

Economic Growth Theory: A Brief History

Somewhat surprisingly economists did not pay much attention to economic growth theories till after WWII. At the same time there are almost as many theories of economic growth as there are economists who study the process. But theory has moved through three major periods: (1) stages of economic growth; (2) neoclassical; and (3) endogenous. The progression reflects deeper thinking about economics and what the data are telling economists.

Nobel (1970) winning economist Simon Kuznets and economic historian Walt Rostow independently developed the stages of development theory in the 1950s. While the details differ the overall story told about the economic growth process are remarkably similar. The economy starts off with subsistence farmers with no trade. But because of the economic notion of “comparative advantage”, some farmers will start to specialize in certain types of agricultural products. Some farmers are simply better at say raising certain crops while others are better at raising certain livestock. Because of the movement toward specialization there is a movement away from subsistence farming and the need for trade. Villages to facilitate trade start to develop. This specialization also leads to higher levels of productivity and as a result incomes. The growth process has begun.

Given specialized farming the need or demand for specialized equipment begins to emerge. The market for manufactured goods is growing. Given the forces of economies of scale, manufacturing begins to gain scale and grows. As farms specialize and grow from economies of scale, the surplus labor moves into manufacturing. As manufacturing becomes more established and productive, labor income increases and the growth process moves forward. As income grows demand shifts from agricultural and manufactured goods to services. The stages then are agriculture to manufacturing to services and along the process a dispersed farm labor concentrates into urban areas. This is a natural process the helps describe patterns that are observed in the real world and is built on basic economic concepts.

Many economists were not content with the stages of growth framework. Some regions seemed to “jump” stages and the theory is more inductive than deductive. Inductive theory is data driven; what does the data say and can we form a theory or story to explain the data? Economists prefer deductive theories that are more in line with thought experiments. Suppose people and firms behavior in a certain way, what happens? Is the data consistent with what the theory predicts? The Nobel (1987) winning economist Robert Solow, working with Trevor Swan, appealed to the newly formulated theories of microeconomics (study of individuals and firms) he has been working with Paul Samuelson (Nobel winning economist 1970) with the development of what is now commonly taught in microeconomic classes.

What Solow and other proposed was a perfectly competitive economy, meaning all consumers and firms are price takers or they cannot affect prices through their individual actions, with

firms working to maximize profits and consumers maximizing utility (happiness) in a self-serving manner, full knowledge of all information and perfectly rational behavior. Under these very specific conditions, one can show that natural competitive market forces drive the economy to a natural equilibrium. From a growth perspective, different economies (countries or regions) will grow to a common level of income. In other words, over time incomes would converge with poorer regions catching up to richer regions. At the time of this work (1950s-1960s) most of the data for the developed world indicated incomes were converging, as evidenced by the growing middle class. The “tightness” of the theoretical models, consistency with competitive markets, and supported by the data, many economists thought that the economic growth question was answered: let the markets work.

Three things happened in the 1980s that changed this “happy ending”. First, what drove the “stability” of the neoclassical model was the assumption of constant returns to scale in production technologies. This is a linchpin and without this assumption the theoretical model became very unstable. But we know in the real world, economies of scale exist. Second, economic historians are keen to point out that what drives shifts in the growth path of an economy is innovation. New ideas, new products, new ways of doing things. But in the neoclassical model there is no mechanism to explain why innovation occurs, innovation just happens much like pennies from heaven. This is not satisfactory. Third, beginning in the mid-1970s the historical convergence patterns of incomes moving toward each other was reversed. For the past 30 years, at least for the U.S., incomes have been diverging.

In the mid-1980s Robert Lucas (Nobel 1995) and his student Paul Romer concluded this is not acceptable and economists could do better. They began by lifting the assumption of perfectly competitive markets in one key way: firms and individuals can and do have market powers in that they can earn what economists call monopoly rents on discoveries. In a world with patents firms and individuals who own those patents can exert monopoly powers on those patents and that is done by charging higher prices. But markets are still competitive in the sense that other individuals and firms will adapt to new innovations and try to replace them with their own innovations. The simple beauty of what Lucas and Romer call endogenous growth theory is that individuals and firms have a profit motivation to invest in research and development of new ideas: a profit can be made by innovating which is protected by patent mechanism. The first individual or firm to bring a new product (innovation) to market earns short-term monopoly rents. By pursuing short-term monopoly rents on innovations economic growth is spurred.

The policy implications of endogenous growth theory are profound. Because innovation is derived from people doing things, investment in human capital (i.e., education) is vital. Encouraging individuals and firms to innovate is necessary to growth. Protecting innovations through patent laws becomes an absolute necessity. Early adopters of innovations will experience short-term advantages even in competitive markets. Thus exposing individuals and firms to new ideas and innovations is vital to economic growth. The role of entrepreneurship moves front and center because it is the entrepreneur who brings the innovation to market. Discussions over small versus large firms becomes relevant: it is said small firms are more nimble and flexible and able to adjust to rapidly changing market conditions but large firms have the resources to invest in research and development but lack the flexibility and nimbleness of smaller firms.

Naturally there are numerous other theories of economic growth, the most important of which to community economic development, more formally introduces geography or space into the discussion. For example, Paul Kurgman (Nobel 2008) developed the “New Economic Geography” which shows that in a spatial world where resource (labor and capital) are mobile and free to move around larger cities have strong growth advantages over smaller places. Here the notion of clusters starts to come to the forefront. But in the end, while competitive markets in a capitalist world are very important, there is a role for policy.