Paying for the future: the cost of science

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In 2020, the International Energy Agency stated that the best solar power schemes can provide the cheapest electricity – cheaper than coal and gas in most major countries (Evans, 2020).

ENIAC – the first programmable general-purpose electronic digital computer – had cost about 500,000 USD (approximately 6 billion USD nowadays) upon completion in 1945. Now, a decent smartphone with much more utilities and processing power can cost less than 300 USD.

Today, spacecraft launching is 10 times cheaper than a decade ago; and SpaceX rocket launching now is about 33 times cheaper than a Russian Soyuz ride cost in the 1960s (Venditti, 2022). The spending of NASA for Project Apollo was more than 25 billion USD (approximately 250 billion USD nowadays). Recently, the development cost of the Falcon 9 was about 400 million USD.

How could technologies become better but much cheaper over time? The answer is intuitive and simple: scientific research.

Science may seem costly at a glance, but it is the rightful costs of scientific products which contribute to the advancement of human society (Vuong, 2018). Without the huge cost in the beginning and along the way, technologies will not be improved. Thus, the cheap services we benefit from today are the results of years and decades, if not centuries of scientific endeavors.

It can be said that funding science is paying for a better future.

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