

Commentary: The “New Economy”: Background, Historical Perspective, Questions, and Speculations

Alice M. Rivlin

DeLong and Summers have done exactly what they should have done for an opening session. They have written a lively, thought-provoking paper that raises more questions than it answers. Their contribution is ideal for getting the conference off to a good start.

The first of the four questions the authors pose to themselves is by far the most crucial: Is the information economy important? Will it have a lasting positive effect on economic growth?

Their answer is “yes.” And it had better be! If their answer were “no,” the Kansas City Fed would have gathered us all in this beautiful place for a conference on a trivial subject, and everyone knows the Kansas City Fed wouldn’t do that!

The authors do not make explicit what they mean by a large economic impact. They appear to mean that the technology sector itself (the production of hardware and software) will continue to grow faster than the rest of the economy and will be a continuing engine for value creation and economic growth in the U.S. and, presumably, other developed economies. They argue that the pace of change in information technology is extremely rapid and not likely to slow soon (Moore’s law will go on working) and, more importantly, that new uses for computing and communicating power and effective demand

for those uses will continue growing faster than the price drops. They believe that the demand is elastic, that the information technology sector will grow, that it will generate wealth, and lead the rest of the economy to higher productivity.

The authors are appropriately modest at the beginning of the paper in pointing out that they don't know the answers to any of their questions and can only offer informed speculation. But their strong assertions later in the paper make it important to remind ourselves that what DeLong and Summers are voicing about the future of the information economy is essentially a hunch and a hope. Of course, there is nothing wrong with hunches and hopes. The hunches and hopes of Alan Greenspan produced rather good monetary policy in the late 1990s! Nevertheless, we simply do not know and cannot know how long the pace of change in IT will continue to be so rapid or, more crucially, what demand for those uses will be like.

Moreover, DeLong and Summers have the wrong credentials for this prediction. They are economists, and economists have abysmal track records when it comes to predicting when the pace of technical change will speed up, slow down, or stay the same, or when and how investment in technology will affect productivity. Let's face it: Economists failed to predict the slowdown in productivity growth after 1973 or the speedup after 1995, and we don't know what will happen to productivity growth when the current slowdown is over.

A skeptic could spin a plausible tale in which the growth in the information technology sector in the late 1990s proved to be a one-time event. The sector remained vibrant but stopped growing disproportionately. Such a story is not necessarily incompatible with continuing a higher level of productivity growth in the economy as a whole. In this story, it turns out that households with personal computers and fast Internet connections have all the computing and communicating power that they have any desire to learn how to use. Similarly, it turns out that while businesses are currently only beginning to learn how to exploit IT, especially the Internet, to increase their productivity, the impediments to doing so are *not* the need for more investment in

equipment or even new software. The limitations may be more in their ability to change their organizational, management, and worker culture in order to take full advantage of the computing and communicating power they already have. This might happen fast or it might happen slowly, depending on the competitive conditions in different sectors of the economy. Continuous investment in upgrading IT would clearly be necessary to faster productivity growth, but maybe not at the accelerating rate implied by the DeLong-Summers scenario.

In other words, it's not clear to me that the future relative growth of the IT sector itself is the right measure of the lasting impact of this technology. Most of the economy is never going to be producing IT products. You can't eat them, wear them, sleep on them, ride in them or play ball with them. Most of the economy is always going to be producing and distributing food, clothing, shelter, home furnishings, cars, haircuts, and medical care. The ultimate impact of information technology is going to depend on how those user industries change their modes of operation, which may or may not involve a continuously increasing investment in IT.

Strangely missing from the DeLong-Summers discussion are the IT-using sectors of the economy. They foresee the economy becoming increasingly Schumpeterian because the IT sector, which they believe will grow relative to the rest, is characterized by high up-front costs, close to zero marginal costs, and big network effects. Hence, they expect a growing share of the economy to be dominated by a few large firms. However, the rest of the economy, which is most of it, may actually become more Smithian, as its use of IT intensifies competition and broadens market reach in a world in which marginal costs still rise and networks break down as they get too big to manage effectively.

Having made the skeptical points incumbent on a discussant, let me make clear that my hunches and hopes largely coincide with Summers and DeLong's view that the current IT revolution is likely to have a lasting impact that will raise our standard of living appreciably—although not always in ways that show up in GDP.

In defense of the DeLong-Summers optimistic story, let me offer a few insights from a recent Brookings study on the economic impact of the Internet.¹ Last year, Robert Litan and I pulled together a distinguished group of scholars—The Brookings Task Force on the Internet—to look at the relatively narrow topic of the impact of the Internet on the economy, especially on productivity. Our authors examined leading-edge firms in major sectors of the economy to see how use of Internet technology was affecting their productivity. We asked them to estimate what would happen to productivity growth over the next five years or so as the most advanced uses of networked computing to reduce costs and increase productivity spread to the rest of the sector. The results were speculative but quite encouraging. We added up the sector estimates and ventured the guess that increased use of the Internet could add 0.25 to point 0.5 percent to productivity growth per year over the next five years. (Many of the gains were one-time gains assumed to be phased in over time.)

We believe that most of the impact of the Internet on productivity will come from cutting the cost of quite mundane data-intensive transactions (ordering, invoicing, accounting, recruiting, etc.), from improved management, especially of supply chains, and from increased competition over broader markets. More intense competition may increase productivity as inefficient suppliers are weeded out, or it may simply pare down margins, but the consumer benefits either way. Very little of the prospective benefit is likely to stem from direct business-to-consumer sales. The Internet may have a big impact on the efficiency of wholesale and retail trade, through its effect on transaction costs and supply-chain management, but electronic retailing itself seems likely to remain largely a subsidiary distribution and communication channel for brick and mortar stores.

Two important points emerged from the study that are relevant to the future impact, not just of the Internet, but of IT in general:

- Much of the benefit in terms of increased productivity and lower costs for the economy as a whole is likely to come in the noncommercial sectors of the economy, including government, health care deliv-

ery, and eventually education, although the last may be much slower since educational institutions are extraordinarily resistant to change.

- Many benefits may result in real increases in our standard of living that will not be easily measured and may not show up in GDP. These include reduction in error rates in medical care delivery (which could even save lives); reduction of accidents, crime, and fraud prevention; and all kinds of additional convenience for consumers in the use of time and space.

Finally, I fully agree with the other major points of the DeLong-Summers paper. The crash of the Nasdaq and the demise of the dot.coms tell us nothing about whether our hunches and hopes about the future impact of IT are right or wrong. It does tell us that manias and bubbles are a constant of human psychology and that sophisticated CEOs armed with the most advanced technology and information can still make bad decisions. More encouragingly, I think it tells us that there is a lot of risk capital out there willing to finance the next new thing, even in the face of likely losses.

I also agree that the effects of the IT revolution are more likely to be micro than macro, although we may learn more about the macro effects in the next few months. If the U.S. economy escapes a deep recession and resumes a reasonable rate of growth sometime in 2002, we will have some evidence, not just that monetary and fiscal policy still work, but that the IT revolution may help companies manage better through a slowdown.

Finally, I concur with the authors' last point, added after the conference—that September 11 and its aftermath will not have a lasting effect on the American economy. The war on terrorism will add to uncertainty and shift the direction of some high-tech investment toward security, but its effects on the tragedy are more likely to be emotional and psychological than economic.

Thank you, Brad and Larry, for such a stimulating start to the conference.

Endnote

¹ Robert E. Litan and Alice M. Rivlin, eds. *The Economic Payoff from the Internet Revolution*, Washington: Brookings Institution Press, 2001.