

**The Impacts of Plateauing  
Educational Attainment on the Economy**

Linh Tang

Economics of Innovation

Grinnell College

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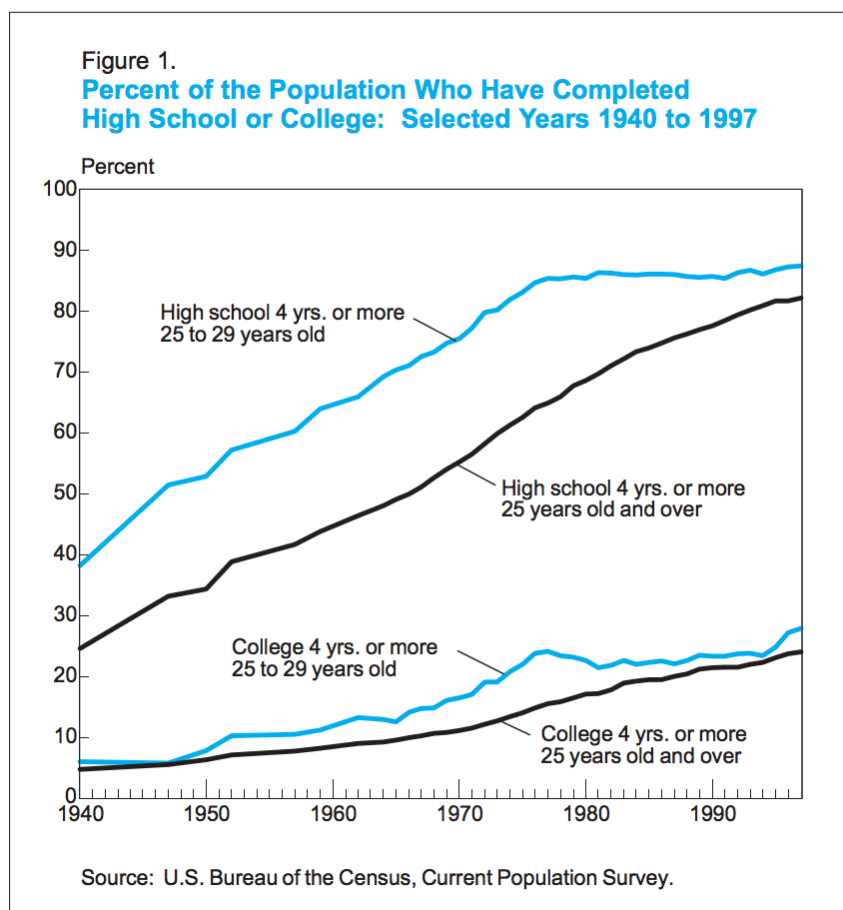
## **How Does This Headwind Limit Economic Growth And Impact Innovations?**

According to Robert Gordon, there are six headwinds that are likely to drag long-term U.S. economic growth regardless of the future constant rate of innovation. He claimed that these headwinds will hold of growth below the possible pace that can be reached by innovation. One of the headwinds is the plateau in educational attainment, which involves the cost of inflation in higher education and poor secondary student performance.

First and foremost, although many campaigns have been run by the U.S governments in an attempt to bring adequate education at the elementary and secondary level, such as “No Child Left Behind” and “Race to the Top,”, no convincing outcomes nor considerable improvements have been recorded so far, especially for low-income children. Several solutions have been tried by successive authorities in recent decades, the declining education productivity, which is mainly from the below-standard public education systems, disproportionately harms the poor. The rising costs of education cannot be fully offset by redistributive mechanisms. And unlike their affluent peers, low-income parents lack the resources to overcome weak quality by home-schooling their children or hiring private tutors.

In addition, the price of college tuition and fees rapidly increases in recent years. Compared to the price of other goods, the cost disease in higher education leads to a non-stop rising student debt. This inflation, in turn, becomes a hindrance for low-income people from getting a college education and even if they are willing to take loans, their career choices are strongly distorted and limited. However, inadequate attention has been paid to this ridiculous inflation, which greatly contributed to the race in the league table ranking between colleges and universities all over the countries by explosively spending money on more lavish laboratory and athletic facilities, which eventually put the financial burden on those who enroll for this higher education. Scholarships are not enough for everybody and even those need-based and/or need-blind aids are often offered for

those exceptionally excellent students admitted to top college and universities, which on the other hand, come from a decent education background and middle to upper-class families.

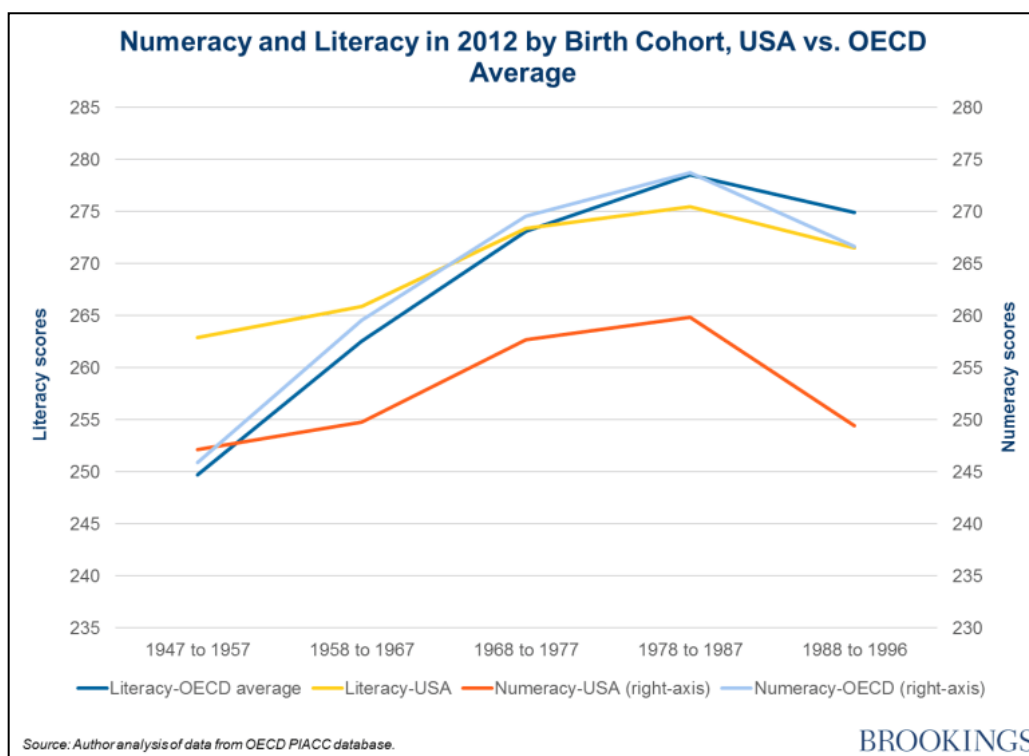


Many researchers claim that fundamental inventions during 3 industrials have proved the importance of innovations in improving the economy in such a short period. However, with the plateau in educational attainment, the increases in human capital failed to keep pace with tech change, hence leads to increasing income inequality. Innovation has outpaced education and increased the demand for high-skilled labor at a faster rate than supply has increased. The wage for high-skilled workers will rise in this environment, but it's not likely the same for low-skilled workers. If they do not experience the same increase in demand from technological change, then their wages will not grow as quickly as the high-skilled wage rate. This operations of the labor market, together with the fact of non-stop rising education costs, is locking low-skilled workers of

low-income people in an infinite helix that they couldn't find a way out. These problems with current and future educational attainment will create more social inequality, slow down the growth rate of innovations, and thus, limit the economic growth of the country.

### Why Suddenly The Growth Rate Slows Down?

According to the statistics from Organization for Economic Co-operation and Development (OECD) assessment, the U.S. gains from educational investment in recent years are especially weak. Despite of its superior spending on education, The United States ranks dead last among 26 countries tested on math gains, and second to last on literacy gains compared to average OECD's countries. Something must be wrong here.



According to Rothwell (2016), one major factor accounts for the ever-increasing cost of education is the growing number of high-paid non-teaching professionals. In 2012, for every 100 full-time students, there were on average 31 employees, and only a third of them are faculty. Managers and non-teaching professionals are outnumbering faculty, who actually should have

been the major rather than minority in higher education workforce. In most public universities where education is cheaper and much more accessible for lower to middle-income family, the student to faculty ratio is surprisingly big, and the size of introductory classes are inefficiently large. These factors lead to a higher percentage of first and second-year college students dropping out as their returns from "investing into college education" is unexpectedly "not worth it". This aligns with the fact that rocketing increases in education cost are mainly absorbed by the corresponding increases in forced student loans, even though federal government subsidies and supplementary grant aid did play a small role.

On the other hand, in term of secondary education, there has been a decline in bureaucratic efficiency the slower increases in price. According to Brookings' research, the number of students for every district-level administrator fell from 519 in 1980 to 365 in 2012. Principals and assistant principals managed 382 students in 1980 but only 294 in 2012. What is more, the money that has been required of school districts to respond to testing, though, has often not been money well spent. Students' performance has always been evaluated based on end-of-the-year test results, which leads to schools focusing on improving those number rather than what their students learn. This leads to fewer students from public institutions getting prepared for college and scholarship application.

In addition, a more "macro" problem perhaps is from the fact that teaching job itself has become more and more unattractive. The starting salaries for teachers are surprisingly low compared to other jobs that require the same level of education background, not to mention those jobs that involve human-human interactions. On top of that, the systems also stress teachers with daily frustrating constraints, such as compulsory administrative examinations which results are evaluated by the whole panels of school districts, states, and federal bureaucracies. These burdens, so far, have driven out many current workers out of this career path, but also prevented many

excellent students from entering teaching professionals, which followed by a noticeable decrease in educational attainment lately.

### **How Is It Overcoming Negative Impacts And What Are Future Solutions?**

Currently, there are 2 coping mechanisms that innovation used to deal with this headwind: digitization and the race between technology and education. First of all, the technological advance of digitization reduces barrier entrances for high-quality education. With the rise of many online learning templates, nowadays students can have access to lectures, quizzes, and exams from top universities and virtual interactions with professors for a very small amount of money. In economic terms, this kind of good becomes non-excludable. For example, some very famous online classes can be found throughout LinkedIn learning, Coursera, EdX,... Recently, some university started to run their own online school program, from simple degree-seeking institute like University of the People, to prestigious MBA preparation pathway like Harvard Business School Online. These platforms allow students to sign up for credits with online courses with a reasonable price and might get a degree and certificate if they can satisfy the “graduation” – or passing requirements, such as having weekly quizzes, attending virtual office hours, or actively involving in online discussions like an actual classroom environment. In this way, innovation itself helps boost individuals’ educational attainment regardless of their financial status.

Moreover, according to Goldin & Katz, the race between technology and education has made major impacts on improving the average educational attainment. Advance technological changes are skill-biased. They tend to complement the skills of high-skilled workers, raising their productivity. This, in turn, increases demand for high-skilled workers in the labor market and thus increases the returns of education and training. Since an increase in educational attainment will increase supply, it creates a race between the supply and demand curve – or in other words, between technology and human capital.

One future straightforward strategy is to increase educational attainment by increasing the endowment for public education. This can be done by amending the policy for education funding and making better use of the current budget. Another way of better spending the funding is to make the funding less dependent on outside sources but rather make profits to “nurture” itself. One example can be high-conviction investing, the hands-on approach that focuses on a handful of investments, by finding experienced trader or financier to be the managers of the funding. Stocks, hedge funds and private equity and other long-term returns investment are some options that can “breed” money so that the endowment can live by itself.

In addition, immigration increases educational attainment. According to Gordon, a better policy of high-skilled immigrants would solve the problem. Standing from the perspective of an international student in a renowned U.S. institute, I would say that immigration is actually boosting the economy and leading technology with its impacts on the labor market and education, as well as its agglomeration effects on innovations. High-skilled immigration is often linked to clusters of technology and knowledge production that are certainly important for local economies and are plausibly important at the national level. This also leads to agglomeration effects: an individual worker’s productivity is enhanced by being near to or working with many other skilled workers in similar sectors or occupations. A surge of high-skilled migration increases the incentive for other high-skilled workers to migrate to the same location. With clusters of talents forming in these areas, more and more innovations are created as a consequence of positivity spillover. As more and more high-skilled workers migrate to the United States, it creates greater competition for certain jobs, which increases the returns of tertiary and graduate education. Therefore, US citizens have higher incentives to invest in their education and skills development, as they can see the possibilities of falling behind and being unemployed if they are not qualified enough and being outsourced.

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