MORPHIC FIELDS AND MORPHIC RESONANCES: WORKING BEHIND SOCIO-ECONOMIC EVOLUTION

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Morfické polia a morfická rezonancia: Skúmanie zázemia socio-ekonomickej evolúcie

Abstract: *The economy in objective reality even such one as it has existed in economic science for a long time– at least from Ancient Greek scholars up to contemporary mainstream economics – that holistic complexly evolving entity/phenomena are still hidden behind dense mist. If we are going to deeper reason on economies in objective reality, it has to occur to us that there have to be something but not singular unknown evenly mysterious reasons in the background of strange behaviour of these realms. Actually, a socio-economic evolutionary organism is admittedly an extraordinary complex realm. There exist plausible statistic data which prove these complexities and strange behaviours of economies in objective reality. Behind it there are working several laws at four levels: physical, chemical, biological, and social as it is the most advanced (highest) level. They altogether as a whole create morphogenetic fields and morphic resonances which are driving socio-economic entities into the future in the form of multilevel complex network. Mutual cooperative play among all but different fields and resonances: physical, chemical, biological, and social together with the laws mentioned above create different qualitative and quantitative forms in space-time dimension, for example cycles, chaotic behaviour, strange mathematical forms or catastrophe, etc. Unfortunately, the meant complexities and strange behaviour in objective reality are not directly observable "as stars in heaven". In this, for economic science unhappy situation, there are coming to help us contemporary advances ICT, AI and CI. Using relative simple and cheap software, we can simulate a similar process in the virtual world, and directly observe it in computational runs. It is interesting and surprising that some of existing mathematical formulas*

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created by economists even if those very simple ones can display analogical behaviour (Marx, Cournot, Schumpeter, Kaldor, Goodwin 1967;1972;1984;1987), Minsky (1982), Yamaguchi, and others). Using these theories and models well-known among economic scholars, we can demonstrate several strange behaviours in virtual economies which help us in more effective reasoning on economic behaviour in objective reality, even those are only metaphors.

Keywords: *Cyclical growth, Financial instability hypothesis, Goodwin–Minsky–Kalecki–Marx model, Levels of Complexity, Morphic fields, resonance,*

JEL Classification: C02, E01, E02, G01, O41.

1 Introduction

Karl Marx: *"They show ... that the present society is no solid crystal, but an organism capable of change, and is constantly changing."*
Capital Vol. I - 1867 Preface

During a briefing on the 2007/2008 global financial crisis, Queen Elizabeth II asked academics at the London School of Economics why nobody saw it coming. The response was:

"Your Majesty,

the failure to foresee the timing, extent and severity of the crisis and to head it off, while it had many causes, was principally a failure of the collective imagination of many bright people, both in this country and internationally, to understand the risks to the system as a whole".

Citation by: ***Crelis Rammelt*** *(Zeeman, 1974)*

Essentially, along that second citations, it is naturally accordingly, because economics ontologically, theoretically, and methodically too, is based on Newtonian mechanical worldview (Andrášik 2019; Andrášik, 2020) and as such it cannot foresee the complex evolutionary behaviour of economies in a similar way as astronomy can predict the motion of planets in the solar system. An economy in objective reality even it has existed in economic science for a long time – at least from the times of ancient Greece scholars up to contemporary mainstream economics – that holistic complexly evolving entity/phenomenon remains to be hidden behind dense mist. If we are going to deeper reasoning on economics in objective reality, it has to occur to us that some unknown, even mysterious reasons must be in the background of strange behaviour of these realms. Actually, a socio-economic evolutionary organism (Andrášik, 2019; Andrášik, 2020) is admittedly an extraordinary complex realm. There exist plausible statistic data which prove these complexities and strange behaviours of economics in objective reality. Behind it, there are working several laws at four levels: physical, chemical, biological and social as it is the most advanced (highest) level. They altogether as a whole create morphogenetic fields and morphic resonances which are driving socio-economic entities into the future in the form of multilevel complex network. Mutual cooperative play among all but different fields and resonances: physical, chemical, biological, and social together with the laws cited above create different qualitative and quantitative forms in space-time dimension, for example cycles, chaotic behaviour, strange mathematical forms or catastrophe, etc. (Zeeman, 1974).

The apprehension whether evenly the belief that human society is an organism is exceedingly enlarged, and it is maybe the most commonly used metaphor in the western social science thinking. To a certain extent, it also pertains of economy for which is sometimes also used metaphor as if it was a living socio-economic organism. This apprehension on social economy, however emerged well before, which we are proving also by the motto of one of the 19th century geniuses in earlier (first) citation in this paragraph of our paper. In our research we have been using the conception of economy as a living organism since the second half of sixties of the last century and not only as clear metaphor but as a picture of genuine objective reality. We establish this conception on the fact that decisive creative actors of economy are people with their ability of independent decision making and their implementation and also capable of unceasing creative constructivism open up into morphogenesis of new unexpected solutions in quantitative and qualitative planes, that is so called successions. After all, mankind societies, whether local or global were evolved by morphogenetic mode their culture as special class/form of not physical field, that is morphogenetic field. A characteristic property of morphogenetic field is among others its structural instability, which actually stands behind the emergence of new solutions. The notion (scientific category) of organism blankly naturally put up to intuitive image of biological world. In expert literature, there is a frequently occurring metaphor of economy as healthy and/or unhealthy organism and are suggesting therapies are suggested how to cure it. In other words, there exists a metaphor in some intuitive form as if economy was like human and/or other animal body. In this place, it is need to note that even in the 17th century great British philosopher Thomas Hobbes was reasoning on society as of a giant creature named Leviathan. Organism, that is human body too, consists from organs, tissues, muscles, carcase, fluids, nerve fibres, receptors, spinal cord, brain, etc., different metabolic processes are in progress in the body. Evenly, insect societies too like as honey bees, ants and termites show analogical morphologic entities as human society, and they have own morphological fields and resonances. Something similar must have also a great flock of birds and/or fishes, when and where all individuals in the flock are behaving seemingly identically and create in a flock as a whole changing figures, which is typical for birds known as starlings. (Expert term for such phenomenon is *flocking*; these are parallels with the *shoaling* behaviour of fish). In literature we are find wholly erroneous explication of the process how the flocking is created. It is hardly possible to agree with the following statement published on the Internet: "Basic models of flocking behaviour are controlled by three simple rules:

1. Separation – avoid crowding neighbours (short range repulsion);

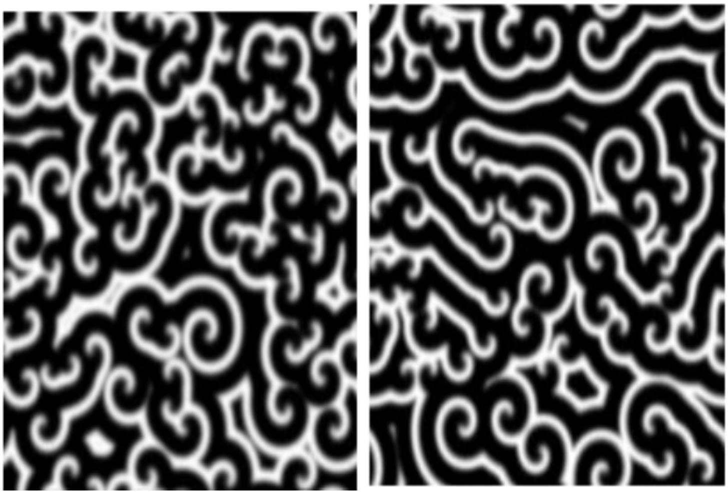
2. Alignment – steer towards average heading of neighbours;

3. Cohesion – steer towards average position of neighbours (long range attraction).

With these three simple rules the flock moves in an extremely realistic way, creating complex motion and interaction that would be extremely hard to create otherwise."

In realistic approaches to this type of behaviour does not correspond to the volition of every single bird in the flock but to aerodynamic field. Behind every wing there arises an aerodynamic hole with high negative entropy, so all the flock is moving in negentropic field created by a giant set of flattering pairs of wings. Similarly, as for bird it is advantageous to fly in negentropy hole, for economic agent it is profitable to act in one of negentropy hole of field which arises in the economy as a whole. The negentropic field is not a simple sum of all wholes but a synergic result of the economy as a whole. In a given context, a similar behaviour called crowding differs by involvement into the process also a sub-consciousness of participants of crowds, in the case of people very intensive one. Sometimes such phenomenon is called *imitation.* In fact, such process sometimes having different names; however, in essence, it is the case of morphologic fields and resonance. In our former publications we are even long ago wrote about a phenomenon naturally occurring among people which is called *memetic infection;* in the case of termites it we can refer tophenomena called *swarm behaviour*. Let us focus attention on the fact that an upper ground termite-hill and underground parts of termite building in the nature of physical entities together with their creators–termites in the form of living entities create a complex evolving organism, and it is similar to social economy of humans, hence inclusive of buildings, machines, ways/highways, railroads, vehicles, airport, aeroplanes etc. and admittedly all living nature. Economies have all attributes of giant living social organisms and hence also together with autonomy of their own evolving which is partially immune against activities of top political and state authorities, executive of giant corporations and banks, which are ineffective in controlling this wholeness. Economies in their own evolving are consecutively becoming auto-regulative behaving organisms, literally living entities in an ambient world. Economy as living organism in longer time horizon is growing into planetary dimensions and its key principle of living is achieving growing negentropy of own morphic-thermodynamic field. For entire understanding of economy and its behaviour in the process of evolution, it is needed to accept the fact that its base is morphic-thermodynamic field, so if economics is to be serious science, it must be working with this morphic conception. Methods by means of morphological fields as a rule contain a built-in memory which helps to re-examine several properties of socio-economic organisms. These approaches, methods and tools enable to preserve such running in economy process as for example exerted stereotypes of economic behaviour, traditions, accustomed manners and rituals, etc. Some of these ones allow socio-economic organism to preserve its organizational and functional principles and laws, it autonomy, rules, formulas of structuration and forms, conceptions of organization, etc. These ones functional so in routine conditions of perpetual generational changing of accessory individuals in periodical iteration of generation cycles birth–living–death. Those are very similar to the manner with morphogenetic fields of human (but also of entirely animal) being are coordinating the whole carnality although the cells are changing and tissues in inner side of body is continually changing, and new ones are substitutes the old ones; this is analogy which is not easily refutable. In a given connection, it is extraordinary interesting and for computational experimentation fundamentally important that even simple mathematical models which are used in economic theory and in their teaching/learning can, under certain circumstances, contain but often only in hidden form tendencies to create structures behind which it is possible to deduce morphological fields. For very convincing such cases, however, one can consider only those in mathematical form brusselators, complex oscillators or chemical–biological reactors (Belousov–Zhabotinsky reaction), of Julia, Feigenbaum and Mandelbrot mathematical constructions, etc., fig. 1–4.

Figure 1: The Belousov–Zhabotinsky reaction two result of computer simulation (these are findings on the Internet)



First of all, the Mandelbrot set, in which is present null (upper) level of complex Thimble showing extraordinary "fertile" structure of set of new thimbles in the nearer levels, while each of them rotated already 45°and is already reduced to smaller one in nearer levels of incursions of Mandelbrot rectangle n × m. In this way, very special morphic field with unit resonances originated. At the end of this introductory section, we present nine illustrative pictures for creating simple ideas on erratic form in abstract mathematics, chemistry, biology, and in economy in objective reality, see fig. 5 – 9.

Figure 2: The eleven biomorphic entities created in computer (these are findings on the Internet)

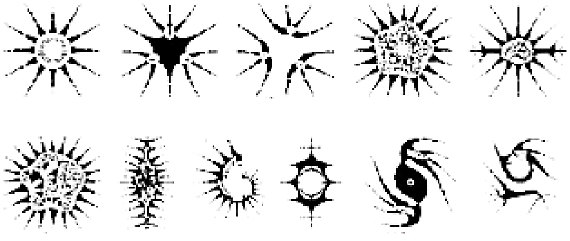
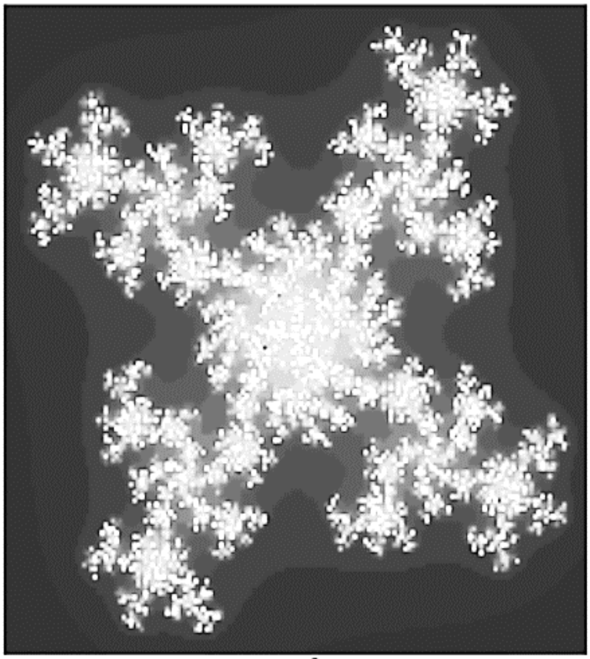
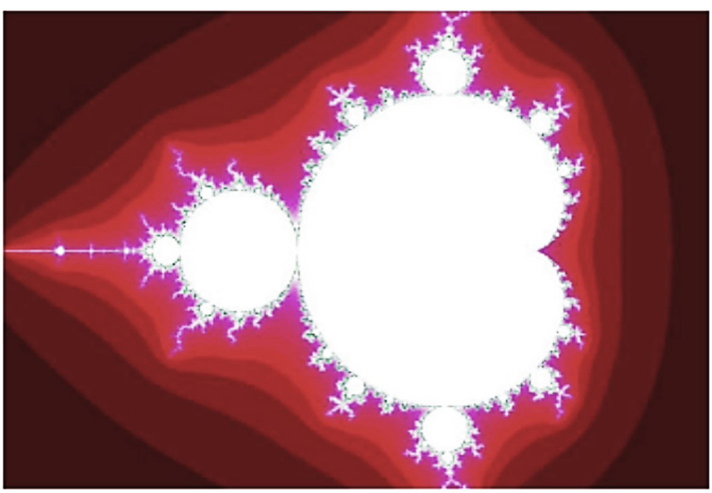


Figure 3: Julia set: The result of computer simulation (these are findings on the Internet)



$z^4 + c$
$c = 0.6+0.55i$

Figure 4: The Mandelbrot set: The computer simulation result (these are findings on the Internet)



$Z_{n+1} = Z_n^2 + c$, maximum iterations 128,
in the area (-2, 1)*(-i, i)

Figure 5: The graph of a short run Phillips curve (SRPC)

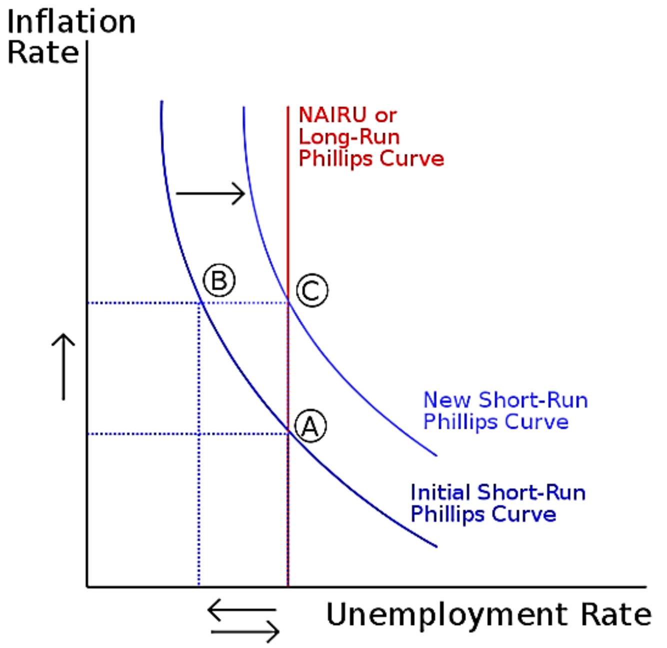
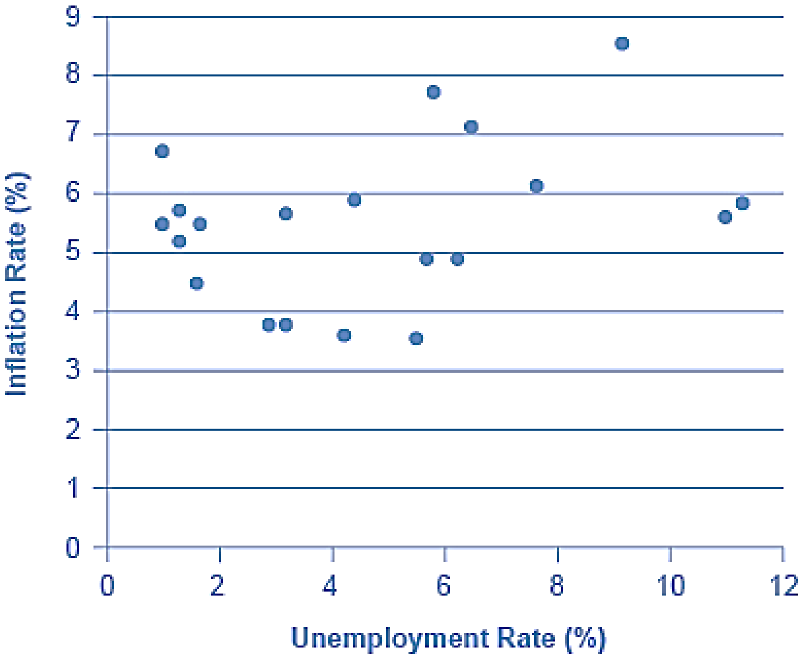


Figure 6: The graph of a long run Phillips curve (LRPC)



In fig. 5 it is presented chaotic U.S. Phillips Curve in the interval of years 1960 – 1979. The trade-off between unemployment and inflation appeared to break down during the seventies as the Phillips Curve shifted out to the right. The mistake of the Phillips curve in fig. 5 consists in setting different time instance Phillips points into the same time, but if we are taking into account the passage of time, we receive a very different result, see fig. 7. As we can see, the Phillips points are wandering in the rectangular area of the rate of inflation/ rate of unemployment by strange mode.

Figure 7: The abstract imagination on Phillips point's errantry in time

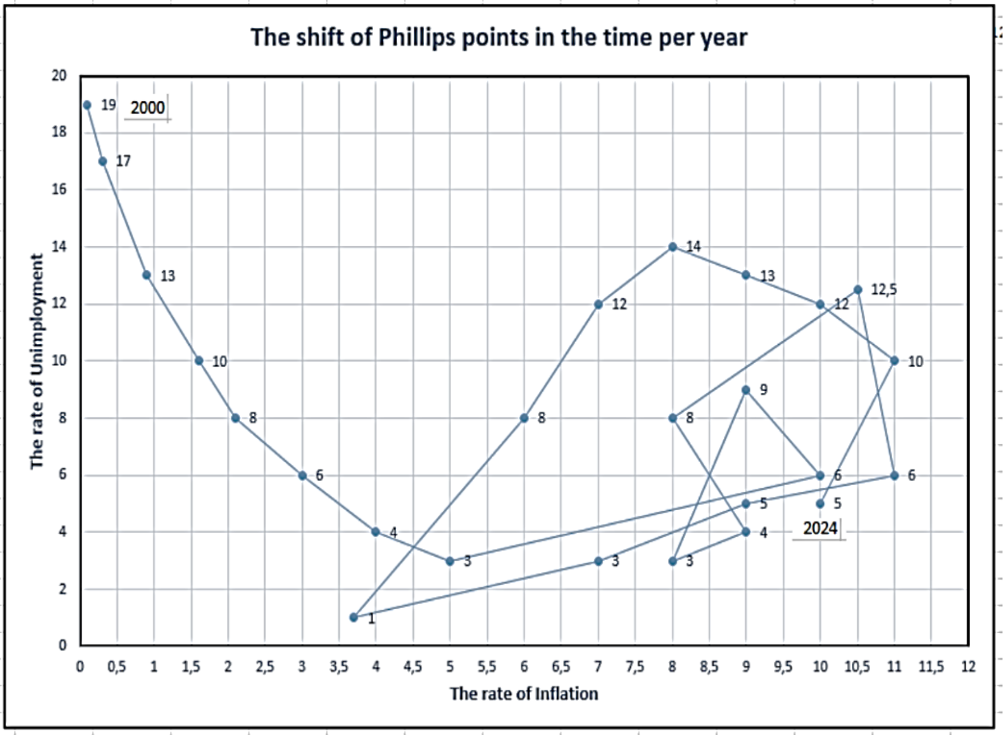
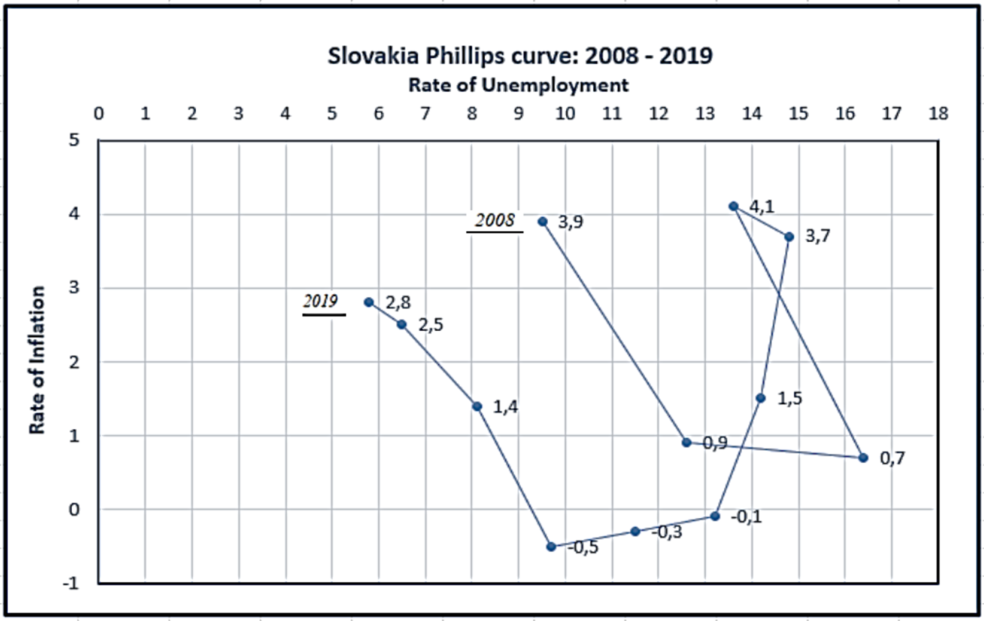


Table 1: Slovakia rate of Inflation and of Unemployment

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Rate of
3,9	0,9	0,7	4,1	3,7	1,5	-0,1	-0,3	-0,5	1,4	2,5	2,8	Inflation
9,5	12,6	16,4	13,6	14,8	14,2	13,2	11,5	9,7	8,1	6,5	5,8	Unemployment

Source: EUROSTAT – Total unemployment rate in %. (online data code: TPS00203 last update: 01/04/2020). Unemployment rates represent unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed.

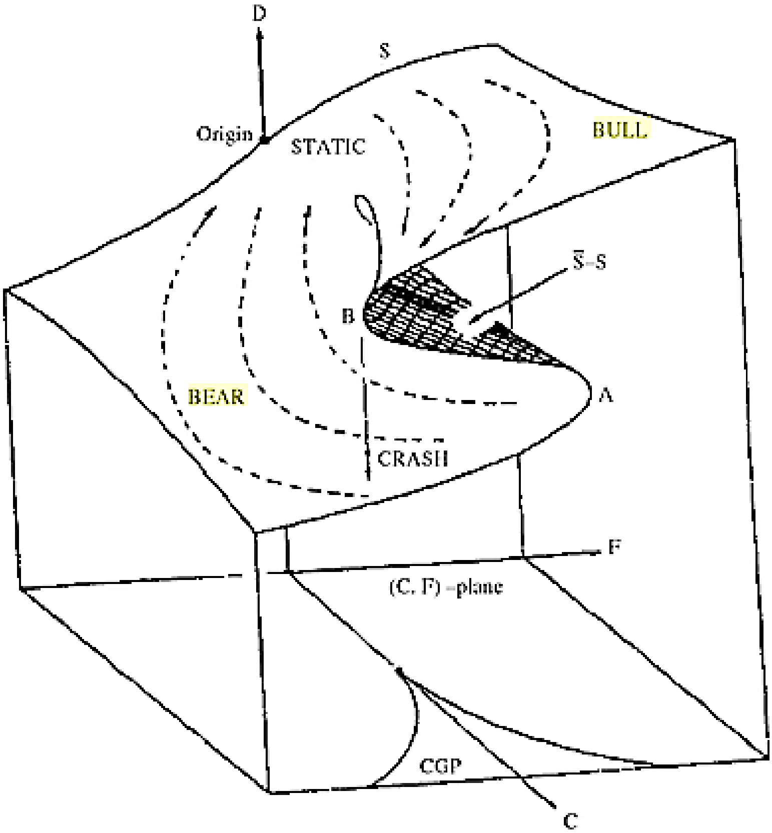
Figure 8: Our graph of time evolution – shifts of Phillips points of Slovakia (the graph is made in Excel by author of this paper)



In the first four years we have learned counter clock movement of Phillips points and in the last years in the right clock movement's ones.

The first economic model using mathematical theory of catastrophe was constructed by Zeeman in 1974 (Zeeman, 1974) as a stock market dynamics in the world of "fundamentalist investors", which is similar to theory of rational expectations and a "chartist" investors who chase trends. The balance between these two participants is varied as outcomes in the market vary. As long as the fundamentalists dominate the market, there is a unique equilibrium and the market is stable. However, when the chartists dominate, there may be multiple equilibria, unstable speculative bubbles, and/or eventual market crashes. Fig. 9 shows among others a cusp catastrophe of the Zeeman model (Zeeman, 1974) where the vertical axis is the change of the prices in the market; the F axis represents the demand by fundamentalists, and C axis shows the demand by chartists. When a crash happens the proportion if investors are shifts back towards dominance by the fundamentalists until a new outbreak of speculation appears. Such dynamics very much reflects arguments made by J. M. Keynes and Lord N. Kaldor and by R. M. Goodwin (1967; 1972; 1984; 1987), (our see also Desai (1984; 2004) and H. Minsky (1982), which we will examine in the second section of our paper as one of significant examples of strange

Figure 9: The simple Zeeman´s stock market (bull-bear) model created in catastrophe theory



behaviour of economies in long term perspective. However, we must note that there are several other models which examine the problem of cyclical character of economies. For example, L. Gardini and other Italian mathematical economists investigate properties of financial capital markets, too.

2 The Basic (simple) Cyclical Growth Model: in accordance with Marx-Goodwin theory

The mathematics which was developed for Newtonian mechanics is not very suitable for elaborating economic process because of purposes we exposed earlier. On the other side, if we use contemporary ICT and first of all advanced methods and tools of Computational Intelligence (IC), these enable us using even simple economic models in mathematical form to demonstrate some of the hidden strange events and storylines in economic evolution. One of such cases is the Marx-Goodwin model of cycles. In 1967 R. M. Goodwin published his article on a Growth cycle (Goodwin, 1987). He was inspired by K. Marx's theory of struggle between capitalist and workers, which is the reason and it leads to cyclical behaviour of the capitalist economy. For mathematical formalization of that model he used as artwork of famous *Predator – Preys theory of Lotka – Volterra,* but with economic variables. His model can be briefly described by means of the following symbols:

- *Labour forces ...* $L = v N_0 e^{nt}$, $v, n = constant;$
- *Wage rate ...* $w;$
- *Goods price ...* $p = 1;$
- *Labour forces productivity ...* $\frac{Y}{L} = a = a_0 e^{\phi t}$, *where* $\phi = constant;$ $a_0 = Y \frac{e^{\phi t}}{L}$
- *Revenue ...* $R = pvN_0 e^{nt} a_0 e^{\phi t};$
- *Profit ...* $\Pi = = pvN_0 e^{nt} a_0 e^{\phi t} - w;$
- *Labour forces income ...* $wL;$
- *Labour forces income share ...* $u = w\frac{L}{Y} = \frac{w}{a};$
- *Capital income ...* $Y - wL;$
- *Profit share ...* $1 - \frac{w}{a};$
- *Savings ...* $S = \left(1 - \frac{w}{a}\right) Y;$
- *Capital output ratio ...* $\frac{K}{Y} = \sigma, \quad \sigma = constant;$
- *Labour forces supply ...* $N = N_0 e^{nt}, \quad n = constant;$
- *Employment rate ...* $v = \frac{L}{N};$
- *Capital ...* $K = \sigma Y = \sigma La0e\phi t = \sigma v N_0 e^{nt} a_0 e^{\phi t}$, *where* $\phi, \sigma, v, n = constant;$
- *Output and/or Income ...* $Y = La_0 e^{\phi t} = vNa_0 e^{\phi t}$, *where* $\phi = constant;$

If it is using equali $S = \left(1 - \frac{w}{a}\right) Y = I = \frac{dK}{dt}$ty then growth rate of capital stock *r* will be

$r = \left(1 - \frac{w}{a}\right)\frac{Y}{K} = \frac{\left(1 - \frac{w}{a}\right)}{\sigma}$, and this rate is equal to growth rate of output Y. For computer simulation, the following map can be used:

$$v = ((1-u)/\sigma - (\emptyset + n))v,$$
$$u = (-\gamma + \rho v - \emptyset)u.$$

The block scheme which we was constructed in STELLA is in the snapshot of fig. 10, and the principal scheme in fig. 11.

Figure 10: The block scheme of simple Goodwin model in STELLA

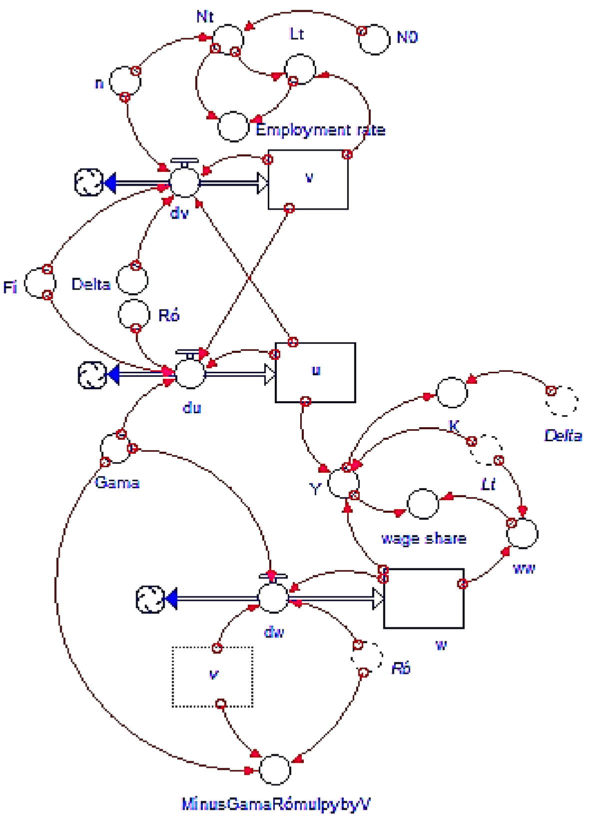


Figure 11: The fillings of blocks in a scheme of simple Goodwin model in STELLA

u(t) = u(t - dt) + (du) * dt
INIT u = 0.65
INFLOWS:
du = (-(Fí+Gama)+Ró*v)*u
v(t) = v(t - dt) + (dv) * dt
INIT v = 0.822
INFLOWS:
dv = (1/Delta-(Fí+n)-u/Delta)*v
w(t) = w(t - dt) + (dw) * dt
INIT w = 0.65
INFLOWS:
dw = (-Gama+Ró*v)*w
Delta = 110
Employment_rate = Lt/Nt
Fí = 0.00115
Gama = 0.8
K = Delta*Y
Lt = v*Nt
MínusGamaRómulpybyV = (-Gama+Ró*v)*10
n = 0.00215
N0 = 1000000
Nt = N0*exp(n*TIME)
Price = ww/Y
Ró = 0.9855
wage_share = ww/Y
ww = w*Lt
Y = w*Lt/u

The figures of parameters we were chosen for the purpose of better images of simulation results. We can clearly observe that there are some phase distance shifts between employment rate and wage share in the entire interval of endogenous fluctuation.

Figure 12: Simulation experiment in time with Goodwin model in STELLA

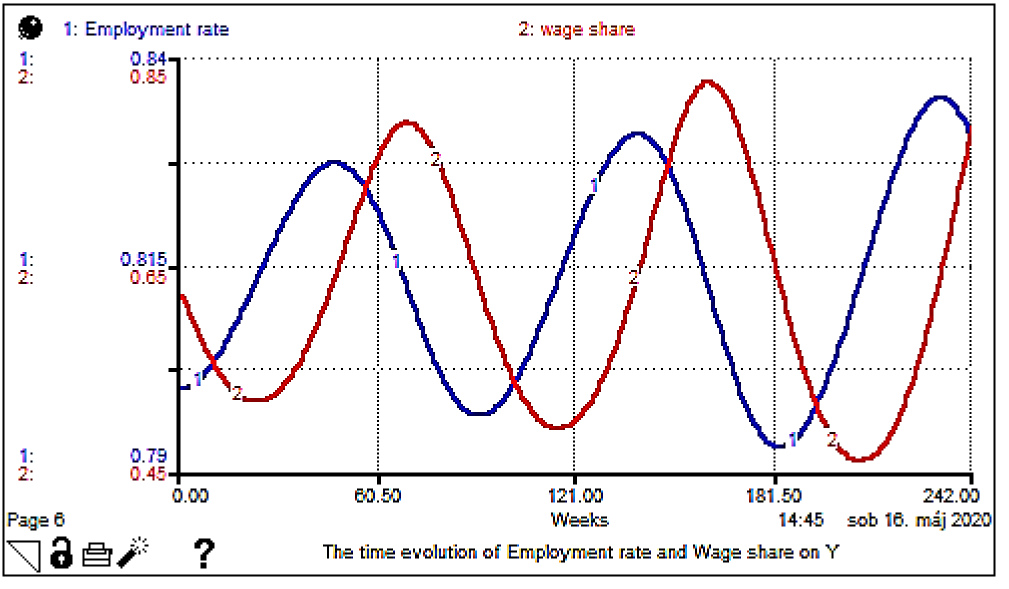


Figure 13: The scatter simulation of Goodwin model in STELLA

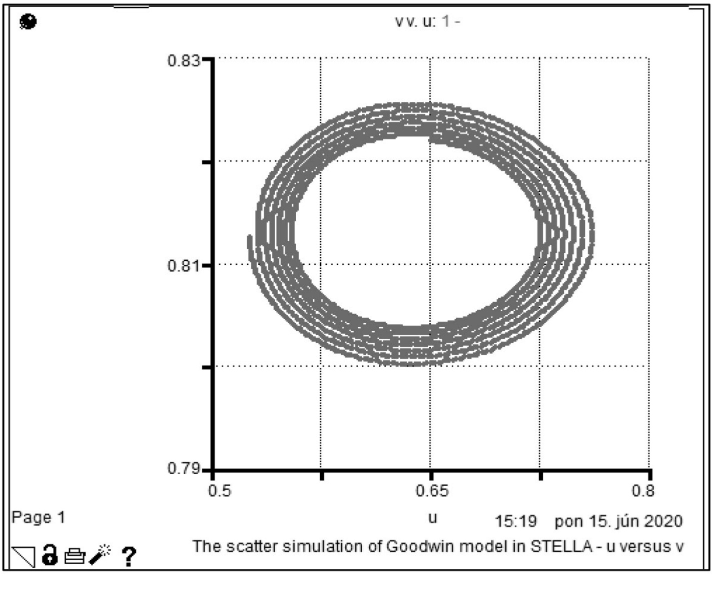


Figure 14: The STELLA experiment with Population and Labour forces size in a Goodwin model

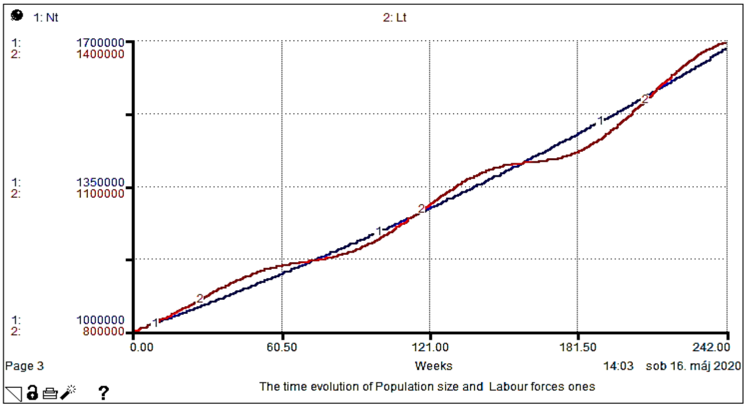


Figure 15: The experiment with Wage and Wage rate with Goodwin model in STELLA

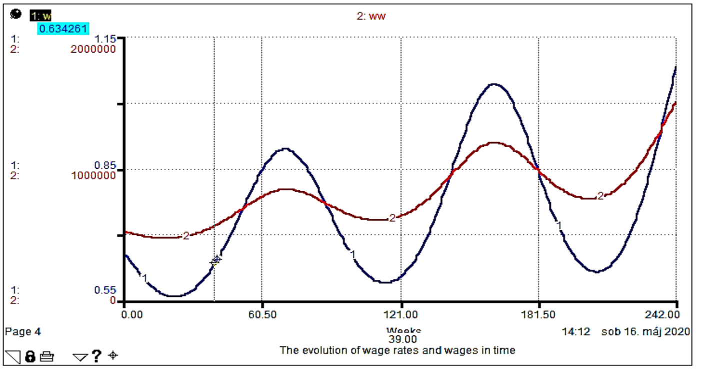


Figure 16: The experiment with simple basic prices with Goodwin model in STELLA

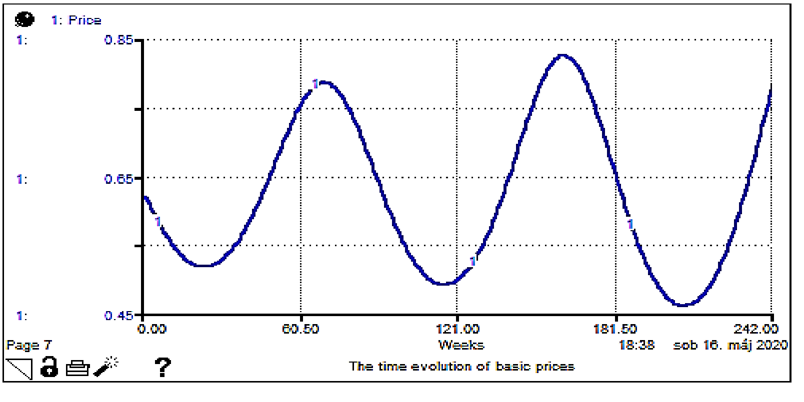
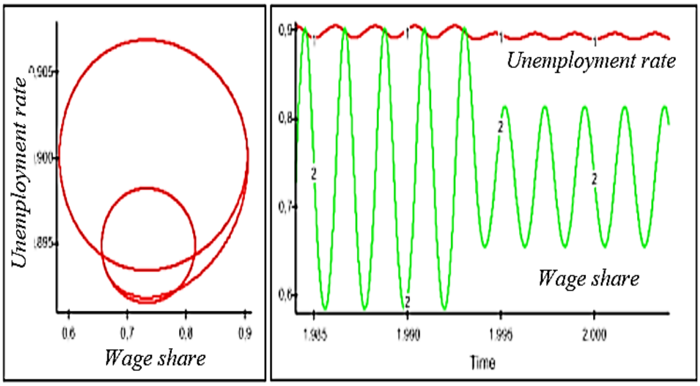


Figure 17: The behaviour of the extended Goodwin model with a change in the Phillips curve



3 Marx-Goodwin-Minsky Model with Endogenous Money by S. Keen

We shall begin this section of our paper by emphasizing that Minsky explicitly rejected neoclassical economics. *"The abstract model of the neoclassical synthesis cannot generate instability. When the neoclassical synthesis is constructed, capital assets, financing arrangements that centre around banks and money creation, constraints imposed by liabilities, and the problems associated with knowledge about uncertain futures are all assumed away. For economists and policy-makers to do better, we have to abandon the neoclassical synthesis."* (Minsky, 1982, p.5). Fundamentals for creating causal loop for cyclical growth with endogenous money:

- Capital (K) determines Output and/or Income (Y) … formula: $Y = \frac{K}{v}$, where v is mean accelerator;
- Output (Y) determines employment (L) … formula: $L = \frac{Y}{a}$, where a is productivity;
- Employment (L) determines wages (w) … formula: $\frac{dw}{dt} = \mathrm{w} \times Lw \times f\left(\frac{L}{N}\right)$, in which f is Phillips curve and N is mean population size;
- Wages ($\mathrm{w} \times L$) determines profit (P) … formula: $P = Y - \mathrm{w} \times L$;
- Profit (P) determines investment (I) … formula: $I = k\left(\frac{P}{K}\right)$, where the right side is depreciation Investment function (γ);
- Capital growing in time $\left(\frac{dK}{dt}\right)$ … formula: $\frac{dK}{dt} = k\left(\frac{\Pi}{K}\right) \times Y - \gamma \times K$.

For illustration purpose only, we added the scheme of Australian economist Keen, see fig. 10.

Figure 18: The scheme with formulas from S. Keen [24]

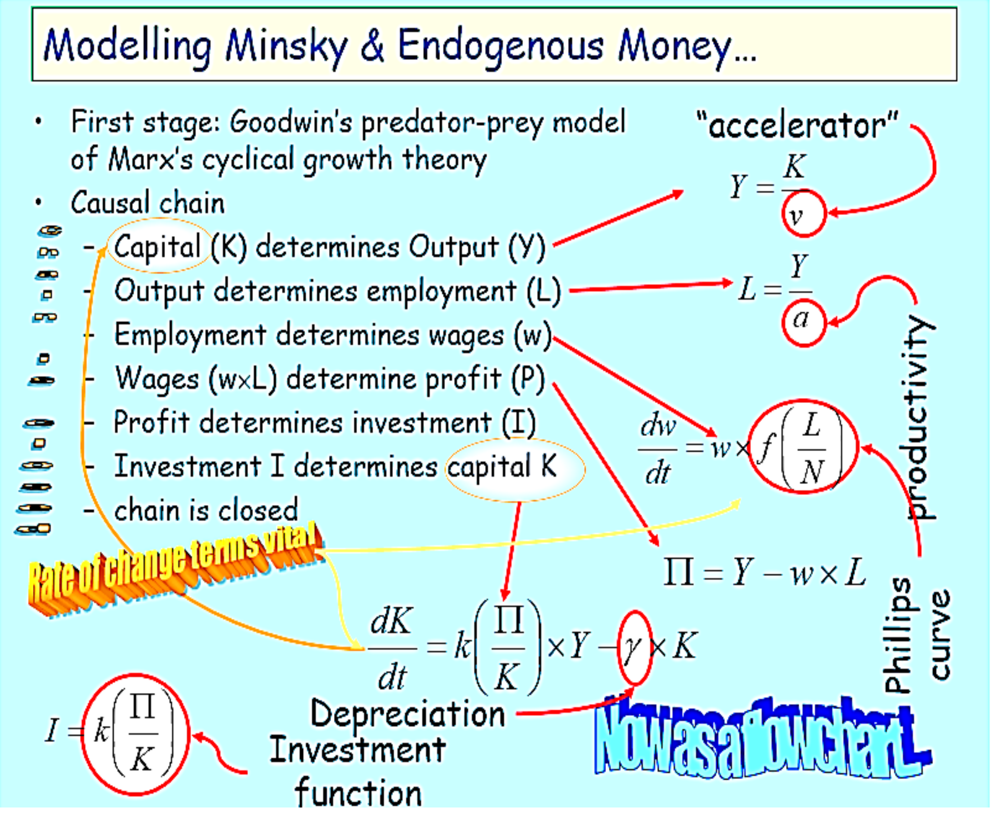


Figure 19: The distributed points of Phillips curve in time-space field

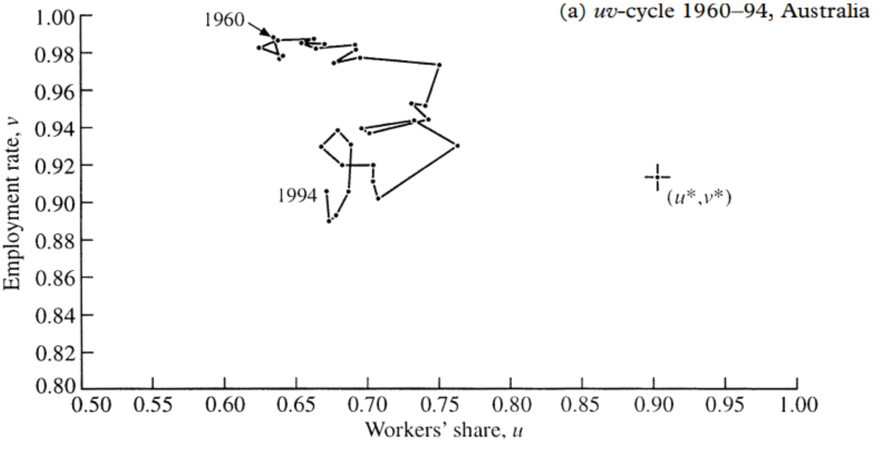


Figure 20: The distributed points of Phillips curve in time-space field

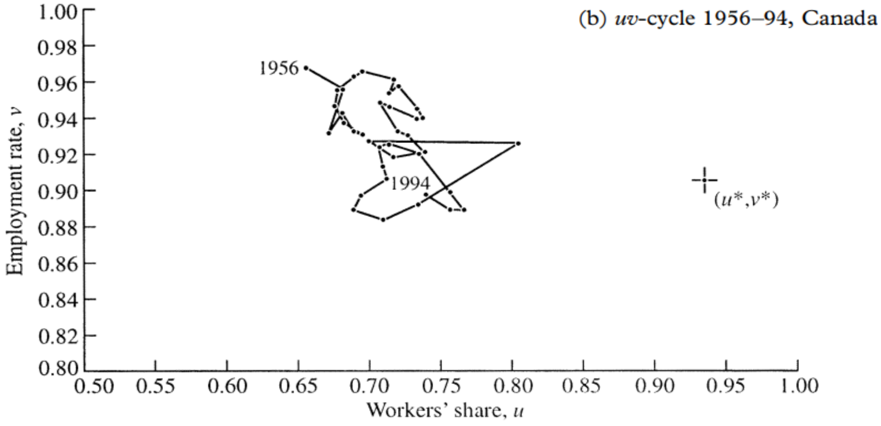


Figure 21: The distributed points of Phillips curve in time-space field

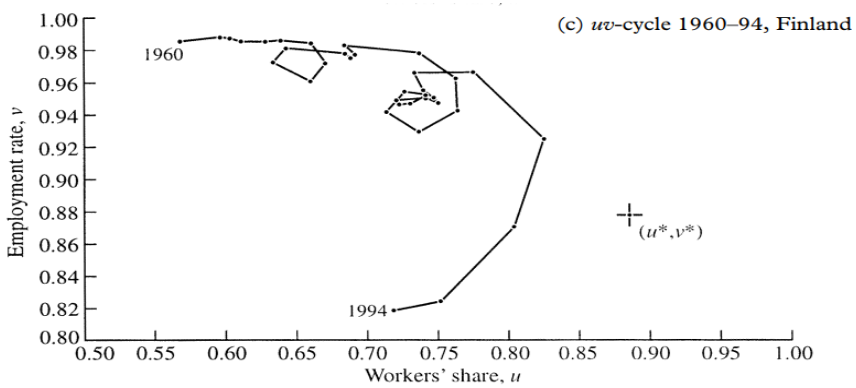


Figure 22: The distributed points of Phillips curve in time-space field

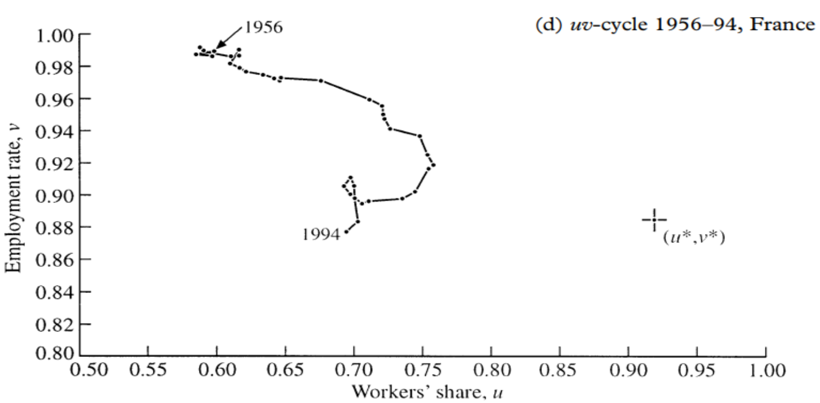


Figure 23: The distributed points of Phillips curve in time-space field

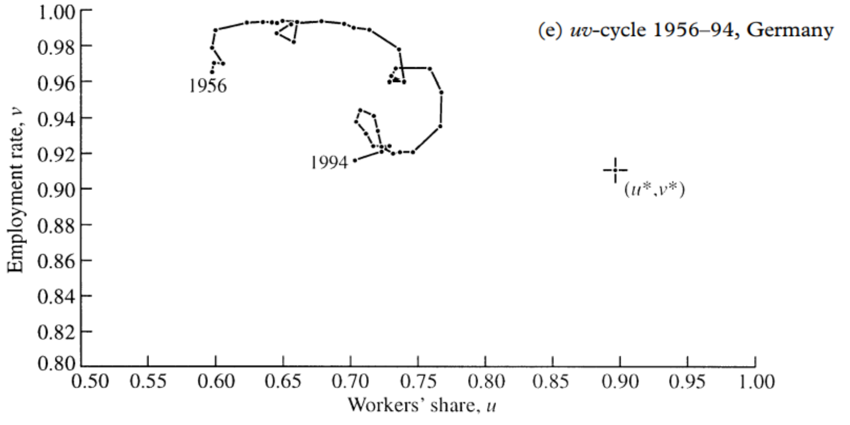


Figure 24: The distributed points of Phillips curve in time-space field

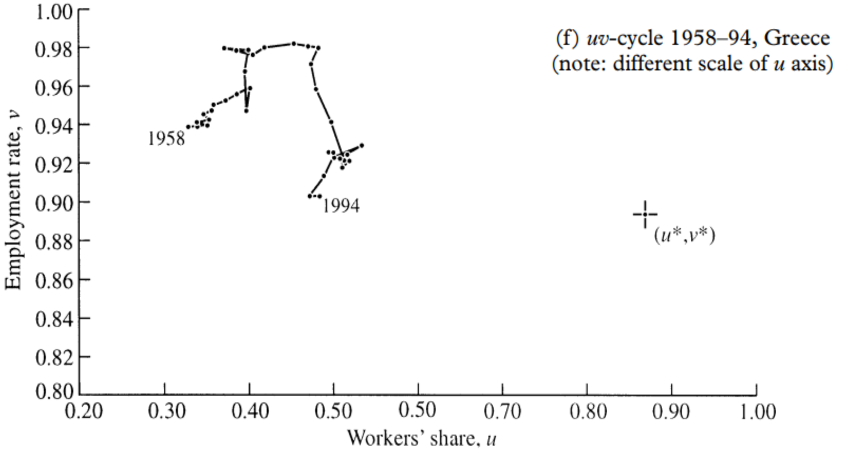


Figure 25: The distributed points of Phillips curve in time-space field

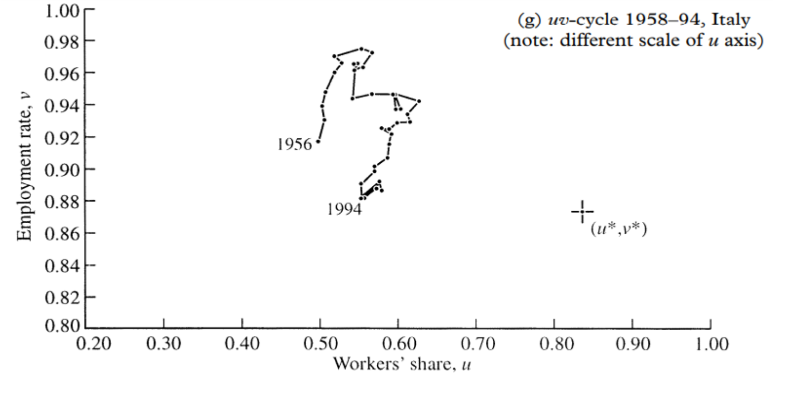


Figure 26: The distributed points of Phillips curve in time-space field

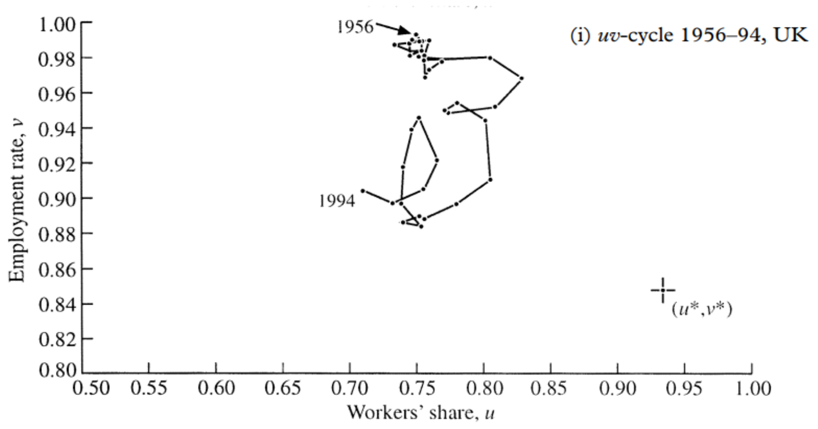


Figure 27: The distributed points of Phillips curve in time-space field

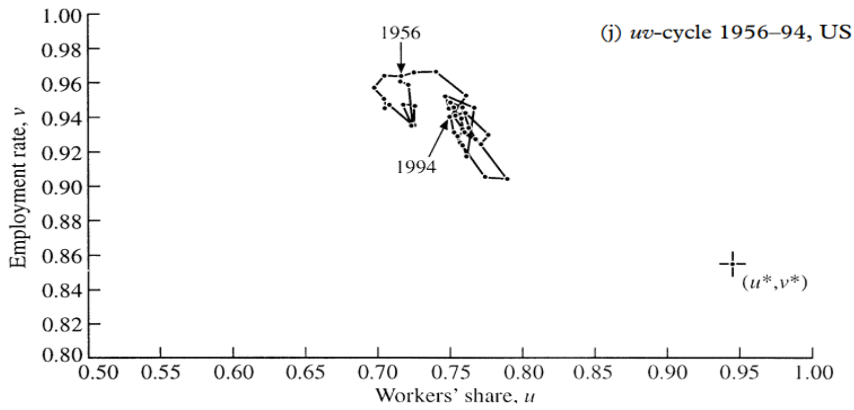


Figure 28: The distributed points of Phillips curve in time-space field

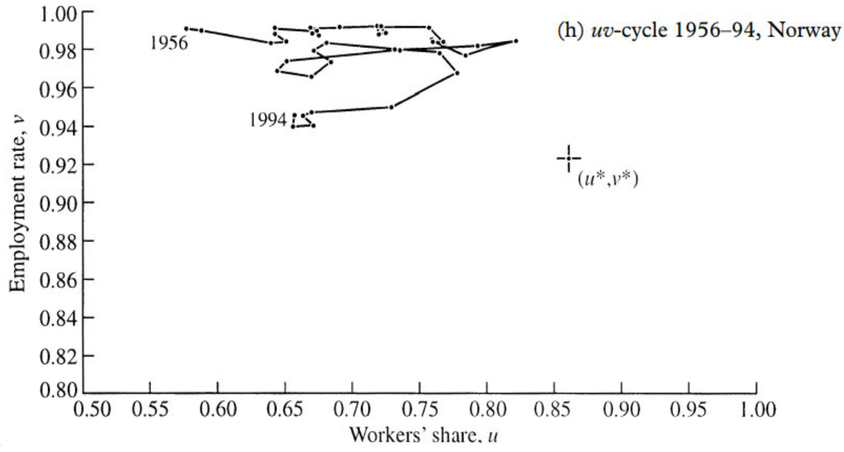
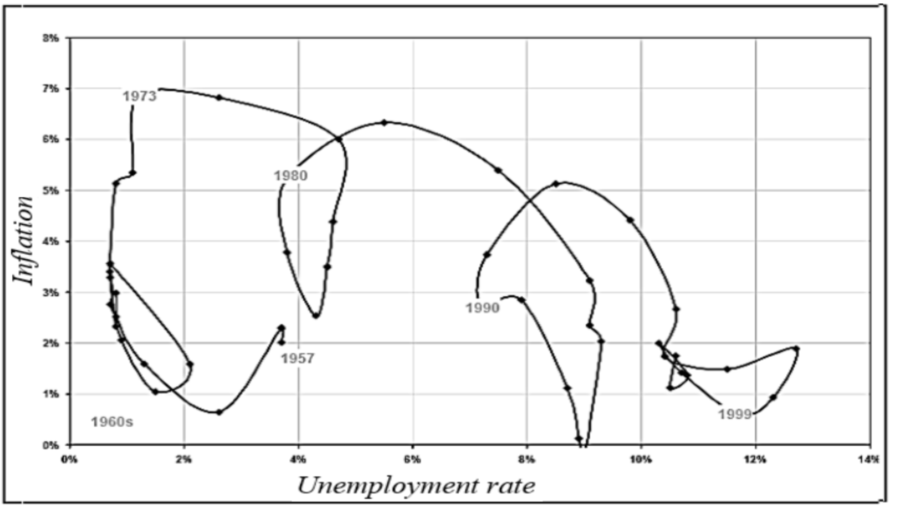
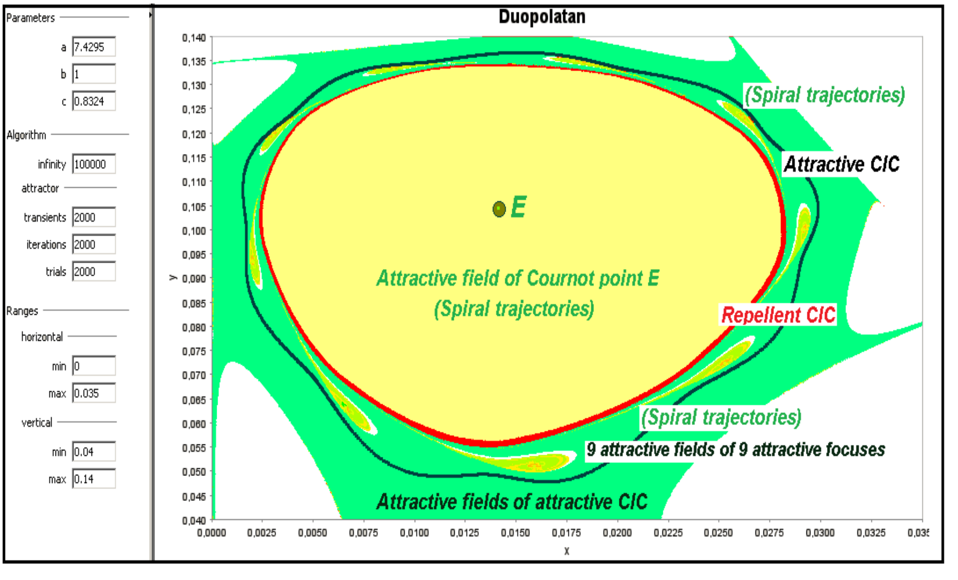


Figure 29: The modified long-term graph of the Phillips curve with German data



As an appropriate object of objective reality for creating partial ideas on potential economic morphic field can serve the regional disparities of the United Kingdom economy as a whole, too.[2]

Figure 30: The strange behaviour of Cournot market (made in iDMC by author)



[2] Since this paper already contains too many graphs, we gave up adding more ones, and we refer the interested reader's attention to official statistical data: Office for National Statistics https://www.ons.gov.uk/.

Similar but more complex behaviour is displayed by the famous model of A. Cournot called duopoly as Goodwin one. It is also created from formula as can endogenously create complex cyclical behaviour. In contrast to the two models mentioned and elaborated by the author (Andrášik 2019; 2020), there exist theories and models with artificially added exogenous functions which is generate cycles, this one is not a product of endogenous process. For example, such one is Lord Kaldor model of cyclical economic growth in which the cycles are generated by artificially added exogenous goniometric function arcus tangents. The same function was used for emerging cycles in the model of financial market created by Italian mathematical economists.

4 Conclusions

The author of this paper was trying to put forward the hypothesis that even to this day hidden forces and behaviours in real economies are responsible for complexity in economies (see also Fliedner, 2001) and for strange behaviour for economics. For exhibition of such cases, the author uses some metaphors from existing economic literature and several statistical data too with a lot of graphs.

In the *first section* the attention is focused on organismic character of socio-economic reality, and it is hypothesizing that behind its strange behaviour there have to be some unknown activities that the author identifies with such events as morphic fields and resonance. On the other hand, the author emphasizes that even in classical political economics there existed a presumption that something, maybe some force, must be behind economy, which is responsible for its partially observable behaviour. For example, A. Smith called this force *invisible hand of the market.* We can really reason market in a metaphorical approach as if there operated some morphic field with several resonances. The socio-economic morphic field and resonance is the most complex case among all other conceivable ones. It is because that entity is constructed on the bases of all existing forces in our world that is: physical (matter, space and time), chemical, biological, sociocultural, and the like. Other classical economist K. Marx claimed that the reasons lie in very variable and contradicting relations among differentiated participants of economic process. He also pointed out that economies have organismic character. It may be a surprising finding that even some simple mathematical formulas also used in economics can exhibit some very strange behaviour if it tested in computational runs. Such examples outside economics are objects in mathematical Catastrophe Theory, in bifurcation theory, in the theory of structural stability, Mandelbrot and Julia sets, in brusselators, Belousov–Zhabotinsky reactions, etc. In all such cases the author emphasizes that these are nowadays only metaphors, and it is necessary to focus attention on further investigations.

In the second section the author is working with theories and models of cyclical behaviour of economies. For argumentation there is served the theory of class struggle of K. Marx adapted by R. Goodwin to mathematical form used as model pattern of the Predator-Prey cyclical growth independently created by famous biomathematics scholars Lotka and Volterra. Author used software STELLA for computational simulation building block diagram fulfilled by principal ones mainly in the form of mathematical formalisms and parameters as chosen able numbers. In the section there are represented several results of simulation runs which clearly proves that even such simple formula can produce complex cyclical behaviours.

In the third section we focusing our attention on the fact that in these days there exist several modifications of original model of Goodwin but we are using only the Minsky–Keen model of financial instability for discussion. Differences consist in using bank loans for investment to growth. This means that there emerge not only quantitative but qualitative differences, too. In the two-dimensional Goodwin model the wage share and employment rates display the typical oscillatory behaviour similarly as has been observed in a predator–prey system, with closed trajectories rotating around a non-hyperbolic equilibrium. The decision to introduce debt to finance new investment leads to the three-dimensional Keen model exhibiting two distinct equilibria, a good one with finite debt and strictly positive employment and wage share, and a bad one with infinite debt and zero employment and wage share. Several scholars determined that for typical model parameters, both can be locally stable. Also other scholars showed that in the case of introducing a purely speculative asset financed entirely by debt leads to a four-dimensional model for which the finite debt equilibrium can become unstable even when it is stable in the absence of speculation, whereas the equilibria with infinite debt can occur with either infinite or zero speculation.

The attempt of the author of this paper to focus attention on strange behaviour of economies in objective reality and his suggestion to use for that purpose in economics is not a very common approach and may provoke embarrassment and criticism, too. But the author is convinced that hypothesizing the hidden unknown strange process in objective reality and using the idea of morphic field and morphic resonance is hopeful. He is convinced, but only on the level of metaphors – however only temporarily – that the evolution of socioeconomic organism is not decided by directly by actors but mediated on the basis of results of a longer historical development, which was forming into morphological field and inside there is running morphic resonant process. On the other hand, he clearly understands the existence of difficulties of the tasks to be solved. Among other matters, a serious problem may be expected to arise when looking for appropriate mathematical approaches; likewise, theoretical and language problems can arise in computational intelligence when considering method, devices and tools for solving such problems. An intensive development of ICT in our days brings promising opportunities for the simulation needed, which actually requires a very strong computer capacity, maybe in the dimension of new Japanese supercomputer Fugaku.

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