



**Knowledge, connectivity and creativity:
the main factors for the value in the socio-economic system.**

in italiano: Conoscenza, connettività e creatività: legati dalla formula di Einstein.

World is facing grand societal and economic challenges. Research and Innovation have been recently and widely considered sources of a renewed growth¹. Big data, and their access, are addressed to boost the economy². Additive printing is shifting to a user-manufacturer decentralized production. These issues will probably shape the future of our society.

Research, industry, policy and civil society have to be jointly involved towards a sustainable socio-economic system, where a shared value has to be adopted as a responsible approach in a cost/benefit interconnected and complex system³.

I propose a new paradigm for describing, and memorizing, the “value” in the socio-economic system. The value results by the product of resources, knowledge and creativity. None of these relevant aspects, alone, can in fact guarantee prosperity. Moreover, each of these aspects have to be necessarily connected, and therefore accessible: raw materials/energy have to be transported, knowledge to be circulated, creativity to be introduced in a global market which tends to homogenize any diversity.

But in a world where information/materials can be distributed very fast and everywhere, a relevant factor for measuring the value will be associated to the ratio between the time of the distribution of information/materials and the time of the system to evolve, accordingly to the acceptance of them.

This factor is therefore taking into account the impact of products/services on the global system.

The best ability will therefore consist in the collaborative advantage while policy will dramatically influence the system in its role to guarantee the neutrality of internet, privacy, antitrust.

Combining the different factors, we have

$$\text{Value} = \text{tangible resources} * \text{knowledge} * \text{creativity} / \sqrt{1 - \frac{(\text{timescale of acceptance of information or materials})^2}{(\text{timescale of feedback from the global system})^2}}$$

This formula is surprisingly similar to the famous Einstein $E = \gamma mc^2$, where $\gamma = 1 / \sqrt{1 - \frac{v^2}{c^2}}$, but does not claim to be quantitative and dimensional.

1. European Commission, Research and Innovation as a source of renewed growth, COM (2014) 339 final, *European Commission* (2014).

2. European Commission, Towards a thriving data-driven economy, COM (2014) 442 final, *European Commission* (2014).

3. Porter, M.E., Kramer, M.R., Creating shared Value, *Harvard business review* (2011).