

ANALYSIS

service and do-it-yourself, typically relying on a home office, telecommuting, neighborhood networks, virtual office, personal computers, modem, fax, multiple and cellular telephone lines and similar technologies. Work at home is the most potent job-generating sector, moving the self-reliant population toward more productive and efficient self-service activities, reducing the pressures on energy, ecology, human stress, traffic congestion and the cost-intensive physical commuting inherited from smokestack-era factories. Clearly, individual or corporate telecommuting presents a powerful alternative to the traditional emphasis on “railroads, highways and bridges.”

Modern production is primarily based on the processing of information, not on hauling goods, humans and machinery over large distances. One can more effectively “haul the information,” to produce goods and provide services locally. Information and knowledge travel effortlessly through electronic superhighways, through telecommunications networks and the Internet. Citizens and employees working at home are in control of their time, can take care of their children and can invest in home technologies; they do not have to pay excessively for gasoline, insurance and child-care, or waste most of their precious off-work hours commuting to work. The U.S. economy appears to serve as an experimental laboratory for many new forms of work and leisure, from work at home and telecommuting to self-employment and virtual offices.

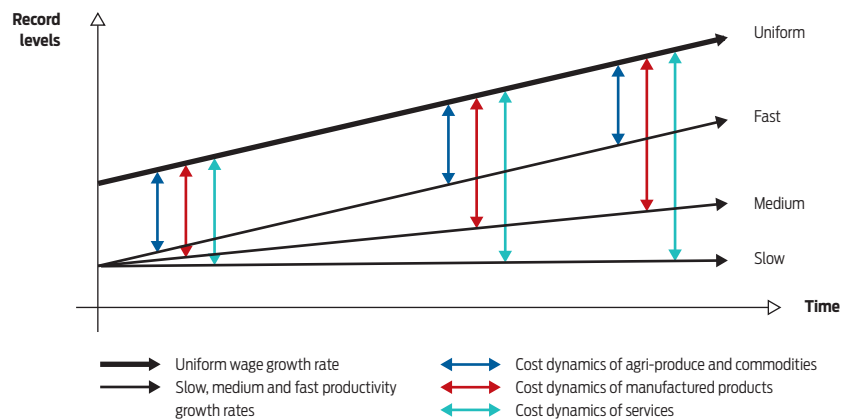
The economy is an organism,

What is the new paradigm for post-transformation economics?

Traditionally we view the economy as a machine, based on the input to process to output model. In machines, an input A is followed by output B in a predetermined and stable pattern. What if the same input A was followed by B and then C or D, even perhaps X? No machine could effectively function that way.

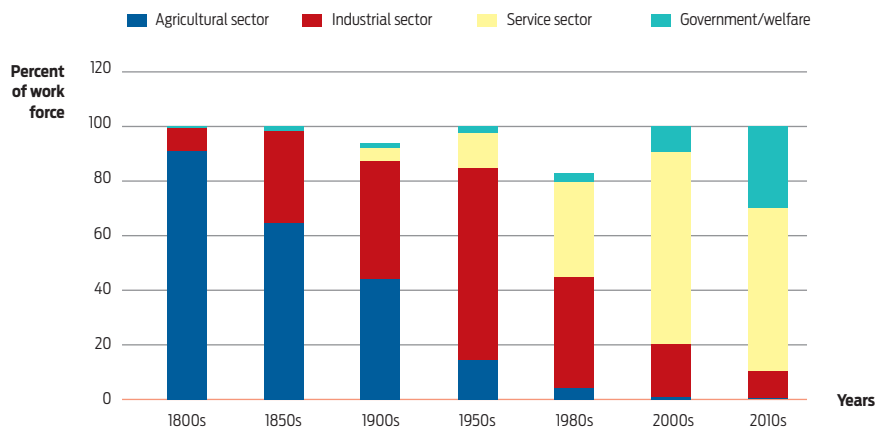
But that is how living organisms behave. If you kick a dog (input A), it will cover in the corner and howl (output B). If you kick the same dog the next day (A), he will stay put, bare his teeth and growl (C). When you kick him again (A), he may just sink his teeth in your flesh, quietly (D). The reason for such behavior is adaptation, accommodation, recalibration and the survival instinct of living organisms. But that is precisely how economies behave: their agents adapt, accommodate and recalibrate vis-à-vis the new circumstances; they also want to survive. If you lower the interest rate, people will borrow and banks will lend. If you lower it again, people become suspicious and many will not borrow because they do not trust their investments. If

Wage growth rates



Differential productivity and uniform wage growth rates cause prices to grow faster in low productivity sectors

General sectoral dynamics of the U.S. economy



Source: Milan Zelený

you lower it again, say, to zero, people will not borrow and banks will not lend because neither will trust their investments. That's why governmental meddling with free markets is so deadly: they treat the economy as a machine when it behaves like an organism. It is increasingly the politicians and their paradigmatic incompetence that worsens or creates economic and social crises. That is not too surprising because humans are organisms and not machines—regardless of political or macroeconomic assumptions, axioms and multipliers.

You can jump-start an internal combustion engine, but you can't jump-start the economy.

The coming transformation will be truly “earth-shaking,” even more so than the shift from geo- to heliocentricity many centuries ago. We will have to learn that economic and social systems are autopoietic (self-producing) organisms and not deterministic mechanisms and contrivances. We will have to acknowledge that biology

and psychology provide appropriate tools, rather than physics and engineering. We will have to replace calculus and differential equations with rule-based simulation and computer-scenario playing. We will have to rely more on the wisdom of the organism than on the wisdom of governments. We will have to create new theories, write new textbooks and establish new universities. We will have to move from the macroeconomics of aggregate numbers toward the microeconomics of decision-making human agents as the center of our economic endeavors. ■

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