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Taking the measure of the networked enterprise

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New research shows that power users reap the greatest benefits from social technologies.

The adoption by companies of Enterprise 2.0 tools, a cluster of web-based social technologies first popularized by consumers, appears to be leveling off after a decade of rapid growth. But new research also suggests that power users—businesses that deploy the more advanced technologies extensively—achieve stronger results than companies dabbling at the edge.

Our latest analysis

For nearly a decade, we've tracked the adoption and diffusion of social technologies—wikis, blogs, social technologies, and the like—through a unique database of 1,500 companies.¹ Two points stand out in our latest analysis.

1. A clear S-curve pattern of adoption

Levels of social-technology use, by our estimates, were low in 2006. By 2008, two-thirds of the companies in our database had adopted at least one such technology, though internal diffusion was narrow: only 20 percent of all employees had used them, and no single technology

had gone mainstream. Thereafter, our analysis shows, an S-curve dynamic (Exhibit 1) spurred the wider diffusion of these tools, particularly blogs and social networks.

Strong evidence indicates that imitation and innovation have been driving the spread of Enterprise 2.0 tools. Using modeling techniques, we found that 35 percent of the companies had adopted social technologies in response to their adoption by competitors. Copycat behavior was also responsible for their diffusion within organizations, though at a slightly lower rate: 25 percent of all employee usage. (Teams, for example, typically tried to burnish their performance by imitating early users of social networks and internal blogs.) As for innovation, company policies designed to encourage it sparked the adoption of wikis. Within enterprises, social networks help to spread innovative ideas.

According to our analysis, imitation and innovation spread Enterprise 2.0 social technologies more quickly than they did nonsocial web-based ones such

as email, as estimated by academic researchers.² But their effect seemed to be weaker than others have found it to be on the diffusion of consumer technologies such as Facebook (social networks) or Netflix (social recommendations).³ One reason for the difference is that the adoption of Enterprise 2.0 tools requires two things that are not always available: additional investment and management discipline to spur integration.

2. Enterprise 2.0 tools follow power laws

Roughly a fifth of the companies we studied will account for an estimated 50 percent of all social-technology usage

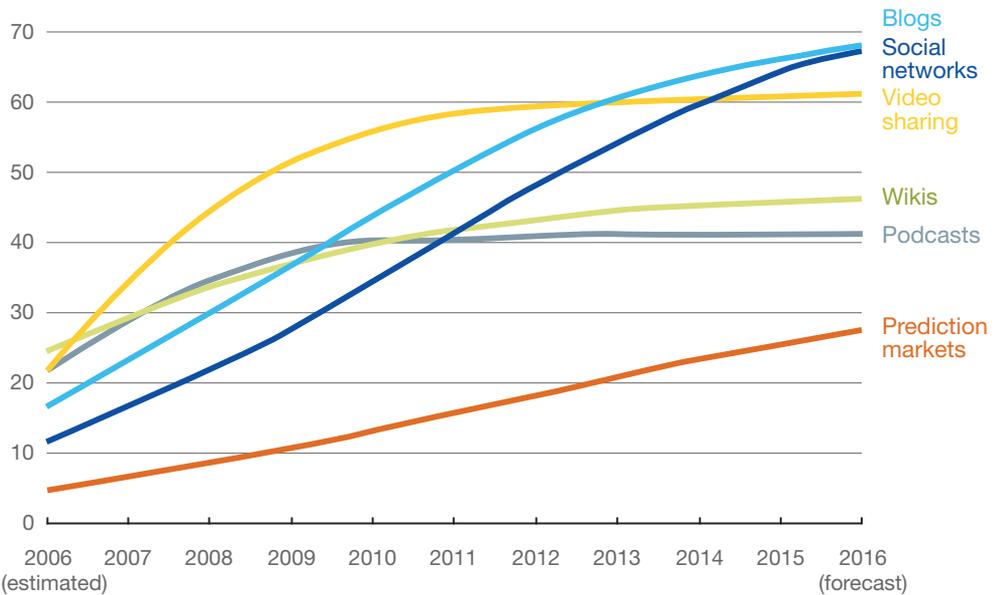
in 2015. The steepness of the power-curve distribution diminishes slightly from 2010 to 2015 as more companies adopted these tools and broadened their internal deployment (notably of wikis and social networks). Our surveys also asked specifically about the perceived impact of Enterprise 2.0 tools on revenues and operating costs.⁴ These self-reported responses were combined to calculate a measure of enterprise value added.

We found that the companies we identified as power users reported an incremental 5 percent in value added in 2010 and of up to 6.5 percent in 2014. These findings were tested with

Exhibit 1

Since 2006, corporate use of blogs and social networks grew most rapidly, but growth is flattening.

Corporate adoption of Enterprise 2.0 technologies, %



a traditional measure of statistical significance which confirmed the correlation. We also used a more sophisticated technique that indicated a causal relationship between usage and performance.⁵ That seems plausible: power laws should naturally skew performance benefits toward heavier users. It’s interesting that the incremental value from social technologies appears to be as large as it was from computers in the 1990s and, more recently, from technologies linked to big data.⁶

In addition, we found significant returns from the greater diffusion of Enterprise 2.0 within companies. The data allowed us to estimate the returns for each technology at several levels of penetration, from 25 percent to 100 percent. We found that even incremental use among employees could significantly increase the value added for each technology (Exhibit 2). The highest usage level of social networks, wikis, and blogs created a self-reported added value of at least 5 percent each, but the impact of other

Exhibit 2

The diffusion of Enterprise 2.0 technologies within companies offers significant returns to scale.

Increase in value added, %

	Level of penetration			
	100%	75%	50%	25%
Social networking	5.8	3.4	1.7	0.6
Wikis	5.7	3.1	1.5	0.5
Blogs	5.0	2.6	1.3	0.4
Video sharing	1.4	1.0	0.6	0.3
Prediction markets	0.6	0.4	0.3	0.1
Podcasts	0.6	0.4	0.2	0.1

social technologies was much smaller. We also found returns to scope: using a second social technology doubles the value added at most levels of penetration.

New frontiers

Social technologies are approaching the top of the S-curve. Adoption across organizations started to taper in 2012, and internal diffusion flattened out somewhat later. Yet the growing popularity of mobile and cloud technologies, as well as the Internet of Things (see “An executive’s guide to the Internet of Things,” on mckinsey.com), could alter the pattern in the future. Companies placing bets should consider how these technologies will interact with Enterprise 2.0 tools and potentially multiply their impact.

Meanwhile, Facebook and other digital players are developing a new generation of social tools geared to enterprise use. These providers, with their huge base of consumers, may further increase the adoption and diffusion of Enterprise 2.0 tools among and within companies. They may also open up new sources of value, both for heavy users and for companies still sitting on the sidelines. ○

of early results can be found on mckinsey.com. For example, see “Transforming the business through social tools,” January 2015; “Organizing for change through social technologies: McKinsey Global Survey results,” November 2013; and “Evolution of the networked enterprise: McKinsey Global Survey results,” March 2013.

- ² Nexhmi Rexha, Bradley Turner, David H. Wong, and Kenneth B. Yap, “Predicting the diffusion pattern of Internet-based communication applications using Bass model parameter estimates for email,” *Journal of Internet Business*, 2011, Volume 9.
- ³ Bruno Ribeiro, “Modeling and predicting the growth and death of membership-based websites,” International World Wide Web Conference, Seoul, South Korea, April 2014.
- ⁴ Regressions for both the adoption and diffusion tests were statistically significant across variables with high goodness fits. For details, see “Ten years of Enterprise 2.0: The power law of Enterprise 2.0 revisited,” forthcoming later this year in the *Encyclopedia of E-Business Development and Management in the Global Economy*, IGI Global.
- ⁵ We used Granger tests to measure whether a variance in performance is reduced when it depends on a level of technology use. See C. W. J. Granger, “Investigating causal relations by econometric models and cross-spectral methods,” *Econometrica*, 1969, Volume 37, Number 3, pp. 424–38.
- ⁶ Erik Brynjolfsson and Lorin M. Hitt, “Computing productivity: Firm-level evidence,” *Review of Economics and Statistics*, 2003, Volume 85, Number 4, pp. 793–808; and Prasanna Tambe, “Big data investment, skills, and firm value,” *Management Science*, Volume 60, Number 6, pp. 1452–69.

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¹ Our database includes 11,000 companies around the world across industries. For this study, we drew on a random sample of 1,500 companies that had completed our Enterprise 2.0 survey for each of the eight years from 2007 to 2014 and had a minimum of 50 data points for each question on adoption and performance to ensure statistical relevance. The research comprised blogs, prediction markets, podcasts, video sharing, social networking, and wikis. The full range