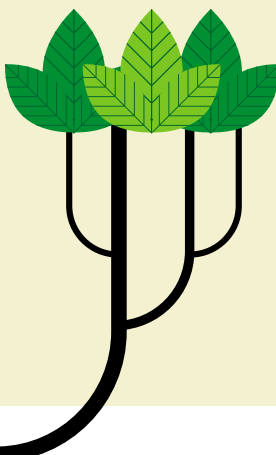


These last descriptors sound biological—and they are. In fact, I’m beginning to think of this second economy, which is under the surface of the physical economy, as a huge interconnected root system, very much like the root system for aspen trees. For every acre of aspen trees above the ground, there’s about ten miles of roots underneath, all interconnected with one another, “communicating” with each other.

The metaphor isn’t perfect: this emerging second-economy root system is more complicated than any aspen system, since it’s also making new connections and new configurations on the fly. But the aspen metaphor is useful for capturing the reality that the observable physical world of aspen trees hides an unseen underground root system just as large or even larger. How large is the unseen second economy? By a rough back-of-the-envelope calculation (see sidebar, “How fast is the second economy growing?”), in about two decades the digital economy will reach the same size as the physical economy. It’s as if there will be another American economy anchored off San Francisco (or, more in keeping with my metaphor, slipped in underneath the original economy) and growing all the while.

## How fast is the second economy growing?



Here’s a very rough estimate. Since 1995, when digitization really started to kick in, labor productivity (output per hours worked) in the United States has grown at some 2.5 to 3 percent annually, with ups and downs along the way. No one knows precisely how much of this growth is a result of the uses of information technology (some economists think that standard measurements underestimate this); but pretty good studies assign some 65 to 100 percent of productivity growth to digitization. Assume, then, that in the long term the second economy will be responsible

for roughly a 2.4 percent annual increase in the productivity of the overall economy. If we hold the labor force constant, this means output grows at this rate, too. An economy that grows at 2.4 percent doubles every 30 years; so if things continue, in 2025 the second economy will be as large as the 1995 physical economy. The precise figures here can be disputed, but that misses the point. What’s important is that the second economy is not a small add-on to the physical economy. In two to three decades, it will surpass the physical economy in size.