Jobs, jobs, jobs…
Crisis or Transformation?

While crisis shall end, transformation will go on
Unemployment shall not rebound in the US
Economy is an organism, not machine

The triggers that induce the catharsis of a *crisis* are often the same triggers that also launch qualitative *transformation* of the economy, business and society at large. While crisis is a cyclical recession or slowdown within the same paradigm – most activities can resume along the same lines after its passing - transformation represents a paradigmatic change in the "way of doing business": here things can never return to where they ended, but move towards new standards and quality, in a unique and non-recursive way. Confounding both crisis and transformation as one phenomenon or "package of thought" brings forth the confusion, inconsistency and guessing.

While many changes in market systems are *cyclical*, there are also evolutionary changes which are *unidirectional*, i.e. transformational.

The unrecognized confluence of crisis and transformation is at the core of old tools not working, old fools making fools of themselves, new tools not being yet developed and new fools (the ones we need most) not being visible or consequential enough to make fools of themselves. In short, we are 'in a pickle" and we might not even realize it. We have forgotten Thomas Kuhn's Theory of scientific revolutions, Schumpeter's "creative destruction", and also the enlightened, non-mechanistic *microeconomics* of von Hayek, Morgenstern and von Mises. None of them provides the answers, but they do provide valuable clues to our predicament.

An example of a paradigmatic transformation would be the shift from geocentric to heliocentric view of the world. Within both views there can be any number of crises, cyclical failures of old and searches for new theories and practices. But there was only one transformation (from geo- to helio-) and there was nothing cyclical about it. It was resisted with all the might of the mighty: remember Galilei and Bruno?

While crises are cyclical corrections and adjustments, transformations are evolutionary jumps or revolutions towards new and different levels of existence.

Where the jobs are…

The arena of employment and jobs, especially in the US, provides clues to transformational qualities of current global crisis. This crisis is intertwined with a transformation and so it displays untypical dynamics and presents new challenges to conventional economic thought and business practice.

Sometimes the clue comes from uninformed and unlearned circles, from new and powerful intuitions rather than from well-reasoned, but old and tired arguments. Obama administration started with the promise of "creating" new jobs. After inauguration they corrected that promise to "creating and saving" jobs. After some experience, they proposed "saving and creating". Finally, Obama's promise has morphed into "saving" valuable jobs, thus fighting mightily for all of those who still have one.

There is a reason for this vaguely unfit politicking. We do not know where the new jobs are but we do remember where the old ones came from. So they ended up with a perfect tautology: What are those valuable jobs we saved? Those still remaining. Tautology can never be wrong – a politician's dream. Such job saving policies can never fail. Any ending of the crisis will be declared to be the result to our spending billions of other people's money; we can never fail… so goes the conventional governmental wisdom - *except for the transformation.*

***Obama's tautology* rivals the famous tautology of Darwin: only the best adapted species survive. Which are the best adapted species? Those which are still surviving.**

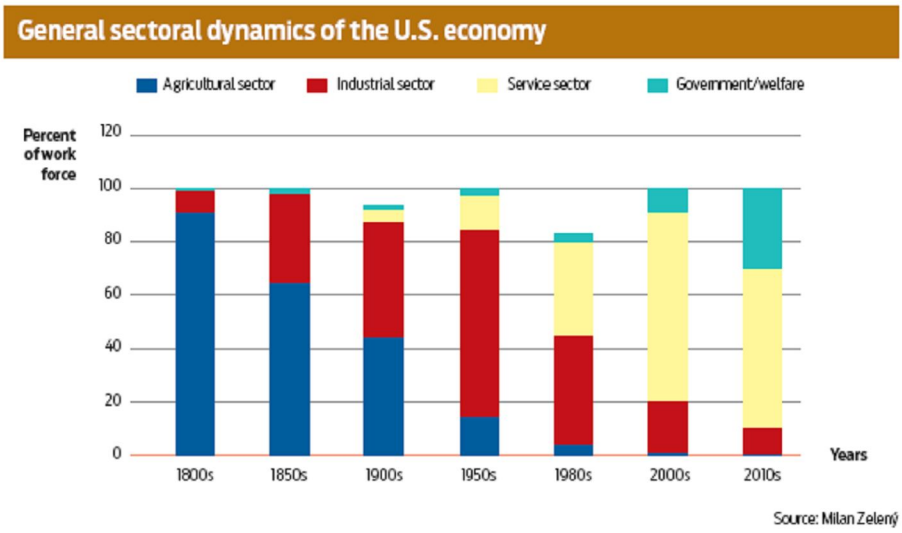
There is a very good reason for such tautologies: nobody knows how but mainly *where* to create new jobs. The key lies in exploring the sectoral dynamics of US economy. Economic sectors evolve, albeit through fluctuations, in one general direction (so called S-curve): they *emerge*, *expand*, *plateau*, *contract* and *exit* – just like any self-organizing system or living organism. We are naturally interested in the *percentage of total workforce* employed in a given sector. The dynamics of this percentage provides a clue *where* the new jobs might be.

Sector's percentage share of employment evolves in dependency on sector's *productivity growth rate.* Agriculture has emerged and disappeared (as a source of employment). Today only ½ per cent or so of total workforce is employed in US agriculture – the most productive sector of the economy. No politician would even propose creating jobs in agriculture (why not?). Then manufacturing had emerged, peaked and contracted. Services have emerged and started contracting – all due to incessant productivity growth rates.

A new sector is emerging: *government, welfare and unemployment*, based on taxes-financed consumption rather than added value production, sheltered from market forces, producing very little. Can we create jobs in this GWU sector? Of course we can: artificially, at the expense of productive sectors, i.e. only at our own risk, in a non-sustainable way and with low added value. Creating artificial employment bubbles is not a stimulus but a temporary patchwork. Only hyperinflation would bring us down to earth - if we do not do the *work of crisis* voluntarily and ourselves.

The four things humans do

The US economy has now become the most mature in terms of sectoral evolution. It has entered the stage – perhaps as the first economy ever - of declining employment in the service sector.



Productivity growth rates are now accelerating in US services and its employment creation or absorption potential is declining rapidly. Accelerating productivity growth rates are dictated by global competition and human striving for better standards of living – they cannot be stopped at will. In the US there are only three areas where new jobs are still being created: education, health care and government. The first two are subject to market forces and will undergo accelerating productivity growth rates and declining employment levels in the near future. The third one, GWU, is sheltered from competition, can expand its share substantially, but it does not produce much of anything, depends on taxes from other sectors and its employment growth is unsustainable.

Slowly and imperceptibly, US economy has shifted towards sectors with lower added value, leading to lower income and increasing reliance on the bubbles of debt. That is a systemic condition which no amount of half-baked regulations and Keynesian or monetarist stimuli (i.e., wasteful spending) can ever address. Even desirable piercing of speculative, employment and debt bubbles has ceased to be politically correct. The

government has now become the problem. Even 100% taxation of all incomes would not balance the US budget.

So, the US is at the *transforming cusp* and hundreds of years of sectoral evolution comes to a halt. There are only four essential things humans can do economically: 1. *Produce food*, 2. *Manufacture goods*, 3. *Provide services* and 4. *Do nothing*. US economy has exploited (from employment viewpoint) all three productive sectors. There is no new sector lurking in the offing, this is *it*: qualitative transformation is taking place. Other economies still have time left, some still have to industrialize, and some still have the services to expand. But the US economy is now the harbinger of the things to come, the role model for others to follow or reject, but hardly ignore. For the first time in history at least one economy has reached the end of the old model (or paradigm) and is groping for the new ways of organizing its business, economy and society.

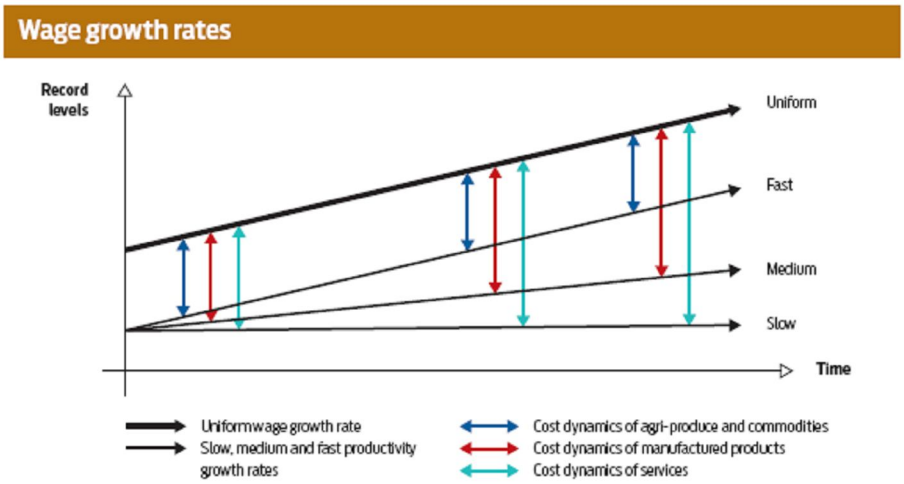
Self-service and do-it-yourself

It is increasingly self-evident that US economists and government have missed the boats not only with respect to the crisis but with respect to the transformation as well. The second one is a more serious miss. It is clear that government will be of no help with the transformation: its politicians and economists do not have the wherewithal of the new paradigm as they have lived and been educated within the old one. That is why they still talk the mechanistic language and use old "levers and pulleys" in the age of internet. For a long time to come they will not see or even acknowledge the transformation. Their "geocentric" view will not transform into the "heliocentric" one without mighty resistance – as was the case with their famous predecessors. The only clues to the new paradigm can be glanced from the self-organization of the market economy itself.

Because there is no new productive sector to emerge, the economy seeks to reinstate its new balance through *self-service* and *do-it-yourself* modes. Producers and providers are outsourcing their production and services to customers. *Outsourcing to customers* is a natural and necessary self-organizing process, including disintermediation, customer integration and mass customization, all driven the by global productivity at the cusp of transformation. Instead of the information society, we have entered knowledge society. Instead of the service society, we are venturing into self-service way of life. The shift towards self-service is a part of natural and spontaneous evolution of human and economic systems. How does it come about?

Due to its productivity growth rates, each sector must emerge, grow, persist, stagnate, decline and dissipate in terms of its employment-generating capacity. The high-productivity growth sectors are emerging and dissipating first, the low-productivity growth sectors (like services) are completing their life cycles only now. *Different* productivity growth rates in different sectors are accompanied by virtually *uniform* growth rates in wages and salaries across all sectors, as required by free-market forces.

As a consequence, the goods of high-productivity growth sectors (food, manufactured goods) are getting cheaper and the products of low-productivity growth sectors (health care, education, insurance) are getting more expensive, as is captured in the figure below:



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

In some third-world nations this may still be the other way around (due to the reigning stage of sectoral evolution): food and manufactured goods are most expensive, while services remain relatively cheap. In developed countries, chicken, bread, computers and cars are getting cheaper, while insurance, health care and education costs are skyrocketing without adequate quality, productivity or availability improvements.

Rational economic agents tend towards *substituting* relatively cheap and capital-intensive manufactured goods for relatively expensive and labor-intensive services. Consumers will use goods instead of services wherever economical and possible. So we observe the emergence of automated teller machines instead of bank tellers, self-service gas stations instead of full-serve stations, self-driving instead of chauffeurs, do-it-yourself pregnancy kits rather than hospital test services, self-handled optical scanners rather than cashiers, and personal computers instead of central mainframes. In other words, self-service and do-it-yourself activities are replacing the traditional, other-person delivered services at an increasingly accelerating rate. Mature economies are entering the era of self service and do-it-yourself.

Work at home

Households are again becoming primary investment/production units. One of the fastest-growing areas in developed industrial economies, especially in the US, is "work at home." Work at home relates to self-employment, part-time self-employment, work after regular office hours, work instead of regular office hours, self-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 towards 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-century 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 the hauling of 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 childcare, nor waste most of their precious off-work hours in 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.

Economy is an organism, not a machine

What is the new paradigm for post-transformation economics?

Traditionally we view economy as a machine [input → process → output]. 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 cower in the corner and howl (output B). If you kick the same dog 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, re-calibration and survival instinct of living organisms.

That is precisely how economies behave: their agents adapt, accommodate and re-calibrate 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 you lower again, say to zero, people will not borrow and banks will not lend because both do not trust their investments. That's why governmental meddling with free markets is so deadly: they treat economy as a machine when it behaves like an organism. It is increasingly the politicians and their paradigmatic failures which 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 is truly "earth-shaking", even more so than the shift from geo- to heliocentricity many centuries ago. We shall have to learn that economic and social systems are autopoietic (self-producing) organisms and not deterministic mechanisms and contrivances. We shall have to acknowledge that biology and psychology provide appropriate tools, rather than physics and engineering. We will have to replace calculus and differential equations by rules-based simulation and computer-scenario playing. We shall 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 macroeconomics of aggregate numbers towards microeconomics of decision-making human agents as the center of our economic endeavors.

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