



Economic drivers

From digital currencies to growing emerging markets, these represent a host of economic factors shaping 2020.

Rising income inequality

Driven by factors that include the aging population, rising unemployment, and skill gaps in developing countries, global income inequality rises. While household wealth grows significantly in aggregate, reaching \$334 trillion by 2020, it does not result in a corresponding decline in inequality. Even so, the world's poor have much greater access than before to goods and services previously available only to the rich and middle class.

More than two-thirds of the world's adults in 2014 have wealth of less than \$10,000, while the wealthiest 0.7 percent holds 41 percent of the world's wealth.

Innovating to zero

"Innovating to zero"—fail-proof systems that reduce unnecessary or unwanted outcomes to zero—becomes a common business goal manifested in many ways, such as "zero security breaches," manufacturing with "zero defects," cars and transport systems that produce "zero accidents," and "zero casualties" in traditionally dangerous industries like mining.

From scarcity to abundance

While disparities between rich and poor persist, scarcity of basic requirements such as food, water, energy, health care, housing, and education is no longer the worldwide norm. As Peter Diamandis, founder of the X Prize Foundation and Singularity University, says, "Humanity is now entering a period of radical transformation in which technology has the potential to significantly raise the basic standards of living for every man, woman, and child on the planet."

Talent and the skills gap

The ability to foster, develop, and maintain generations of educated, skilled employees becomes a priority for countries around the world. Many nations grapple with aging workforces and a lack of skilled technical talent. These forces drive the “freelance economy,” in which labor moves between jobs fluidly, prompting changes in immigration policies and influencing education and training. Governments, private companies, and educational organizations come together to address the growing skills gap and embed paradigm shifts such as “lifelong learning” in the workforce. The global contest for talent defines which nations lead the world economy for years to come.

Digital currency mainstreamed

The year 2020 sees alternatives to cash and traditional currency systems gain momentum. Decentralized cryptocurrencies—the successors of Bitcoin, Ripple, Peercoin, Namecoin, Litecoin, and others—gain a toehold in a digital, largely cashless economy. Mobile payments are a natural extension of the digital lifestyle, while protection against digital theft becomes an imperative for regulatory agencies around the world.

Data as currency and asset

In a hyperconnected, sensor-driven world, virtually everything and everyone generate a vast amount of data, all the time. Much of that new information will consist of personal details: where people have been, what products they’ve bought, what movies they like, which candidates they support—the list is nearly endless. By 2020, more than 80 percent of consumers collect, track, barter, or sell their personal data for savings, convenience, and customization, making information a currency in the truest sense. The production and use of troves of data encourage “citizen innovators” to transform open data into solutions and applications.

By 2020, the amount of digital data exceeds 40 zettabytes, the equivalent of 5,200 gigabytes of data for every man, woman, and child on earth.

Between now and 2020, the global volume of digital data multiplies 40-fold or more.

The circular economy

For more than two centuries, humanity’s use of natural resources basically stayed the same: take, make, and throw away. By 2020, however, businesses adopt a new approach, viewing the resources as assets instead of inputs, and their customers as users rather than buyers. In this model, companies realize it makes little business sense to discard assets after only one product cycle and instead strive to continually reacquire and reintroduce these assets to market. CEOs and product designers attempt to maximize the value of their products by focusing on questions such as “How can we design our products with asset recovery in mind?” and “How can we obtain source material in regenerative loops instead of linear flows?”

The savings from increased recycling and reuse of resources amounts to about \$1 trillion by 2025.

Radical openness becomes the norm

The trend toward radical transparency has been mounting for some time, with companies increasingly opening their data (GlaxoSmithKline), supply chain (Apple), and culture (Zappos) to the public. In 2020, these models are no longer confined to a handful of innovative organizations. Instead, they dominate most industries, as consumers demand information that was traditionally kept private before they will engage with the organization. This is particularly true in the food space, where sustainability reputations and labeling become a prerequisite to doing business.

By 2013, there were more than 300 open data initiatives worldwide.

A “barbell” economy

As global giants increasingly acquire mid-sized companies, a “barbell” economy emerges, in which wealth is concentrated in a handful of huge, borderless corporations at one end and a large group of small and “micro” companies at the other. Small companies find spaces untouched by the giants where they can grow and flourish. These areas often become the most important sources of innovation.

The next billion consumers

As emerging-market economies flourish, huge new markets open up to global brands. These “next billion” consumers, however, are vastly different from those that preceded them. While many earn more than \$5,000 a year, making them part of the global middle class, they are still significantly poorer than their Western counterparts. As a result, companies that want to do business in these markets must completely rethink their product mix and finances to compete at a much lower price point.

More than 2 billion Asians qualify as members of the global middle class by 2021. In China alone, this middle class includes 670 million consumers, compared with only 150 million today.

Twin forces collide: Water scarcity and climate change

Urbanization, rising standards of living, and associated consumerism put increasing pressure on already scarce resources. The perception of scarcity may trigger conflicts and unrest before actual shortages are even felt. Climate change exacerbates these effects. Scientists increasingly agree that climate change will restrict our access to vital resources including food, water, land, and energy. According to the UN Food and Agricultural Organization, by 2025 1.8 billion people will live in regions with absolute water scarcity, and two-thirds of the world population could face water stress.

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Water scarcity drives continuing transformation in industrial production and technologies. Differing national policies concerning the sale and ownership of natural resources become a top-priority area for international organizations such as the United Nations and World Economic Forum.

By 2020, the world needs a 13 percent increase in food production to meet the demand of 7.8 billion people, an addition of 890 million tons.

Infrastructure bottlenecks

Infrastructure is a basic pillar of economic competitiveness. By some estimates, Western nations will need to commit trillions of dollars in the next decade simply to modernizing aging infrastructure. Developing countries must build new infrastructure to support economic growth and bring vast majorities of people out of poverty. But the difficult economic and fiscal environment limits infrastructure spending in critical areas including land transportation, water networks, and energy grids.

Exponential innovation

The core digital technology building blocks—computing power, storage, and bandwidth—continue to improve exponentially. Unlike previous technological innovations, the digital juggernaut shows no sign of stabilizing, thus leading to a greater level of disruption in industries. The impact is further amplified when technologies coalesce into open platforms and ecosystems, enabling people and technologies to rapidly build on previous waves of innovations. Exponential innovations in digital technologies move across boundaries, combining with completely new categories of technology such as molecular and material science, which in turn causes disruption across a range of industries, functions, and disciplines. This ability wherein technological improvement enables innovation, which in turn enables more layers of innovation to be built upon existing innovations, is at the core of exponential innovations.

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