9 BIG IDEAS THAT EXPLAIN 2016

AMERICAN GROWTH HAS SLOWED DOWN. GET USED TO IT.

By ROBERT GORDON | Illustration by Brian Stauffer

SLOW GROWTH HAS BEEN IN THE FOREFRONT OF THE CANDIDATES' CONCERNS ABOUT THE economy throughout this presidential campaign. They're right to point it out: Whatever your view of the past several years, America's economic growth is not what it used to be. Our real gross domestic product roared along from 1947 to 1974, growing an average of 3.8 percent per year, and slowed only slightly until 2004. But since then, it's dropped by half. Today's economy, growing at a sluggish 1.6 percent per year, has been described using an old term inherited from the 1930s, "secular stagnation." ¶ Yes, the economy is stuck, and all candidates promise to unstick us. But can they? Well, there's a good chance they won't be able to do anything of the sort. I've spent the past five years looking at what really caused the American economy to grow so quickly for so many years, and the conclusion is that we're going to have to get used to a very different idea

of how fast our economy can grow. Some treat the recent slowdown as an anomaly and assume we can get back to our "normal" high-growth mode. But a closer look at history suggests that the real anomaly is how fast things grew for much of the 20th century. The reason is not that we've stopped innovating. Instead, the basic explanation is that some inventions are more important than others—and the most important ones happened decades ago.

Economic growth doesn't happen at a steady pace. Instead, progress jolts forward much more rapidly in some eras than in others. There was virtually no economic growth in human societies for millennia until the Industrial Revolution began around 1770. Growth began at a slow pace from 1770 to 1870, then—fueled by a unique clustering of what I call "the Great Inventions," principal among which were electricity and the internal combustion engine—became remarkably rapid in the century ending in 1970.

That century witnessed an economic revolution, freeing households from an unremitting daily grind of painful manual labor, household drudgery, darkness, isolation and early death. By 1970, daily life for nearly all Americans had changed beyond recognition. Manual outdoor jobs had been largely replaced by work in air-conditioned environments. Housework was increasingly performed by electric appliances. Darkness was replaced by light on demand; isolation was replaced not just by travel, but also by color television images bringing the world into the living room. Most important, the arrival of clean running water, to say nothing of indoor bathrooms, waste systems, a safe food supply and modern medical care, utterly changed life expectancy. An infant born in 1870 could expect to live only to age 45, whereas by 1970, the expected life span had reached age 72. The economic revolution of 1870 to 1970 was unique in human history.

Economic growth since 1970 has been simultaneously dazzling and disappointing. The advances of the past few decades have mostly come in a narrow sphere of human activity involving entertainment, communication and information. It's true, we've all benefited from desktops, laptops and smartphones; indeed, the computer revolution brought with it a substantial but temporary revival of productivity growth from 1995 to 2004. But in other aspects of life, the pace of change has slowed. For the rest of what humans care about—food, clothing, shelter, transportation, health and working conditions—there was less progress after 1970. Today's automobiles are much more similar to those of 1950 than the 1950 models were to the horse and buggy of 1900. The appliances in today's kitchens closely resemble those of 1950, except for the addition of the microwave oven, whereas the 1950 kitchen was a world apart from the kitchen of 1900, which had no electric appliances at all.

So despite all the cheerleading from the Bill Gateses and Mark Zuckerbergs about our recent innovations, Silicon Valley and even many economists have failed to take into account something crucial: The economist's basic measure of technical progress has been lagging. Overall, growth comes from improved productivity. And if you look closely at labor productivity figures, you can figure out how much is due to technological advances. By subtracting the contributions of better education and more machines per worker, we get what economists call "total factor productivity," or TFP. And the data show the sad fact that TFP growth since 1970 has been barely one-third of the rate achieved from 1920 to 1970. (If you factor in other crucial improvements that aren't captured in GDP, like clean water and lower mortality, you realize that the middle decades of the 20th century were an even more extreme outlier in terms of how fast quality of life improved.)

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What about the future? Unfortunately, my projections suggest that productivity growth is likely to slow further. My own forecast of likely growth in disposable median income per person for the next quarter-century is just 0.3 percent per year—less than one-fifth of that achieved from 1920 to 2014. Since half of the population will see gains below that median, that means that income per person will barely grow at all for millions of households—and this generation of American youth will be the first that fails to double the standard of living of its parents.

Yes, technological change is happening. Many optimists see another transformative invention in artificial intelligence, which could increase productivity in intellectual work as quickly as the steam engine did for manual labor. Yet much of AI is devoted to marketing, and a competitive battle over market share does not increase the size of the overall economic pie. But for now, AI is making small inroads in fringe areas of the economy, excelling in such areas as legal searches, voice recognition and language translation, but without making a dent in productivity growth in our very large economy. Join me in playing the game of "find the robot," and I'll bet you won't turn up any robots in your local retail stores, or in hotels, or when you visit the doctor.

What can be done about slow economic growth? My findings cast doubt on some favorite prescriptions, like investing more in infrastructure and research. Research and development is already well-funded by America's flourishing venture capital industry, and besides, there's no reason to believe that the next round of innovations will have the impact of the big changes that came before 1970. We shouldn't expect infrastructure spending to deliver the sharp gains it offered in the past either. Interstate highway construction in the 1950s and 1960s transformed the country's economy, but repairing and maintaining roads and bridges, while an urgent necessity in many parts of the United States, only preserves what we have rather than providing us with something new. A major new push for education reforms—like government-supported preschool—would be more promising. Education can boost productivity even if technology isn't giving it a lift.

But that doesn't change the basic point: Growth has been our American mantra, but it might just prove to be an elusive slogan. So beware politicians bearing promises of a return to a vanished past.

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