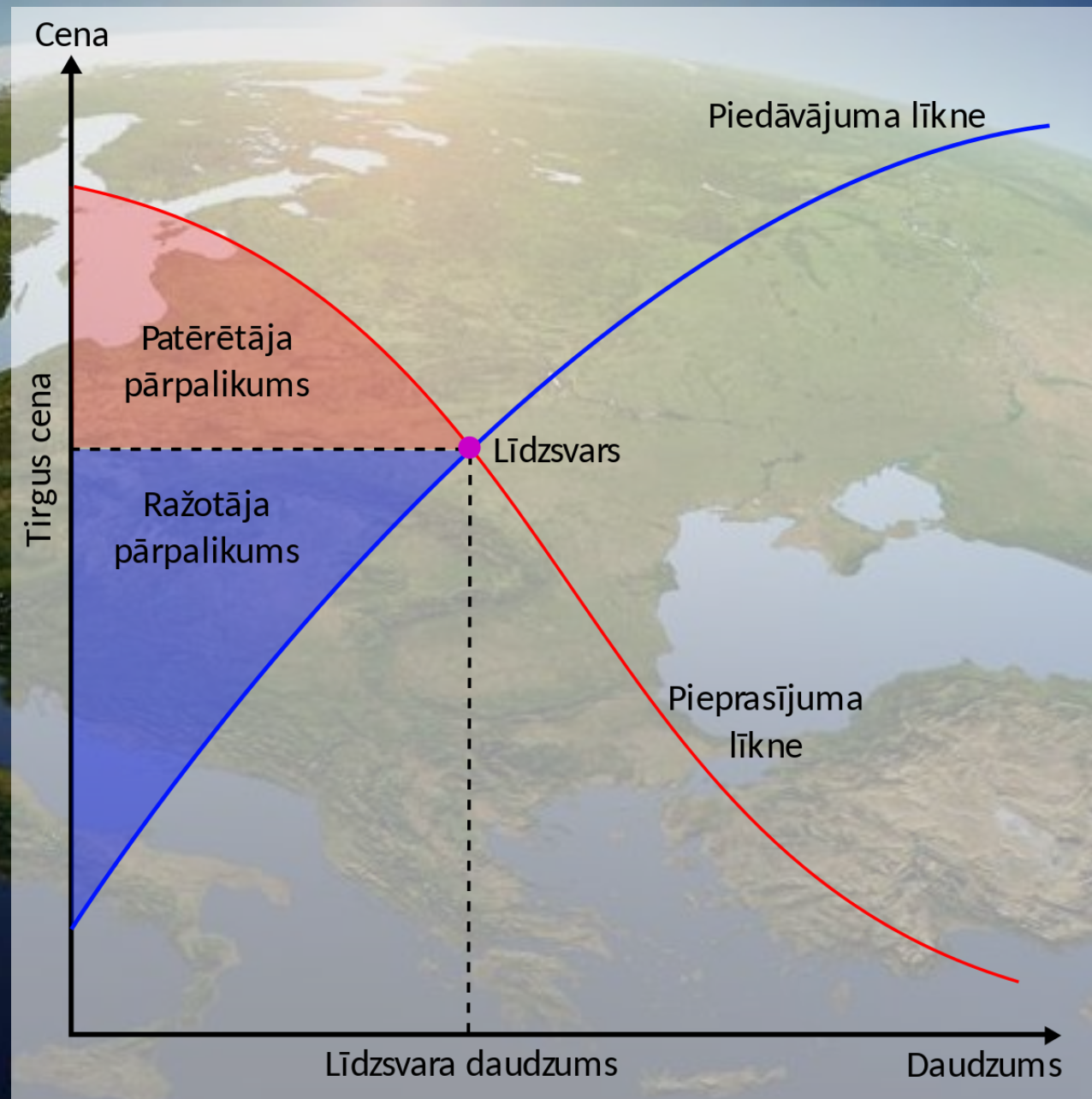


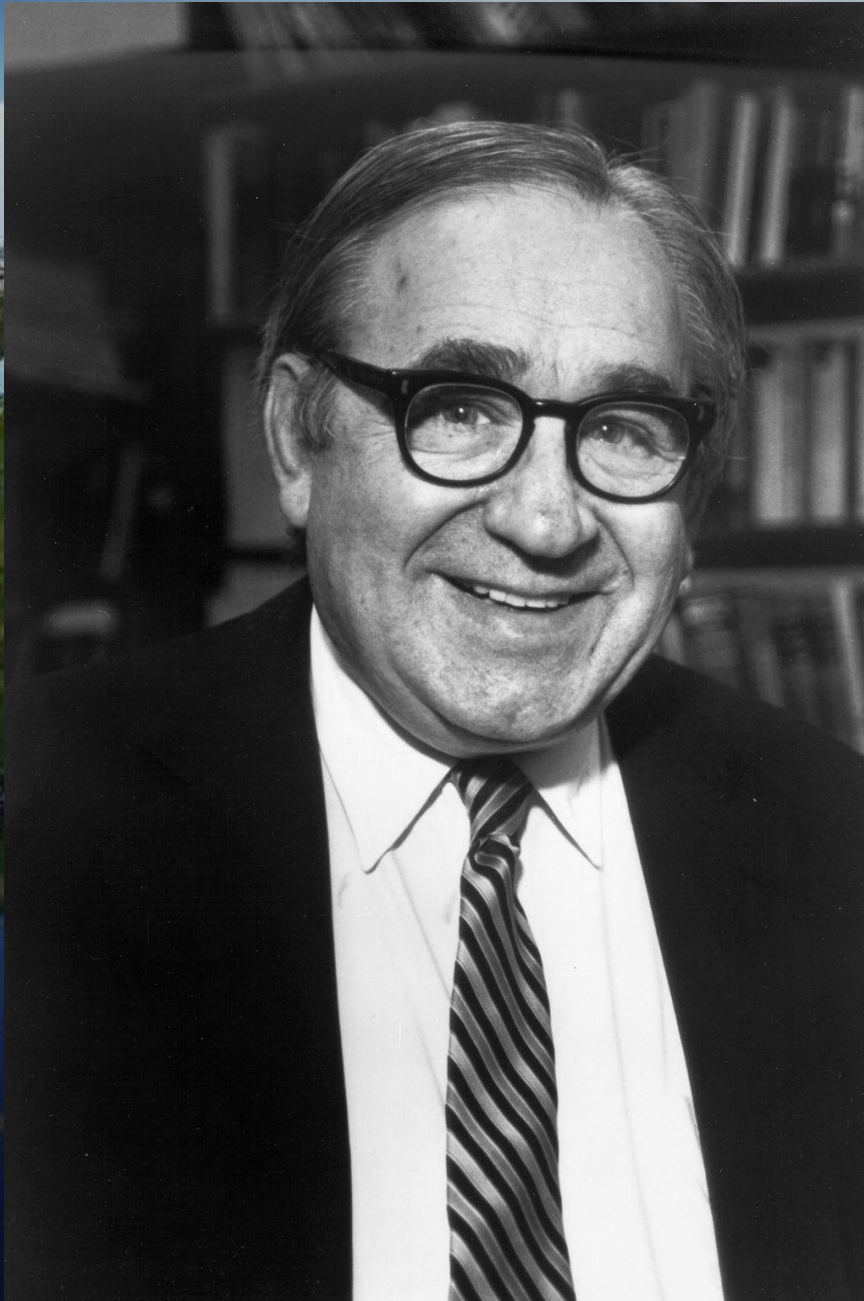
“Tas jaunais laiks, kas šalkās trīs..”

Ģirts Bērziņš
2021. gada 25. novembrī





Ceteris paribus



Catching Up with the Economy[†]

By ROBERT W. FOGEL*

In his Presidential Address five years ago, Zvi Griliches (1994) called attention to the severe difficulties that beset current attempts to measure the growth of labor productivity in the American economy. Because of these difficulties, it is likely that the true rate of economic growth is substantially underestimated. The root of the problem is the difficulty in measuring output in the service sector which now represents two-thirds of the economy. In such sectors as health care and information services, the contribution to gross domestic product (GDP) is measured by inputs rather than outputs, a procedure that makes it impossible to gauge accurately improvements in the quality of output. Thus, in the case of computers, which are transforming American society, economists have been unable, so far, to find a measurable contribution of computers to the rise in labor productivity — an astonishing paradox.

I want to follow up on this problem of mis-measurements. My thesis is that the profession

is lagging behind the economy more than it has to. We are, to some extent, entangled in concepts of the economy and in analytical techniques that were developed during the first third or so of the century, when economics emerged as a modern discipline. The range of the discipline did not expand greatly during the middle decades of the century, due partly to a concentration on the reformulation of the previous analytical concepts and techniques in more sophisticated and more general mathematical models. Although the dividends from these efforts were high and have contributed to the flexibility and capacity of economics, they did not encourage a reconsideration of some of the received assumptions about the scope and focus of economic analysis. There has been a significant broadening of the scope of economics during recent decades, with the emergence of such fields as the new household economics, the new institutional economics, the economics of aging, and medical economics, but much remains to be done.

The balance of this address is divided into four sections. I begin with the inadequate attention to the *accelerating* rate of technological change, the implications of this acceleration for the restructuring of the economy, and its transforming effect on human beings. I then consider the neglect of the nonmarket sector of the economy, the implication of that neglect for the measurement of consumption, and for the analysis of economic growth. The third section deals with the need to shift the focus of economic analysis from cross-sectional to life-cycle and intergenerational data sets, especially in connection with forecasting. The final section points to the impact of cultural lag in the treatment of material inequality, and the neglect of the more severe problem of spiritual inequality. I use the word spiritual not in its religious sense but as a reference to commodities that lack material form. Spiritual or immaterial commodities make up most of consumption in the United States and other rich countries today.

[†] Presidential Address delivered at the one-hundred eleventh meeting of the American Economic Association, January 4, 1999, New York, NY.

* Center for Population Economics, Graduate School of Business, and Department of Economics, University of Chicago, 1101 East 58th Street, Chicago, IL 60637, and National Bureau of Economic Research. This address is based on research made possible by grants from the National Institutes of Health (AG10120), the National Science Foundation (SES-9114981), the Walgreen Foundation, and the University of Chicago. I am grateful to the University of Chicago Press for permission to make use of material contained in my forthcoming book, *The Fourth Great Awakening and the Future of Egalitarianism*, which will be published in January 2000. I have also drawn on a forthcoming paper by Chulhee Lee (2000) and on concepts developed jointly with Dora L. Costa, Irwin H. Rosenberg, Nevin Scrimshaw, and James M. Tanner. I have benefited from comments and criticisms by Karen L. Brobst, Katherine A. Chavigny, Dora L. Costa, Roderick Floud, Daniel M. Fogel, Enid M. Fogel, Allison M. Garrett, Mark Guglielmo, James A. Heckman, Max Henderson, D. Gale Johnson, Susan E. Jones, Chulhee Lee, Brigitte Madrian, Robert Mitterdorf, Douglass C. North, Nevin Scrimshaw, and Richard Suzman.

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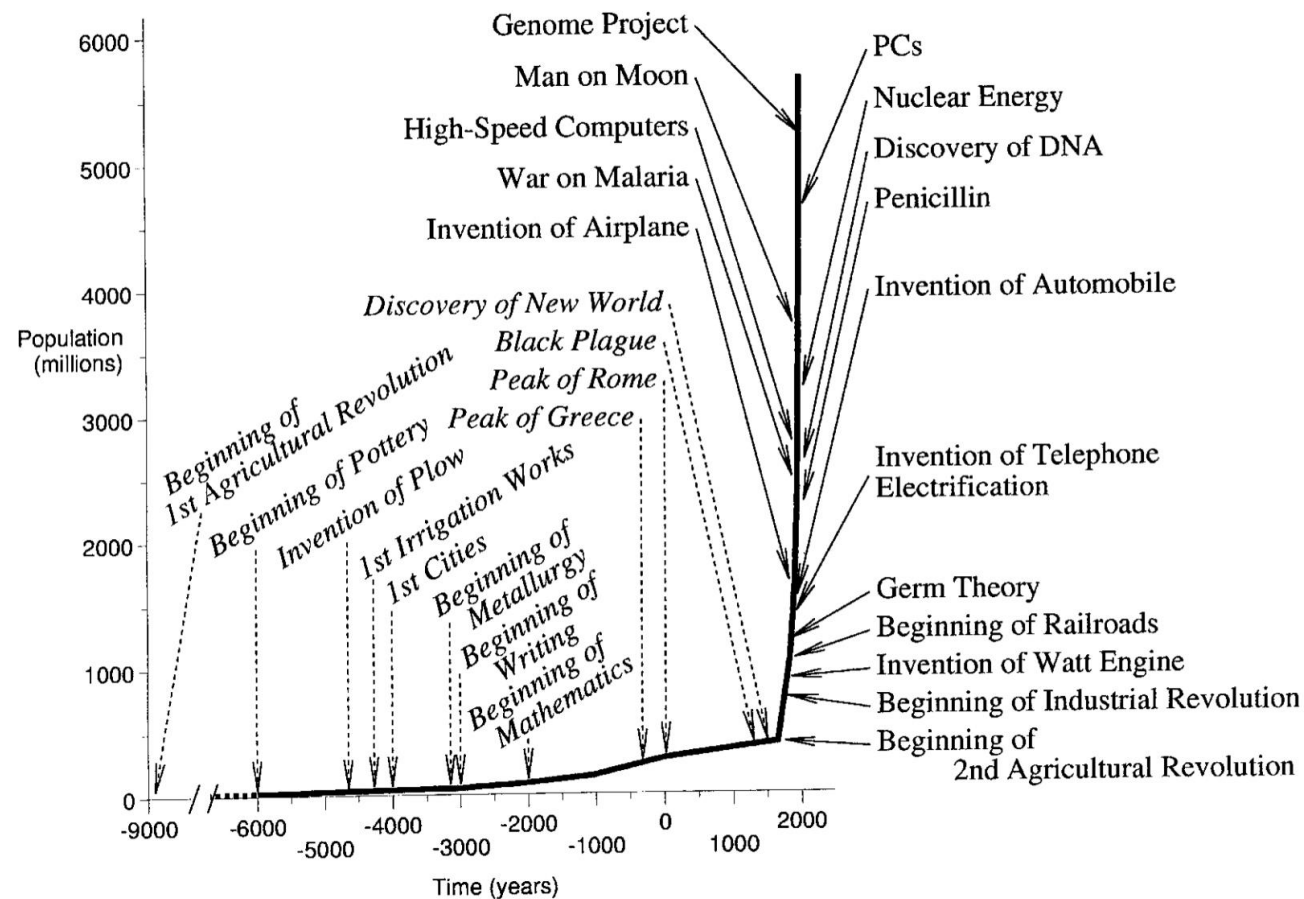


FIGURE 1. THE GROWTH OF THE WORLD POPULATION AND SOME MAJOR EVENTS IN THE HISTORY OF TECHNOLOGY

Notes: There is usually a lag between the invention of a process or a machine and its general application to production. "Beginning" means the earliest stage of this diffusion process.

Sources: Carl W. Bishop, 1936; T. K. Derry and T. I. William, 1960; Graham Clark, 1961; B. H. Slicher von Bath, 1963; Stuart Piggott, 1965; Glenn T. Trewartha, 1969; William McNeill, 1971; Jacob Bronowski, 1973; Carlo M. Cipolla, 1974; B. M. Fagan, 1977. See also E. A. Wrigley, 1987; Robert C. Allen, 1992, 1994.

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Cilvēks pirmais

Mašīna pirmā

Cilvēks pirmais

Mašīna pirmā

1.0
1784

2.0
1870

3.0
1969

4.0
tagad

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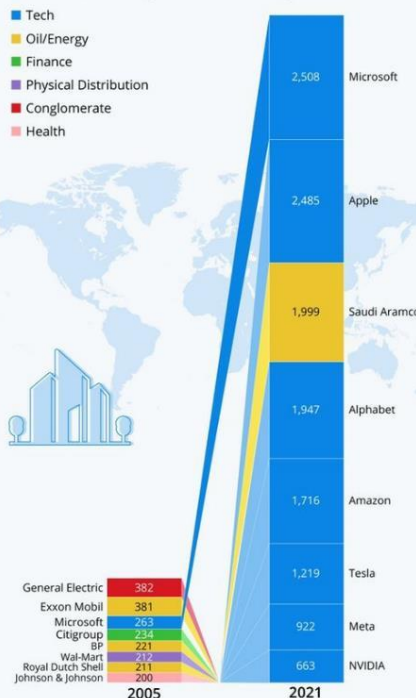
2.0
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1969

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The Age of the Tech Giants

Companies with the world's largest market capitalizations in 2005 and 2021 (in billion U.S. dollars)



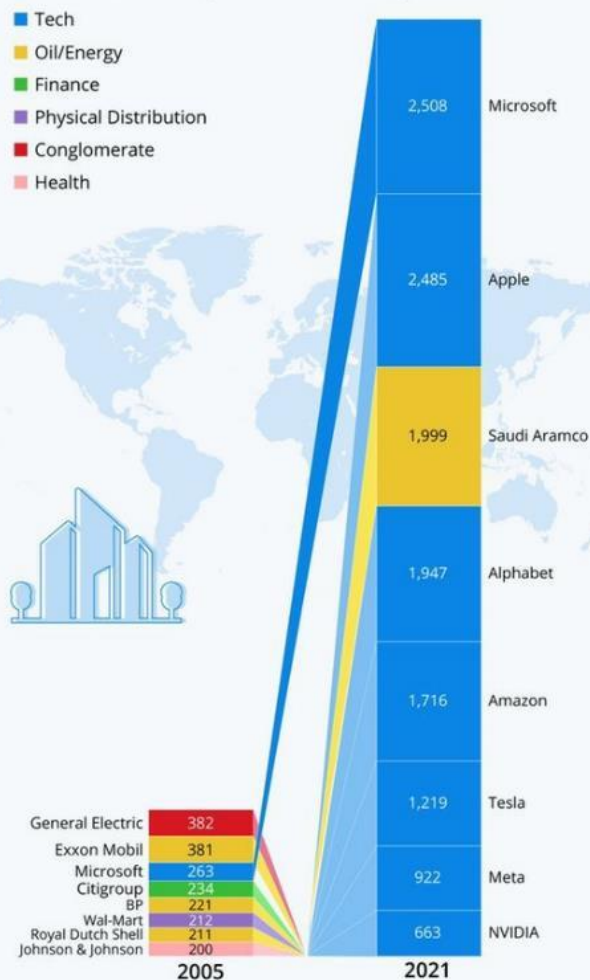
* As of March 31, 2005 and November 4, 2021.
Sources: Financial Times, Yahoo! Finance



statista

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statista

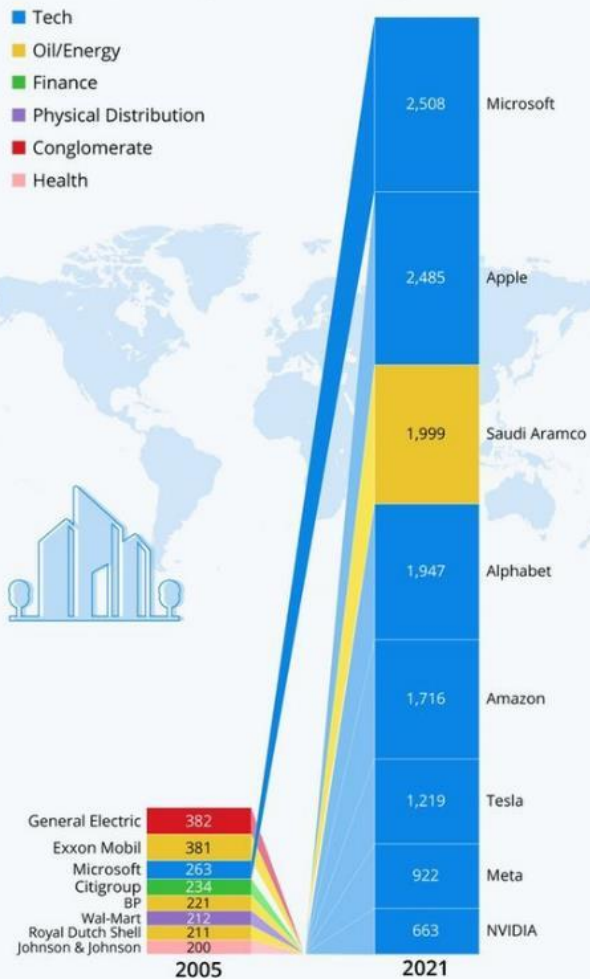
Vērtība vai novērtējums?

Novērtējums šodien par vērtību ... kad?

Kas ir novērtētā vērtība?

The Age of the Tech Giants

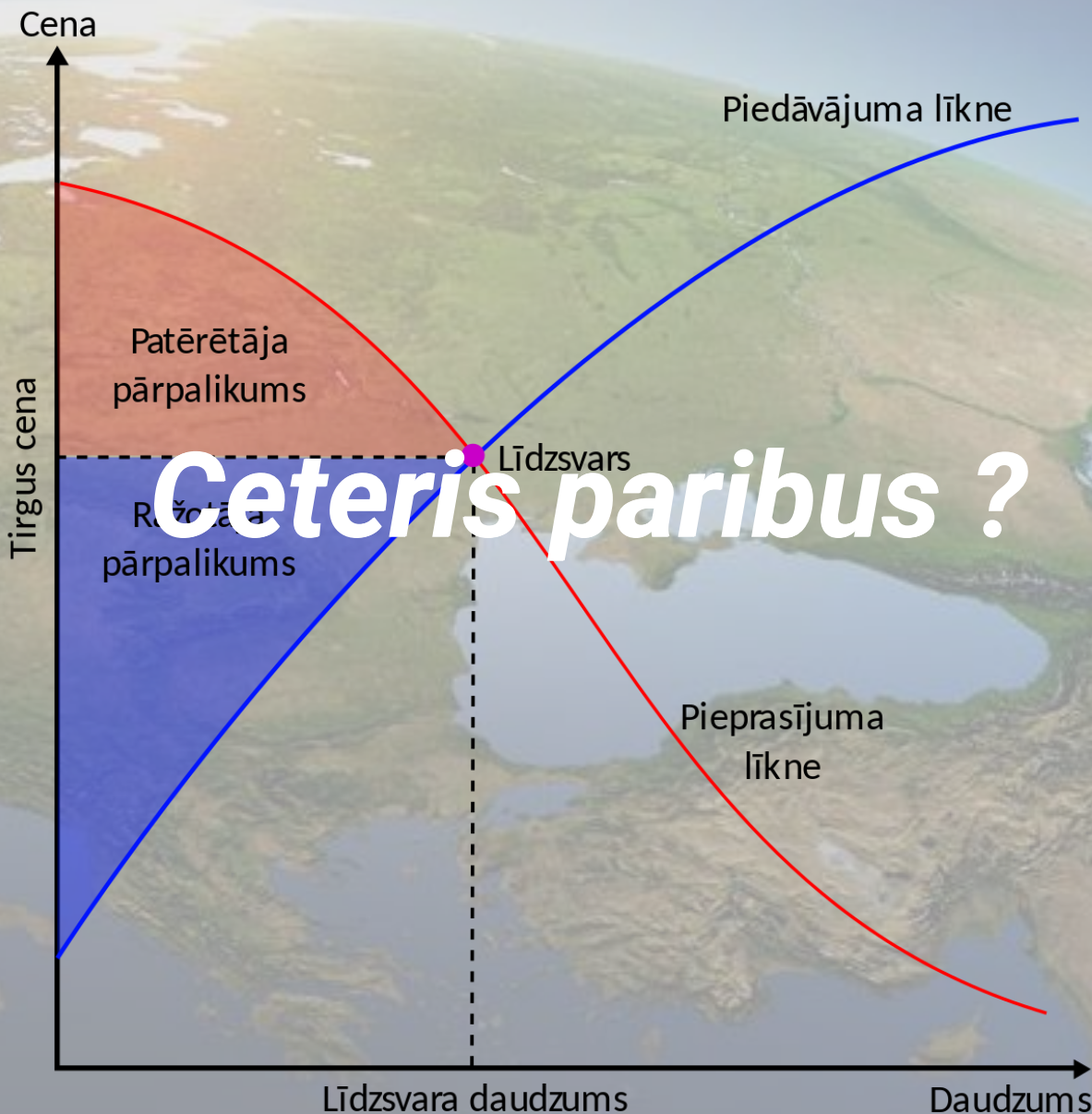
Companies with the world's largest market capitalizations in 2005 and 2021 (in billion U.S. dollars)*



* As of March 31, 2005 and November 4, 2021.
Sources: Financial Times, Yahoo! Finance



statista





Ceteris paribus ?



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Mašīna pirmā

Virtuālā un reālā
simbioze

1.0
1784

2.0
1870

3.0
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4.0
Pirmspandēmija

5.0?
Pēcspandēmija

Cilvēku dižrevolūcija

Ilgspēja



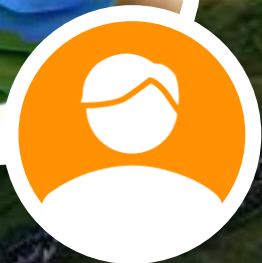
Virtuālā un reālā
simbioze

1.0

Pēcpandēmija

Cilvēku dižrevolūcija

Ilgspēja



Plašā simbioze

Cilvēks pirmais

?

Cilvēks otrs

1.0

Pēcpandēmija

2.0

?



Homo Dolor

Homo Sustineri

STATEMENT ON THE PURPOSE OF A CORPORATION

Americans deserve an economy that allows each person to succeed through hard work and creativity and to lead a life of meaning and dignity. We believe the free market system is the best means of generating good jobs, a strong and sustainable economy, innovation, a healthy environment and economic opportunity for all.

Businesses play a vital role in the economy by creating jobs, fostering innovation and providing essential goods and services. Businesses make and sell consumer products; manufacture equipment and vehicles; support the national defense; grow and produce food; provide healthcare; generate and deliver energy; and offer financial, communications and other services that underpin economic growth.

WHILE EACH OF OUR INDIVIDUAL COMPANIES SERVES ITS OWN CORPORATE PURPOSE, WE SHARE A FUNDAMENTAL COMMITMENT TO ALL OF OUR STAKEHOLDERS. WE COMMIT TO:

DELIVERING VALUE TO OUR CUSTOMERS. We will further the tradition of American companies leading the way in meeting or exceeding customer expectations.

INVESTING IN OUR EMPLOYEES. This starts with compensating them fairly and providing important benefits. It also includes supporting them through training and education that help develop new skills for a rapidly changing world. We foster diversity and inclusion, dignity and respect.

DEALING FAIRLY AND ETHICALLY WITH OUR SUPPLIERS. We are dedicated to serving as good partners to the other companies, large and small, that help us meet our missions.

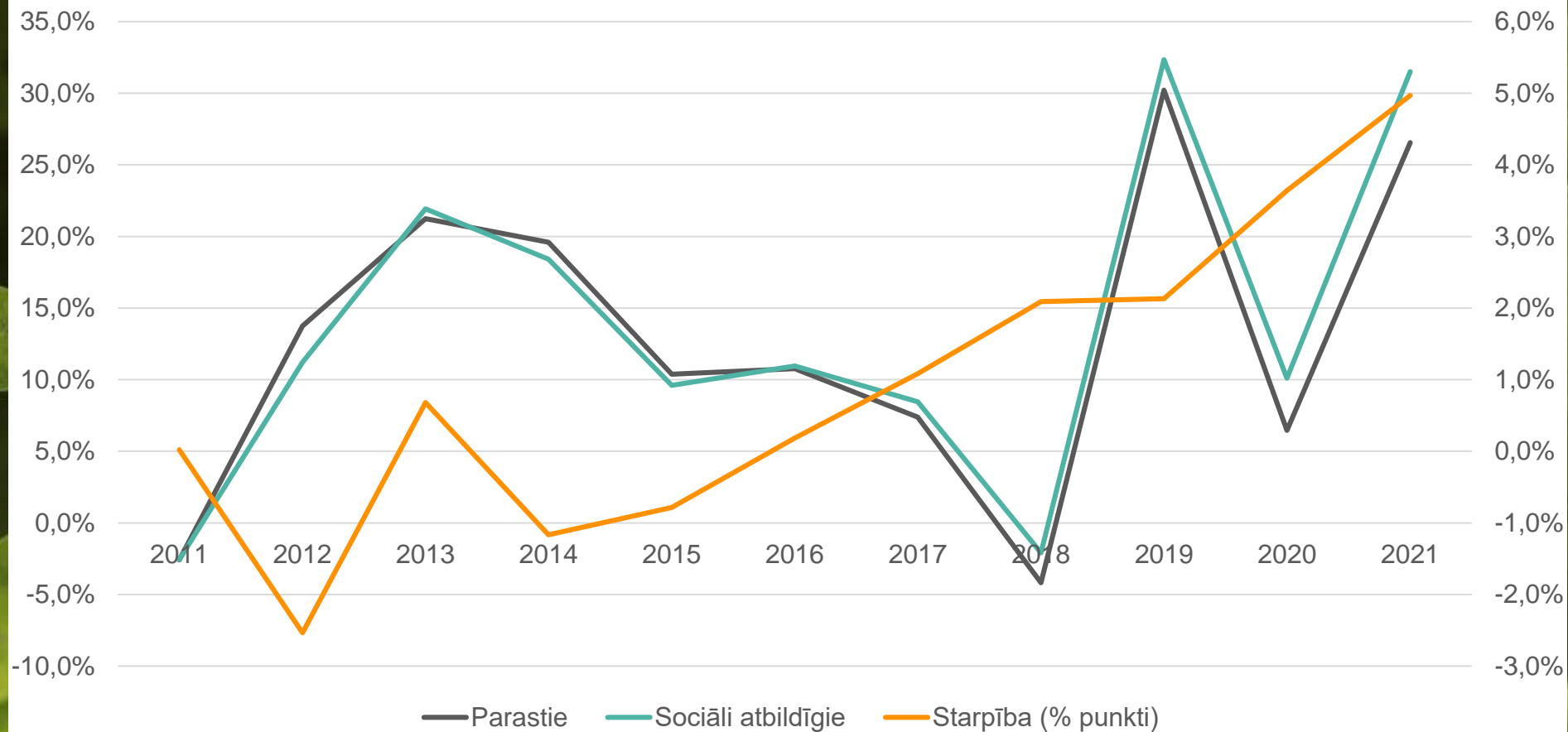
SUPPORTING THE COMMUNITIES IN WHICH WE WORK. We respect the people in our communities and protect the environment by embracing sustainable practices across our businesses.

GENERATING LONG-TERM VALUE FOR SHAREHOLDERS, WHO PROVIDE THE CAPITAL THAT ALLOWS COMPANIES TO INVEST, GROW AND INNOVATE. We are committed to transparency and effective engagement with shareholders.

EACH OF OUR STAKEHOLDERS IS ESSENTIAL. WE COMMIT TO DELIVER VALUE TO ALL OF THEM, FOR THE FUTURE SUCCESS OF OUR COMPANIES, OUR COMMUNITIES AND OUR COUNTRY.

BRT.org/OurCommitment  Business Roundtable

Attīstīto valstu uzņēmumu akciju indekss



What if we get things right? Visions for 2030



The UN says we could **stop women dying in childbirth** by 2030...

WORLD ECONOMIC FORUM



New Zealand wants to transform its politics to focus on **kindness, empathy and well-being**

WORLD ECONOMIC FORUM



India is building one of the **most sustainable cities** in the world

WORLD ECONOMIC FORUM



This company is turning desert into fertile soil

WORLD ECONOMIC FORUM



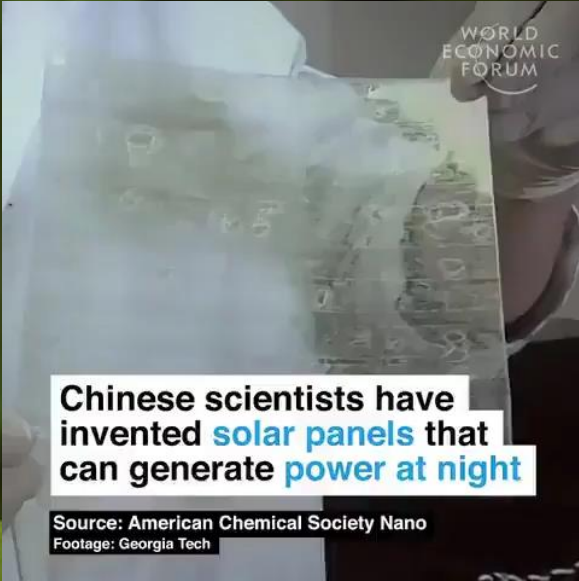
Norway is paying Gabon to protect its **rainforest** as a **weapon** against climate change

WORLD ECONOMIC FORUM



In France, **postal workers** check on **elderly people** to **fight loneliness**

WORLD ECONOMIC FORUM



WORLD ECONOMIC FORUM

Chinese scientists have invented solar panels that can generate power at night

Source: American Chemical Society Nano
Footage: Georgia Tech



WORLD ECONOMIC FORUM

5 ways you can help stop the insect apocalypse



WORLD ECONOMIC FORUM

This UK student has created a bioplastic that breaks down in just 6 weeks

Footage: JS Productions



WORLD ECONOMIC FORUM



WORLD ECONOMIC FORUM

These plastic bags made from vegetables could help end plastic pollution

ecoplas
100% Biodegradable
100% Compostable
100% Recycled
100% Sustainable
100% Eco-friendly
100% Green



WORLD ECONOMIC FORUM

This innovative Dutch farm grows food with minimal water, no soil and zero pesticides

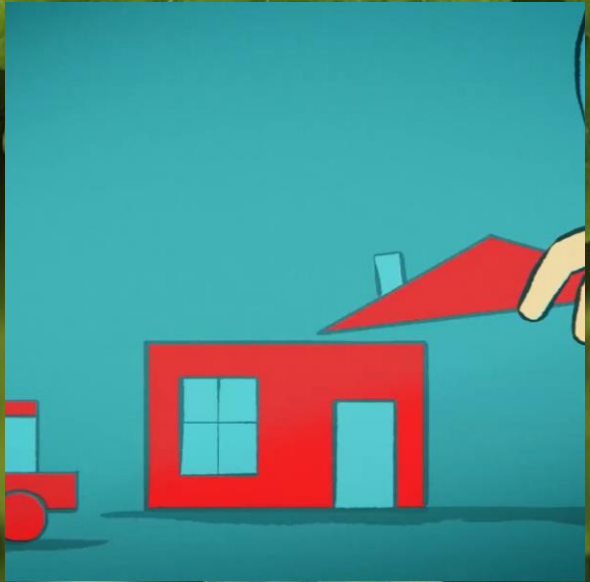
Images: Our Planet, Netflix



WORLD ECONOMIC FORUM

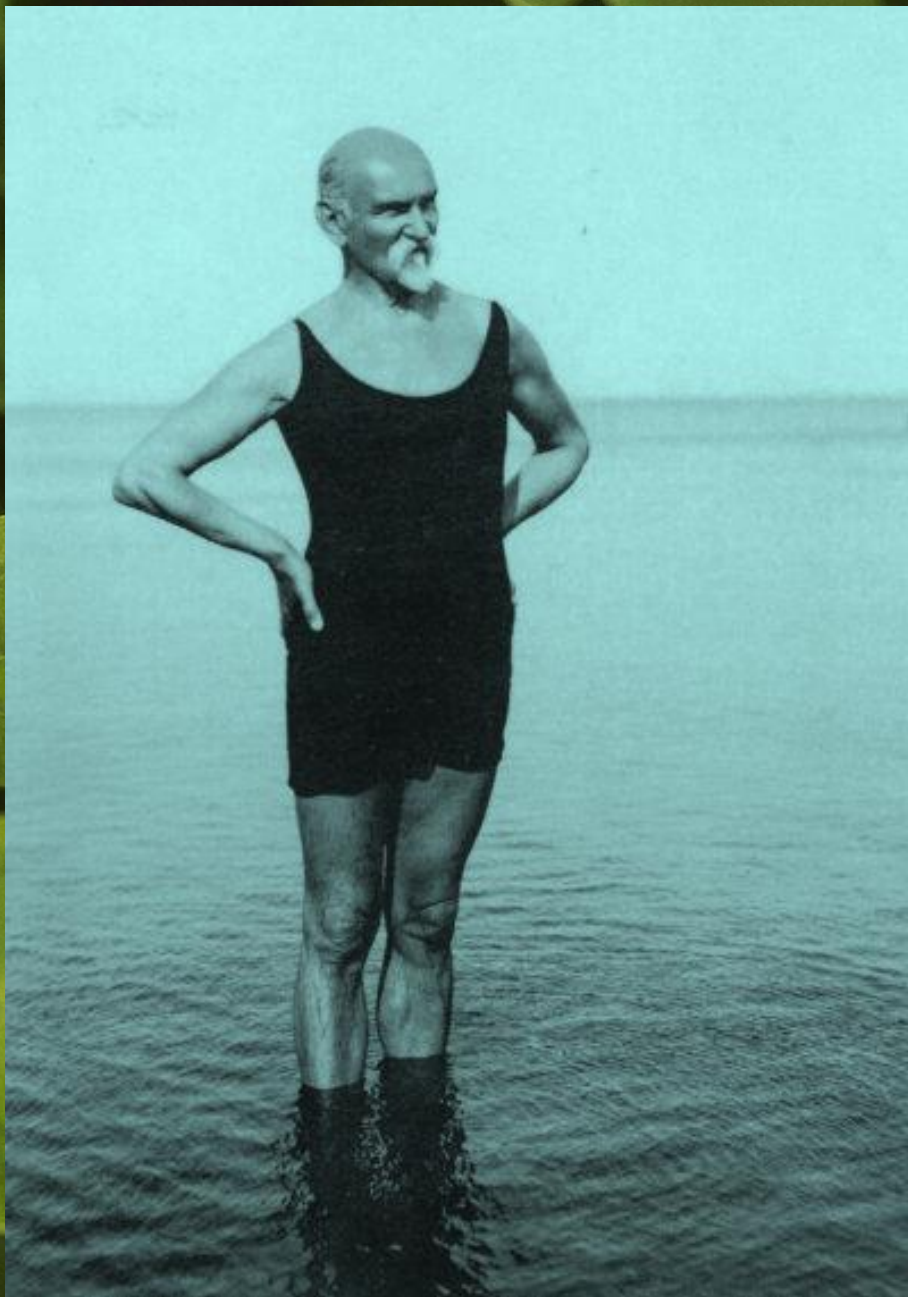
South Korea has bins that charge you for throwing away food

Source: Ministry of Environment
Footage: Seoul Solutions, YouTube





**Kopā mēs veidojam
labāku pasauli**



Tas jaunais laiks, kas šalkās trīs,
Tas nenāks, ja ļaudis to nevedīs;

Ikvienam ir rokas jāpieliek,
Lai lielais darbs uz priekšu tiek;

Ikviens lai uguni kurina,
Kas visu pasauli sasilda;

Lai palīdz katris to namu celt,
Kur vien tik cilvēces laime var zelt,

Kur katris ir iecelts saulītē,
Ar visiem kopā gavilē.

Bet jaunais laiks, kas šalkās trīs,
Tas nenāks, ja ļaudis to nevedīs.

Swedbank

