The Economist

The geography of start-ups

Something in the air

Why birds of a tech feather flock together

Oct 27th 2012 | from the print edition

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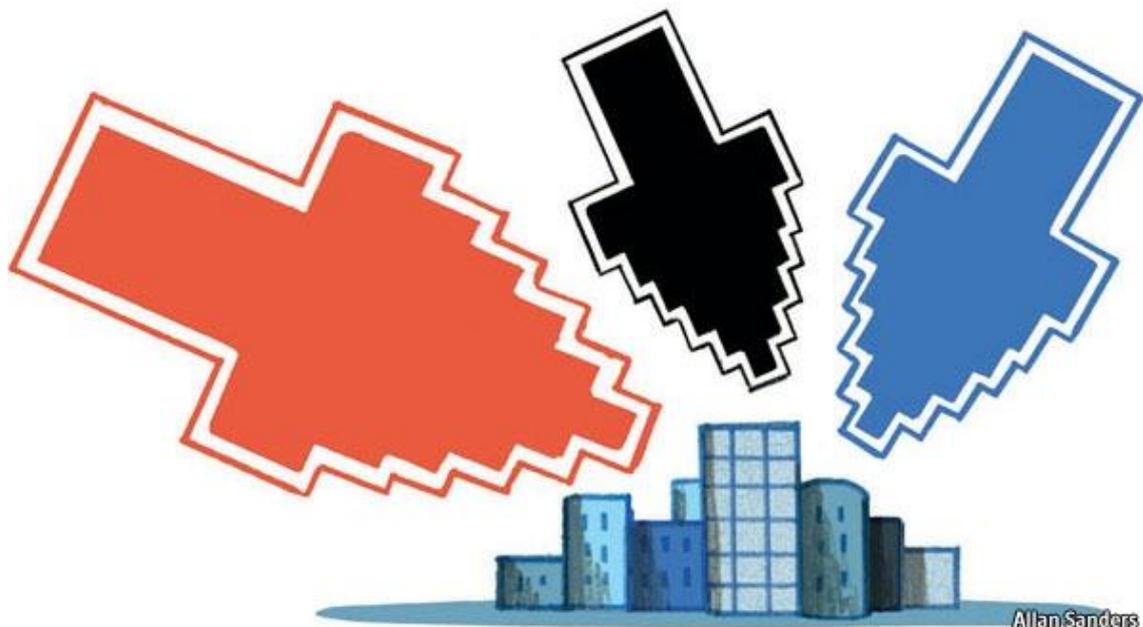
century Alfred Marshall, a founding father of modern economics, asked why firms in the same industry were often geographically near each other. Proximity, he said, created something "in the air": "…if one man starts a new idea, it is taken up by others and combined with suggestions of their own; and thus it becomes the source of further new ideas."

Marshall was thinking about Victorian manufacturing, but the same is true of the information-technology companies of the 2010s. Silicon Valley is home to many of the industry's giants, and hopeful founders of young start-ups still head for northern California. A certain Mark Zuckerberg left Harvard for Palo Alto as soon as he got the chance. Others beat a path to newer hubs, such as Berlin, London, Moscow, New York or Tel Aviv.

Economic theory suggests four main reasons why firms in the same industry end up in the same place. First, some may depend on natural resources, such as a coalfield or a harbour. Second, a concentration of firms creates a pool of specialised labour that benefits both workers and employers: the former are likely to find jobs and the latter are likely to find staff. Third, subsidiary trades spring up to supply specialised inputs. Fourth, ideas spill over from one firm to the next, as Marshall observed. But there are also forces that encourage companies to spread out. One is the cost of transporting their products to widely dispersed customers. Another is rents, which rise when firms cluster together.

You might imagine that the dramatic fall in the cost of communications and computing would have pushed firms in the information-technology industry (among others) farther apart. Natural resources do not matter to them; all they need is a good internet connection. The ease of online communication should reduce the need for their people to be close together in order to work, to deal with customers and suppliers or to swap ideas. Young companies really can pick their spot. That would seem to count against Silicon Valley, where premises are costly, and against London and New York, which are not only expensive but also lack California's high-tech history. Berlin is cheaper, but there are plenty of places all over Europe where costs are lower.

Yet although you can find tech companies of all shapes and sizes almost anywhere, the smaller ones especially have a fondness for huddling together. Jed Kolko, Trulia's chief economist, puts this down mainly to the continuing attraction of a deep pool of skilled labour. "The less an industry needs to be near natural resources, its suppliers or its customers," he says, "the more it's likely to cluster where its workers want to live."

The magnet factor

For the tech industry, workers want to live either where the jobs already are (eg, Silicon Valley) or in lively cities (London, New

York, Berlin and perhaps San Francisco). At Wooga, an online-games company in Berlin, the 250 staff come from 35 countries. Jens Begemann, the founder and chief executive, says that Australians and Canadians sign contracts even before leaving home. Dmitry Repin of Digital October, a co-working and meeting place for start-ups in Moscow, says that "for a university kid, studying in the regions, moving to Moscow sounds smart." Even short distances can make a difference. Zimride's Mr Zimmer says he moved his young company just 30-odd miles (50km) from Palo Alto to San Francisco because that was where most of his then 20 employees lived (he now has 32).

For

programming talent, says Mr Stoppelman at Yelp, nothing beats Silicon Valley. The Valley is big enough and old enough to have clusters within clusters, from makers of semiconductors and network equipment near San Jose to Google and Facebook farther north and a host of smaller young internet companies in San Francisco. Even within the city, there are divisions between districts: South of Market, or SOMA, with lots of smaller start-ups; the Design District, which houses Airbnb and Zynga, a games company, in bigger premises; and Mission Bay, the base of Dropbox, a cloud-storage firm (see map).

Young companies need more than labour; they also need money and advice. Anthony Goldbloom of Kaggle, which runs online

competitions for data scientists, moved his company to the SOMA district from Melbourne this year. Mr Goldbloom (who was once an intern at *The Economist*) says that being in a cluster "makes serendipity possible": he can have more face-to-face meetings, which are often more productive than phone calls or e-mails, and there is a good chance of bumping into someone interesting, such as a venture capitalist. The venture funds, indeed, constitute another cluster within the Valley.

The recycling of people is as important as that of money. Brian McClendon, who oversees Google Maps and Google Earth, says he has been working within a mile of where he is now for 22 of his 24 years in the Valley: first at Silicon Graphics and later at his own company, Keyhole Earth. That was sold to Google, which now occupies Silicon Graphics's former home. "The diaspora of Silicon Graphics", he says, "created many, many companies throughout the Valley…as a diaspora we communicate and we contact and we hire each other and we steal each other's people." Google already has a diaspora of its own.

In the Valley people are also close to the latest ideas. "Ideas are exposed to that little tiny region possibly years ahead of the rest of the world," reckons Mr Stoppelman. "You are always building on the idea that came immediately before. If you are trying to build the thing that comes next, early access to information about the things that are out there helps you." That sounds like what Marshall had in mind.

The cycles of investment, success, failure and regeneration have made the Valley what it is

Will other hubs ever catch up? New York, London and Berlin have two possible advantages. One is that they are bigger and therefore livelier and more attractive to young people than San Francisco, let alone the smaller places on the way to San Jose. Chad Dickerson, chief executive of Etsy, an online marketplace for handmade and "vintage" goods based in Brooklyn, jokes that in San Francisco "everything closes at ten o'clock."

The other is that they have a wider pool of industries and hence skills on which companies can draw. To many this variety is invaluable. "It's not just engineering talent," says Dennis Crowley, boss of Foursquare, which is based in New York. "You can find that all over the place. We may have a whole bunch of engineers, but

we also have a whole bunch of product people."

New York's programming pool was deepened when Google started putting engineers into its office in the city in 2003. Some alumni have since set up or joined start-ups there. Matthew Brimer of General Assembly, a co-working and education firm, explains that since the financial crisis people have been readier to work in start-ups; Wall Street has become less of a draw. People in London start-ups also see the presence of Google and other big companies as a boon. Some say the same about the city's advertising and financial industries, but others see them as deep-pocketed competitors for staff.

As for capital, New York and London have their own crop of venture funds. Much of Europe is serviced from London too, and London and Silicon Valley funds, as well as local ones, are active in Israel. Is Europe small enough for investors to feel the benefits of proximity? Adam Valkin of Accel Partners in London thinks so. "I woke up in Berlin today and I was in the office at 9am," he says. His colleague, Philippe Botteri, adds that on a bad-traffic day it can take him three hours to drive from San Francisco to San Jose.

Younger hubs are also trying to conjure up Marshall's "something in the air". Alexander Ljung of SoundCloud, a site for publishing audio files, was drawn to Berlin from Stockholm by the German capital's "strong intersection of technology and art" and "creative chaos". He sees a "sense of reciprocity" among its start-ups: his Sunday activity is "trying to advise people".

Almost every hub has its co-working spaces, accelerators and incubators where tiny firms of perhaps two or three people work cheek by jowl. The provider of the space may offer equity or just a place to work, meet and learn. There are also regular convivial gatherings, such as Silicon Drinkabout in London, where troubles can be shared as well as drowned.

Capital from past successes is being recycled too, through investors such as Stefan Glaenzer of Passion Capital in London, Christophe Maire, a Berlin-based entrepreneur, and Kai-Fu Lee, a former Google executive who now runs Innovation Works in Beijing. Watchers of the British tech scene are waiting to see what Mike Lynch, the founder and ex-boss of Autonomy, will do with the money he made when his software firm was bought by Hewlett-Packard. HP pushed him out in May.

Nothing quite like the Valley

But no other place has seen the cycles of investment, success, failure and regeneration in the information-technology industry that have made the Valley what it is, so no other place as yet has the Valley's scale and resilience. Some still question whether other young ecosystems would have the strength to survive anything like the dotcom bust of a decade ago. They probably would, but until a crash happens, no one knows.

For cities as big and diverse as London and New York, it may not matter much. They have other strengths. And many other cities too may be about to discover an asset they did not know they had. It is neither people nor money, but something else in the city air: data.

from the print edition | Special report