The Importance of Innovation to Our Regional Economy

Introduction

At the Federal Reserve Bank of Cleveland, we spend a lot of time thinking about what factors drive economic growth and prosperity. I would like to share my thoughts on the importance of innovation to our region's future. First, I will discuss how innovation drives economic growth. Next, I will outline the progress of innovation and entrepreneurship in our region over the past century. Finally, I will focus on how we can work together to foster continued innovation and a growing regional economy for the future.

Additional Information

Sandra Pianalto

President and CEO,
Federal Reserve Bank of Cleveland

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I. Innovation Drives Economic Growth

Let's begin, then, with the role of innovation in driving economic growth. It goes without saying that the future health of any economy rests on its ability to innovate. The key to growth and progress has always been innovation-a process of churning from the old to the new. You may have heard that process described as "creative destruction." This phrase was developed in the early part of the last century by a Harvard economist named Joseph Schumpeter. He argued that the ebb and flow of economic activity and employment are an integral-and indeed, necessary-part of growth. Productive resources are redirected into providing new goods and services that have higher value than the old.

Schumpeter defined a number of innovations that drive growth-things like the introduction of new products, new methods of production, and new trade relationships. As examples, he cited the discovery of raw materials and the reorganization of business and economic activity. Through creative destruction, each innovation would be accompanied by temporary periods of job loss and business stress as the economic system was reconstructed to become more efficient. This idea of creative destruction spawned a whole line of study in economics known as "growth theory."

Growth theory made another great leap forward in the 1950s with the work of economist Robert Solow, who would go on to win a Nobel Prize. In one of his studies, Solow concluded that nearly 90 percent of the rise in U.S. prosperity during the first half of the twentieth century came from technological growth, and not, as most economists had assumed, from the mere accumulation of machinery.

So the evolution we are seeing today is nothing new. We see old plants closing and new plants opening. We see old occupations dying out and new occupations born to take their place. The new jobs that are created come from innovation. And, of course, we will experience some tough growing pains as many jobs, and even industries, become obsolete.

While innovation leads to higher growth, higher growth can lead to greater investments in research and development, which will likely lead to more innovation. The forces that drive innovation are not necessarily random events. They are usually driven by the need to be competitive. That is true today, just as it was one hundred years ago.

II. Innovation and Entrepreneurship Across a Century

In fact, why don't we step back for a moment and consider how Northeast Ohio looked a hundred years ago? It looked pretty good, as it turns out. Back at the beginning of the twentieth century, Northeast Ohio was a hotbed of growth and innovation, with some contemporary observers comparing it to today's Silicon Valley.

Our region was blessed with a great location, access to raw materials, and a critical infrastructure-first the canals and then the railroads. In fact, much of Akron's early growth came from its fortunate location at the summit of the Ohio & Erie Canal.

We also were blessed with the knowledge, skill, and energy of our citizens and of new people who kept streaming in. Our region had a healthy concentration of entrepreneurs, firms, and experts who, working together created a major center for industrial innovation.

Akron's role in this region's industrial rise is well known. For most of the last century, its importance to the rubber industry made it the "Rubber Capital of the World." And the boom in this industry made Akron America's fastest growing city for much of the early 20th century, with Akron's population roughly tripling from 1910 to 1920. The growth in industry in Akron attracted immigrants from around the world, and development was so rapid that rubber companies had to build homes to accommodate their need for new workers.

Together with our neighbors to the north, at various points throughout the last century, this region would become one of the nation's dominant producers of rubber, steel, and automobiles, and an important producer in many other major industries. These developments, in almost all cases, can be traced to important innovations, such as the process that allowed Rockefeller's refineries to remove sulphur from petroleum, or the invention of a way to rapidly and automatically unload ore at Lake Erie ports. All of which led to Northeast Ohio becoming one of the nation's major manufacturing centers.

But we all recognize that the glory days of our region's manufacturing prominence have faded. Over the past couple of decades, we have been struggling to come to terms with a structural shift that includes more global trade, changing technologies, and a shrinking share of manufacturing jobs versus service-sector jobs.

As painful as these short-term adjustments may be, we know that we must keep pace with the changes around us if we are to move forward-to build a future as bright as our past. We need to continue to identify the factors that will drive economic growth and prosperity for our citizens. And at the Federal Reserve Bank of Cleveland, we are working harder then ever to try to identify those factors in the context of economic transformation.

Our recent findings indicate that we have some work to do here in Ohio. The data indicate that our state's economy is less dynamic--

that is, it shows less creative destruction--than other states. While Ohio has strong productivity growth and a large number of firms and skilled workers, it also has a very low rate of business startups. In terms of employment trends, we are losing jobs from manufacturing plants at a slower pace than the nation, but we are also gaining new jobs from manufacturing plants at a slower pace.

The problem with this situation is that dynamic states tend to have the healthiest economies. Fast-growing states not only have a relatively high rate of plant openings, but they also have a relatively high rate of plant closings. Why would this be so?

Well, since the days of the Industrial Revolution, businesses and workers have been affected by the opening of new markets, new products, organizational developments, and new manufacturing techniques. Again, through creative destruction, new economic relationships are forged from existing ones. This process is not necessarily smooth or painless. Productive resources in the form of labor, capital, and entrepreneurial talent have to move from declining industries to expanding ones. It is through this process that economic growth is generated.

III. Steps We Can Take to Foster Innovation and a Growing Regional Economy

So what practical steps can we take now to foster a growing regional economy for the future? In our Bank's 2003 Annual Report, we discuss our research findings in this area. We propose that innovation is the true engine of economic prosperity, and we argue that our greatest strength will be our ability to embrace change, from integrating new technologies to welcoming new people. If we hope to remain vital as a region, then flexibility is likely to be our most valuable asset.

Indeed, the key to maintaining a region's economic vibrancy is its ability to sustain a community of innovators. Openness to new ideas and different perspectives may be the most important factor in nurturing growth and innovation. As many of you know so well, an entrepreneurial spirit is a critical driving force for innovation.

It is really no exaggeration to say that the American psyche is hard-wired for entrepreneurship. My friend and colleague Bill Poole, president of the Federal Reserve Bank of St. Louis, recently co-wrote a research article on this subject with Howard Wall. They note that Americans are more than twice as willing to become entrepreneurs as are people in Western Europe and Japan. They emphasize that in order for this American entrepreneurial spirit to lead to success, it must be accompanied by an environment that allows it to thrive.

As a region, we must become better at encouraging our entrepreneurs. We must create the conditions that allow new businesses to grow more readily throughout the area. I believe that we are making progress. While there is much more that we can do and must do, I am very encouraged by the many, many stories of successful entrepreneurship that are occurring right now. There are literally hundreds of companies-by some estimates, more than 400-working to unlock the commercial possibilities of polymers and plastics in Akron. Of course, the Akron area boasts the largest such concentration of polymers and plastics activity in the world. And not far from here, between Akron and Cleveland, there are companies choosing to cluster around another world-class center, in this case for technology related to liquid crystals.

We need many more such stories of successful entrepreneurism. To invigorate new business start-ups such as these in our region, we need to engage many different groups in the process-government, business experts, educators, and investors. We must start focusing more on the long-run adaptability of our businesses and our capacity to grow new ones.

One of the best things we can do to become more innovative and adaptable is to improve the level of educational attainment among our citizens. We must do all we can to build an educated workforce for the future. Business leaders and educators should join forces to better understand the role of education in providing the raw material for future innovation.

Evidence shows that the Cleveland-Akron area lags behind other regions of the country in levels of educational attainment. In an economy that increasingly runs on brainpower, we must invest in our most important asset-our people. Education and workforce development must be broad-based, and we must be realistic about the amount of change that is needed.

We have to attract more angel and venture capital in our region. Entrepreneurs are telling me that it can still be difficult to get early-stage capital for new ventures. The Federal Reserve Bank of Cleveland is trying to learn more about the investment climate. Just recently I met with several "angel investors" in Northeast Ohio who have set their sights on growing new businesses. Several other Reserve Banks are holding similar meetings. We are hoping to better understand where "angel investors" invest and why.

We also have to take an honest look at the role of government in promoting innovation and growth. Recent efforts to cooperate at a regional level might lead to a better business climate, and we should urge government leaders to engage in those conversations.

Conclusion

On a broader level, we also have to let go of what might have worked well for us in the past. For our region to compete successfully in today's global economy, I think that we must shift economic development thinking to focus on innovation. We must stop trying to preserve the past and move our vision and energy toward creating the future.

Let us not forget that by its very nature, innovation requires us to be open to change. Think of the steady, upward march of our economic prosperity as climbing a ladder, where each rung is a new stage of our economic development. Until we are willing to release our grasp on the rung we're holding and reach for the next one, we cannot hope to reach greater heights.