater scale generates more value, which attracts more participants, which creates more value in a virtuous feedback loop

Yet online marketplaces remain difficult to build. To attain a critical mass of buyers, there needs to be a critical mass of suppliers; but to attract suppliers, there needs to a lot of buyers. Even after a marketplace has attracted a critical mass of both buyers and sellers, much remains to be done (Hagiu and Rothman, 2016).

Implications for strategic choice of business model

The attractions of multi-sided platforms have enticed many companies to try to apply the model in cases where the reseller model would have had a better chance of succeeding (Hagiu and Wright, 2013).

The key is to recognise that a firm's position along the continuum between pure reseller and pure multi-sided platform is determined by its degree of control over transactions. To what extent does the intermediary control pricing, product presentation and other factors that influence purchasing decisions? And to what extent does it take responsibility for fulfilling orders and delivering products?

Analysis suggests that intermediaries should choose the platform model for the following types of products (Hagiu and Wright, 2015a, 2015b):

→ Products where the suppliers have a significant information advantage about the best way to market products relative to the intermediary.

→ Products for which their prices and marketing activities have limited spillovers on other products. Some products, for example, have much higher value to buyers when bought together than when purchased separately from independent sellers. In those cases, resellers generally do better than platforms.

→ Products in the 'long tail'. High-demand products are sold more efficiently by a large reseller, which can capitalise on economies of scale in purchasing, infrastructure, delivery and customer support.

> In many ways, online market places are the perfect business model. They have low cost structures and high gross margins.

These advantages do not apply to low-demand products, which is why Amazon acts as a reseller for high-demand products but as a multi-sided platform for long-tail products available from independent sellers.

Service marketplaces: employees versus independent contractors

Platform businesses have become particularly prevalent in service industries, enabling professionals to connect directly with customers. At companies like Coursera (education), HourlyNerd (business consultancy), Uber (taxis) and Upwork (outsourced staffing), professionals control some or all of the relevant decisions, such as prices, equipment, training and promotion.

Firms providing service marketplaces of this kind face a choice between two models of organisation: employing and controlling professionals; or enabling professionals to interact with customers on terms that they choose themselves (Hagiu and Wright, 2016). In making this choice, it is important to recognise two types of decisions – transferable and non-transferable – that affect the returns to the firm and the professionals. Non-transferable decisions are always completely controlled by the professionals – with Uber, for example, how friendly to be to customers – or by the firm – for example, the quality of the ride-hailing app. In contrast, transferable decisions can be made by either party: the type of car an Uber driver uses; or the details that an Airbnb host lists about an apartment for rent.

If the transferable decisions are controlled by the firm, then it is functioning as a traditional business. But if the transferable decisions are controlled by the professionals, then the firm is functioning as a platform.

Implications for business regulation

What about the growing number of firms in the grey area in between, as technologies have made it easier to fine-tune the degree of control exerted over interactions between service providers and customers? The optimal model for a company might be somewhere in the middle, controlling some aspects of contractor performance but not others.

This analysis is relevant to legal and regulatory debates about whether professionals that work through service platforms like Uber should be classified as employees rather than as independent contractors. Existing legal definitions emphasise control rights as the most important factor in determining this issue. But drawing the distinction between employees and independent contractors solely based on control rights is notoriously difficult.

A practical approach that could be used by courts would be based on the share of variable revenues (net of production costs) kept by workers: when this share is above 50%, it is an indication that the firm has given key control rights to the workers, consistent with them being independent contractors. The higher the share, the more confidence the court can have in drawing this conclusion.

Mre broadly, a new approach is needed that goes beyond the dichotomy between employees and contractors. While still guaranteeing employer flexibility and worker protections, there should be a spectrum of options to reflect the unique in-between status of many professionals in the age of multi-sided platforms.

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Andrei HAGIU is an Associate Professor in the Strategy group at Harvard Business School. Andrei's research focuses on multi-sided platforms, which enable interactions between two or more distinct groups of customers , who value each other's participation. He studies the business strategies used by multi-sided platforms across a wide range of industries.

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