

ENABLING DIGITAL DEVELOPMENT

Social media

When considering another person in the world, a friend of your friend knows a friend of their friend, on average.

—Lars Backstrom and colleagues, “Four Degrees of Separation” (2012)

That remarkable statement cannot yet be applied to everyone in the world, but a 2011 study showed that it pertained to the active users of Facebook—some 721 million people at the time, and their 69 billion friendships.¹ The average of 3.7 intermediary links between randomly selected people in the global Facebook population contrasts with the 5.7 links between Nebraska residents and Bostonians documented in Milgram’s famous “six degrees of separation” study from 1967.² From 2011 to early 2015, the network’s user base had doubled, with each user having an average of 338 “friends.” This is more than twice Dunbar’s number, which asserts that 150 is the maximum number of stable relationships that humans can retain.³ These statistics show some of the ways in which social networks are expanding and changing with the advent of social media on the internet.

Social networks are fundamental to human society. They constitute the fabric of relationships that support trust, reputation, and social cohesion. For instance, a debtor may be less likely to default on a loan if both she and her lender share a dense network of mutual friends. Social networks exert peer pressure on behavior and shape aspirations for work, marriage, and consumption. By defining social boundaries, they can be instruments both of social inclusion and exclusion. They also are a conduit of gossip, slander,

harassment, bullying, and infectious disease, as well as job opportunities and innovative ideas.

One of the clearest channels by which networks affect economic development is the diffusion of innovations. Networks provide the medium through which people learn of an innovation. Adoption by a trusted person then initiates a chain reaction of adoptions through the network, accelerating as peer pressure bears on laggards. The impacts can be large. An experimental study on the adoption of weather insurance (an unfamiliar innovation) by Chinese farmers found that, while attending an intensive information session on the product boosted take-up rates by 43 percent, merely having a friend who attended such a session had almost half that effect, and was equivalent in impact to a 15-percent subsidy.⁴ Impacts were larger when those initially informed were more central to the network. Social networks are also important channels for transmission of health behavior, and there is a tendency for people with poor health behavior to clump in networks isolated from those with healthier behaviors.⁵

Enter the internet, in the form of Facebook, LinkedIn, and Twitter based in the United States; Sina Weibo and WeChat in China; VK in the Russian Federation; and many other social media platforms designed to encourage the formation of social links. There are many types of social media, but social networking sites and microblogs are most relevant in the context of social and economic development. A simple typology is based on whether communication is directed at specific recipients, and whether ties are explicit (prompted by invitation, acceptance, or reference within a social network) or not (table S3.1).

Social scientists distinguish between weak ties and strong ties in social networks. Weak ties exist between

WDR 2016 team, incorporating contributions from Robert Ackland and Kyosuke Tanaka.

Table S3.1 Relationships in different types of social media

Type of ties	Direction of ties and examples	
	Directed	Undirected
Explicit	Friendship networks (Facebook, Google+)	Microblog networks (Sina Weibo, Twitter)
Implicit	Semantic networks (recommendation systems, social tagging systems)	News groups, blogs

Source: Ackland and Tanaka 2015.

people who could be considered acquaintances rather than friends. Such ties can be useful to transmit novel information about technologies or other useful and new knowledge, since information comes from people with whom interaction is more sporadic. Strong ties, between people who have more in common (family, friends, or close colleagues), are a source of emotional support but may be less important as a source of novel information, since members of a close group are likely to have the same information. Strong ties within “closed” groups with relatively weak ties to outsiders can be important, as this may increase trust and facilitate coordination, in part because of the high reputational cost of bad or unproductive behavior within the group. Social capital is likely higher in groups linked by strong ties. Social networking sites are considered more important for developing strong ties, while microblogs foster weak ties. One observer compared Facebook to a cocktail party where you are surrounded by people you know and like, while Twitter is like someone standing at a street corner with a megaphone shouting “Check this out!”

Social media platforms change the dynamics of social networks in at least three ways. First, they encourage expansion of the scope and density of networks, since links are very easy to form, regardless of physical distance. Second, they speed the diffusion of information between links. Third, they increase the visibility of opinions and some behaviors across the network. Research on the development impacts of social media is still at an early stage, but there is some evidence on how they affect economic development, how they prompt changes in behavior, how they help in emergency situations, and how they can increase people’s voice.⁶

Social media and economic development

Social media act as a channel for communication and information exchange, thus reducing transaction costs for economically beneficial, as well as potentially harmful, interactions. Research in Nigeria showed

that social media supported microfinance by facilitating information flow to the poor and small business owners.

A study of a group of women in Jakarta showed that their use of social media encouraged their entrepreneurial activities and helped them find customers for their products, although the specific context of this study—they were middle-class urban residents—may not be transferable to every other place. Social media sites can also be a source for economically useful data, including about consumer preferences and complaints.

Social media and behavioral change

Commercial ventures take advantage of the features of social media—often for marketing purposes—as they exploit the huge amounts of information about personal preferences, buying habits, and relationships. But online behavior can also be channeled in ways that are consistent with development. For instance, individuals can be encouraged to share their progress in meeting exercise or learning goals with their social network, thus using peer pressure and competition to maintain motivation. Experiments show that, in principle, networks can be manipulated to encourage desired outcomes. For instance, an online experiment showed that when participants were networked in tight clusters, a promoted health practice diffused more quickly than in a loosely structured network.⁷

Social media and emergencies

Before, during, and after natural disasters or other urgent crises, social media platforms are useful for disseminating information and as a management tool, such as to channel requests for assistance. The key contribution is that information does not just flow one way from officials to citizens as through radio or television, but in all directions between officials, citizens, and the private sector.

Social media and community voice

Recent events such as the Occupy Wall Street movement or the Arab Spring have raised questions about the role of social media in facilitating social change. Some analysts think social media played a central role, including by spreading democratic ideals across borders. They also make movements less dependent on charismatic leaders or ideologues. Others are more skeptical, arguing that revolutions occurred long before social media, and the apparent inability to form strong leadership through such tools can reduce the chances for lasting change. An additional issue is the role of social media in spreading false information or to correct misinformation. The intensity of a crisis changes the quality of information shared on Twitter. And, interestingly, fact-checking conversations on Twitter are more likely to occur between strangers than between friends. Whether social media can encourage collective fact-checking will influence its role in social learning in the context of social and economic development.

There is still much to learn about the role that social media can play in development. One important lesson is that their impact is country-specific and context-specific. Variations in access to technology and education obviously matter. But there are also large variations in how people use social media and how they share information. People will more likely share information broadly if they think they can influence events or policy. There is evidence that people in more authoritarian countries are less likely to forward (re-tweet) information.

Finally, general-purpose social media platforms may have less of an impact in poor communities compared with more targeted social media interventions. Examples in other parts of the Report show that purpose-built platforms set up by public institutions or development agencies as part of program delivery may be more effective. They could, for instance, deliver extension services to farmers or connect participants with leaders to foster aspirational change.

Notes

1. By March 2015, Facebook had 1.4 billion active monthly users worldwide.
2. Milgram 1967.
3. Dunbar 1992.
4. Cai, de Janvry, and Sadoulet 2015.
5. Centola 2011.
6. See Ackland and Tanaka 2015 for individual references.
7. Centola 2010.

References

- Ackland, Robert, and Kyosuke Tanaka. 2015. "Development Impact of Social Media." Background paper for the *World Development Report 2016*. World Bank, Washington, DC.
- Backstrom, Lars, Paolo Boldi, Marc Rosa, Johan Ugander, and Sebastiano Vigna. 2012. "Four Degrees of Separation." Presented at ACM Web Science Conference 2012, Evanston, IL, June 22–24.
- Cai, Jing, Alain de Janvry, and Elisabeth Sadoulet. 2015. "Social Networks and the Decision to Insure." *American Economic Journal: Applied Economics* 7 (2): 81–108.
- Centola, Damon. 2010. "The Spread of Behavior in an Online Social Network Experiment." *Science* 329 (5996): 1194–97.
- . 2011. "An Experimental Study of Homophily in the Adoption of Health Behavior." *Science* 334 (6060): 1269–72.
- Dunbar, Robin. 1992. "Neocortex Size as a Constraint on Group Size in Primates." *Journal of Human Evolution* 22 (6): 469–93.
- Milgram, Stanley. 1967. "The Small World Problem." *Psychology Today* 2 (1): 60–67.

