

The Self-Organized Doomsday Machine

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SUMMARY

Technologies *per se* are neither good or bad for society, it is the use we make of them that can be good or bad. Also the financial system can be regarded as a set of technologies.

Let us analyze the various components interacting with the financial system.

We start with the real side of economy. In our modern free markets, any production and commercial process is realized by organizational forms oriented to maximize their profits. All these activities must to be carried out inside a framework of laws and dispositions by which local Governments regulate and address the economic activities exercised on their territory. These laws pursuit two goals: (1) to warrant and protect the interest of the organizations to exercise industrial and commercial activities; (2) to regulate and limit those activities whenever they may prevents the interests and rights of workers, other subjects and the environment involved at different levels. The effect of this second goal is to define the normative borders into which the economic activities can be explicated. It is clear that this fact immediately translates into social costs or Pigouvian taxes that are to be accounted by entrepreneurs when running their activities. Thus

“A legal system which places weak attention towards the limits and borders into which economic activities can be explicated, tends to be more profitable even though more prone to produce negative externalities for the society.”

The second component is the social system. Every society has a system of values. In particular, individuals tend to pursue actions that increase their *social status*. Theorists

disagree about the elements determining membership to a specific social class, but many features appear in many accounts. Among these are *ownership* and *consumption*. In today's monetary-based societies, the socio-economic status is mainly measured by money. According to this measure, an increase of our wealth suggests an improvement of our social status.

As it is well known, the emergence of social dilemma is very common in societies. The one described here is a situation with two equilibria, a good and a bad one, from a social point of view. It is rational to maximize the private utility enjoying the public good but not contributing to it. When everybody does so, there is no public good to enjoy anymore. Before discussing the role of the financial system we need to make an example. Let us consider a local community in which an entrepreneur establishes a new and profitable economic activity, say a plant. There is a local bank which collects investments from the citizens and lend funding to the entrepreneur. The citizens receive a good return on investment as well as the entrepreneur and the bank. After some time it turns out that the plant has obvious negative externalities (e.g. pollution). Now, the social dilemma becomes apparent. In a rational choice framework, whether the system reaches the good or bad equilibrium is all a question of expected benefits and costs. The good equilibrium is reached if the social costs are internalized in the households utility function. In that case, as the discounted cost due to the effects of pollution (e.g. health care) is higher than the expected income from their investment activity, the good equilibrium will be reached since households will allocate money only to environmental-friendly projects. However, it may also be due to social sanctioning (e.g. loss of reputation, no more help from the neighbors in case of need) which introduce an explicit cost constraint to the households utility maximization problem. In particular, it is of interest the case in which the expected income from the investment is just slightly higher than the expected pollution costs. In this case, the cost function dynamics over time due to social sanctioning, play a crucial role. It is reasonable to expect that this function is monotonically decreasing in the percentage $n \in [0,1]$ of households investing in the polluting activity. As n tends to 1, less they will be sanctioned (those who do invest do not sanction the others for doing the same). Therefore depending on the initial conditions, it is possible to reach the bad equilibrium.

The third component is the financial system itself. It can be considered as a complex set of different actors which execute different activities under a common denominator: the transfer of money over time and space. In the general consumption-investing decision making problem, households invest part of their income in order to increase their wealth over time. This activity is performed by different institutions which work as intermediaries along a chain between savers (households) and the universe of investment opportunities to be selected (firms, business projects, etc.). It is of course possible for households to directly invest in a specific project (via the equity or bond market). However, this activity required certain specific competences. Hence, most households acting as *principals* delegate their activity (wealth management) to specialized institutions acting as *agents* who collect the funds received from different sources and bundle them in pool. The principals do not know how their money are used since the chain may be very long (an agent can delegate his activity to others) and complex. They simply agree on a certain return given their risk appetite.

The downside of this delegation is the creation of a *decoupling* between savers, and the entrepreneurial activities funded at the end of the chain. In other words, savers do not know where their money goes. The chain which links the first source of finance to the final project is so long and complex that any information on negative externalities that should be included in the households utility maximization problem, are disregarded. These are out of sight. Relating back to the example of the local community, now investors are from outside the community. If the project is carried out in a region where labor is not well organized and the legal system is not strong enough, it is clear that the chances are heavily towards the bad equilibrium.