

Chapter 9 The Future of economic growth

9.1 Introduction

- Over the past 200 years, per capital real output in the world has increased by a factor of eight, according to Angus Maddison's estimates.
- Solow writers contend that the growth of output has been greater because the gains from better quality, great variety, and increased choices tended to be underestimated.
- Life expectancy in the world has tripled since 1800. Infant mortality is a rare occurrence in the most developed economies, and even in the least developed economies infant mortality rates are a small fraction before 1800.
- Education levels, access to safe water, availability of health care, and nutritious food, also show how well off people are today compared to everyone who lived before 1800.
- Nevertheless, several problems exist such as pollution, AIDS, "unfair" foreign competition, cigarette smoke, illegal drugs, and corruption.
- Economic growth has been humanity's greatest achievement, and it is our greatest hope for reducing the poverty, the deprivation, and the injustices that still maintain.

9.2 Explaining economic growth

- Traditional growth models such as the Harrod-Domar model viewed saving and investment as the driving forces behind improvements in people's standards of living.
- The neoclassical Solow model shows that only increasing capital and even human capital will eventually run into diminishing returns.
- In general, growth models point out that economic growth was driven not just by investment in physical and human capital, but by an ever-faster rate of technological progress.
- Our models of technological progress and the empirical evidence suggest that the rate at which new ideas are developed depends in part on the total stock of ideas already

Economic Growth

in existence.

- But the mere accumulation of knowledge is not sufficient for continued technological progress. The rate of technological progress also depends on the number of people who are motivated to think of nonrival ideas that can be applied and expanded upon by others.
- Fundamentally, there are no limits to the creation of new ideas. Because the number of human minds is growing and the potential combinations of existing ideas are growing more rapidly, technological progress could accelerate further in the future.
- One set of the models of technological progress maintains the neoclassical assumption of perfect competition and specifies technological progress as an “externality” to investment or production.
- This type of externality models imply that technological progress is a by-product of economic activity motivated by incentives completely unrelated to the creation of ideas. This is not the fact.
- Inventions and discoveries are almost always the result of preparation, intentional efforts, and the application of costly resources.
- Another set of the models of technological progress specifies technological progress as the direct result of intentional and costly research and development activity.
- Innovation, research, and effort devoted to finding better production processes, products, and distribution methods are undertaken because some individuals or organizations believe these endeavors will make them better off.
- Specifically, the R&D model showed that innovation depends on four factors:
 - a. the expected gains from the innovation.
 - b. the availability and cost of resources used in the creation of ideas.
 - c. the efficiency with which resources applied to the R&D process generate new ideas.
 - d. the rate of interest with which we value the future relative to the present.
- Both the rapid accumulation of capital and the acceleration of technological progress were the result of improved institutions that provided incentives for investment and

Economic Growth

innovation.

- For innovators to profit from their efforts, there must be rule of law, protected property rights and well-enforced contracts. Institutions such as patents and copyrights, impartial judicial systems, universities, freedom from censorship, free international trade, equal treatment of foreign and domestic investors, efficient banking regulations, predictable fiscal policy, and noninflationary monetary policy also help to foster innovation and entrepreneurship.
- Institutions that affect people's creative behavior and their willingness to give up present consumption for future gains, to assume risk and so on are things that determine the rate of technological progress and the standard of living that a society achieves in the long run.

9.3 Explaining the sudden surge in growth after 1800

- The unprecedented economic growth over the past two centuries suggests that the incentives for innovation have become much stronger. Only after 1800 was technological progress able to overcome diminishing returns.
- Growth surged after 1800 also requires an examination of institutions and the determinants of institutional change.
- Open economies grow faster than closed economies.
- The growth of international trade in the Netherlands and Britain may have helped them achieve rapid growth because trade speeds the accumulation of knowledge and the expansion of markets and investment.
- Economic growth is most likely within an environment that supports the market system of exchange, which provides people with the economic freedom to make their own choices and lets people enjoy the rewards and suffer the results of their creative or destructive behavior.
- The rule of law that provide equal economic opportunity and individual rights to make welfare-maximizing choice, and the protection of property rights (including intellectual property rights) seem to promote expanded production and technological progress.

Economic Growth

- The Netherlands and England were process in establishing the rule of law and protection of property rights.
- The establishment of property rights in Western Europe and North America was the decisive institutional change that caused the surge in economic growth after 1800.
- The economies that grew the fastest over the past 200 years are those whose institutions most provided incentives for people to be productive and for people to create and apply new ideas.

9.4 The decisive factor of future growth is economic freedom

- For economic growth to continue into the distant future, there must be technological progress.
- Economic growth also requires that government institutions, traditions religious, and social pressures not suppress individual freedom, not discourage new ideas, and not deny people the rewards of their efforts and creativity. This is so-called economic freedom.
- Economic freedom is related to political freedom. Many writers have taken the spread of democracy as suggesting that future economic growth is likely. But democracy is not a guarantee of economic freedom. Government still has coercive powers under democracy, and unless there are strict limits on how the coercive power of government can be used.
- Consider the contrast between the democratic government of India since 1950 and the undemocratic colonial government of Hong Kong over the same period.
- The British institutions that were imposed on the colony of Hong Kong, without a vote or even any consultation, proved to be much more conducive to economic growth than the divisive and corrupt politics that arose under democracy in India.
- In colonial Hong Kong: economic activity was mostly unregulated, taxed very little, and supported by British business law and protection of property rights. Democratic India voted to impose a vast array of controls and regulations on economic activity. Moreover, intellectual property rights were not protected in India and markets were not free to let all suppliers and consumers reach mutually beneficial exchanges.

Economic Growth

Consumers were not allowed to buy foreign products. Foreign firms were not allowed to establish factories in India and employ Indian workers.

- Hong Kong's per capita income is today equal to that of the most developed economies, and India is still struggling to provide the majority of its people with the most meager standard of living.
- To conclude, a necessary condition for rapid technological progress is economic freedom.
- To create and maintain the economic freedom necessary for long-run economic growth, society must find a way to (1) use the coercive powers of a third-party government to support institutions that stimulate creativity, effort, and innovation and (2) prevent that third party from using the same coercive powers to support institutions and policies that discourage creativity, effort and innovation.
- The rest of society's institutions also are limited in their ability to suppress creativity and confiscate the rewards of creativity. Societies should give their citizens a high degree of personal and economic freedom such that does not discriminate on the basis of any personal characteristics.
- Not only is economic freedom a necessary condition for sustained economic growth, but economic growth also increases freedom.
- Freedom stimulates the human creativity and effort necessary economic growth, and the economic growth brings greater freedom.
- If the institutions that protect freedom are undermined, growth will suffer and the freedom to choose and innovate will be reduced. The cycle of freedom and growth can collapse into a cycle of hopelessness and stagnation. Without long-run economic growth, there will also be no increase in the wealth and choices that increase human freedom.