“Behavioral economics as the new mainstream in economic thinking: reinterpretation of financial and currency risks”



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# Behavioral economics as the new mainstream in economic thinking: reinterpretation of financial and currency risks

## Abstract

For many years the research literature has discussed the role of behavioral economics in monetary policy formulation. Time and again the "science" of economics as practiced by policy makers has often failed to anticipate and apply effective stabilization policies to the impacts of national and global economic developments. So why do "theories" and results diverge? The "science" assumes "rational" behavior in an idealized economy whether modeled in arcane the "efficient" market, capital asset pricing or others or just as conceptualized in policy making conversations. The current economic crises persuaded both central bankers and economic thinkers to reconsider theirs "rational" economic approaches and to put more attention to psychological factors which determine the decisions of economic agents. Thus, besides of normative economic theories, behavioral economics became one of the mainstreams in economic thinking nowadays. For this reason the application of behavioral economics to the macro and micro-governance processes was enlightening. In the paper the development of behavioral economics was analyzed. First part of the article presents the overview of the main researches which are related to the psychological approach to economy. The particular focus was done on the works of Tversky & Kahneman and Akerlof & Shiller for they have made a significant contribution to the formulating of the behavioral economics ideas. In the second part the attempts to analyze current economic crises in Eurozone from the point of view of behavioral economics were revealed.

**Keywords:** behavioral economics, bounded rationality, irrational behavior, psychology in economics, decisions under risk, economic crises, currency risk, Eurozone.
**JEL Classification:** E60, N10, G10.

## Introduction

*The essence of this-time-is-different-syndrome is simple. It is rooted in the firmly held belief that financial crises are things that happen to other people in other countries and other times* (Reinhard & Rogoff, 2009).

The sub-prime crises of 2008 in the US and continuing debt problems in the Eurozone area bring us to the conclusion that existent quantitative economic concepts haven't been effective to extend to safe global economy from distraction and crashes. But what is the reason? If so many scientists over the last few centuries (!) worked under modelling of economic processes, then why we still haven't the universal formula for running the economy in the prosperity with full employment and low inflation?

This paper is dedicated to the behavioral mainstream in modern economic thinking which to my mind most precisely describes the real situation in the world economy via the explaining of economic agents' behavior. Whilst the rational behavior of economic agents is the critical assumption in the up-to-2008 mainstream economic theory, it is also the underlying assumption of the developed countries economic policy. Behavioral approach to the explanation of financial crises occurring goes against standard economic concepts. In producing such a description, it is investigated how the human beings behave when the risks to loose are much higher than the opportunity to gain a better profit. Thus in the end the article provides you with the assumptions and concerns of the inductive explanation of the Eurozone economic crisis and downturn in the financial markets.

## 1. Overview of the theoretical fundamentals of behavioral economics

The roots of behavioral economics go to the 18th century to the name of outstanding mathematician Daniel Bernoulli (1738) who discussed the St. Petersburg paradox and developed the idea of relative utility. In his paper he mentioned: "…the determination of the value of an item must not be based on its price, but rather on the utility it yields. The price of the item is dependent only on the thing itself and is equal for everyone; the utility, however, is dependent on the particular circumstances of the person making the estimate. Thus there is no doubt that a gain of one thousand ducats is more significant to a pauper than to a rich man though both gain the same amount". In this quote Bernoulli pointed out different perception of the same quantity of monetary units which he called "utility". In the light of behavioral approach evolution, moreover, it worthy to mention Herbert Simon (1955), Nobel Prize winner (1978), who suggested "bounded rationality" term which presented decision-making process of the average agent. He underlined the agents were only partly rational. Simon also assumed that individual preferred heuristics for making a consumer choice rather than a theory of optimization.

In 1940s *Oskar Morgenstern* and *John von Neumann (1944) tried to go back to the strict rationalism mentioning*, "We wish to concentrate on one problem – which is not that of the measurement of utilities and of preferences – and we shall therefore attempt to simplify all other characteristics as far as reasonably possible". They had pushed off from the idea of always rational decisions to maximize agent's monetary profit and then they called it "expected utility".

One of the first researches, who disapprove *Oskar Morgenstern* and *John von Neumann's* joint development of *expected utility* theory, was Maurice Allais. A couple of simple experiments by M. Allais demonstrate that people's behavior is not always rational. These results were also used by Kahneman & Tversky's in their "Prospect theory: An analysis of decision under risk" (1979) which became the well-cited paper at the end of XX century and, to an extent I can judge, made behavioral economics the new mainstream in the economic thinking of postindustrial countries.

Generalizing from their results, it deserves to concentrate on the idea of *asymmetric reaction* to wealth *changes* which was produced from the empiric researches in the risk of uncertainty. The central points here are utility and value. Kahneman & Tversky consider utility which reflects human attitude to the net profit, but in the human general frame of mind "value" characterizes income and expenses as two independent parameters.

Kahneman & Tversky focus on the distinction between two different approaches: normative (rational) and descriptive (irrational, subjective) considering the individual does not always make rational choices or realize his/her mistakes, even after the normative theory will explain him. The economic behavior of individuals according to Kahneman & Tversky appeals to a non-rational way of thinking. Thus, people can make wrong choices repeating them without analyzing their errors even if classical theory is explaining that the decisions can cause negative consequences on agents' financial position.

Floris Heukelom (2007) in his paper that is dedicated to investigating the behavioral economy origins concludes upon Kahneman & Tversky theory that their 1979 "Econometrica" article marks the beginning of a project to come to a full descriptive theory of rational human behavior along the existing normative theory. Also it deserves to be mentioned that nowadays behavioral approach develops in two directions, which still are based on the Kahneman & Tversky assumptions: first continues normative-descriptive-prescriptive theory, second develops in terms of neoclassical theory which considers psychological researches as a part of mathematical economic predictions approach.

One of the most influential books which developed a new vision of human nature and its role in economic-decision process is "Animal Spirit" (2009) by George Akerlof (Nobel Prize in 2001) and Robert Shiller (Nobel Prize in 2013). I think few of economists will judge me for taking too much attention to this book. The authors try to explain the fundamental reasons of economic crises abstracting from five "stem sells" of the "world economic body". They are − confidence and its multipliers, fairness, corruption and bad faith, money illusion, and stories which are separately or in total determine the direction of society's way of thinking in different periods of history. I will not go deeper into the second part of the book where the authors concentrate under eight questions concerning current economic and social crises in the USA. However, the main theoretical ideas reflected in the first part deserve to be mentioned and detailed taking into consideration that they will be used then in making the analysis of Eurozone crises.

Akerlof and Shiller (2009) make a focus on the importance of confidence as a process of implying behavior that goes beyond a rational approach to decision making. Also they figure out Keynesian-Hiksian money multiplier in the light of confidence multiplier which has a reason because it bases on the consumption level. And in the case we have sustainable economic development people have the confidence that they can spend money because they will obviously receive fixed income next month. It means that consumption is growing and money supply is also following the growing production. And in fact the opposite effect appears in case of the problems in economy. However, to utilize this factor for practical purpose to analyze an economic situation we have to find a way to evaluate it by set of parameters. It can be argued that we can include there the changing of consumption but other parameters which can cause the significant bias in economy. For example, it is needed to be taken into account internal investment rates and investments structure. If the largest share of investments is going to the commodities such as gold, real estate, etc. it means that we have the effect of substitution money by material things, so people are tending to get rid of money possibly because they feel it is risky to keep money in cash, bank deposits or bonds. In the other words, the expectations of inflation or depreciation among the house holdings or legal entities predominate. In this way we touched upon the issue of the expectations which carry great weight in the decision-making process of the economic agents. And public pressure has influential effect which also leads the economy and we will use this conclusion making the analysis of Eurozone economy. In the light of this issue Akelof and Shiller presume credit flows have to be targeted "at the level that would normally prevail at full employment. Achieving this target would replace the credit flows that have disappeared because of the sudden decrease in confidence".

The other points which authors reveal are fairness, corruption, and bad faith which are strongly combined with the level of confidence in the society. Fairness can affect confidence in a positive way by strengthening it or negatively by creating confident bias. Current societies have a very strong sense of fairness, but here we have to mention the phenomenon that each country has its different attitude to fairness. Moreover, it can be presumed that for Akerlof and Shiller it is a kind of importance because American society is more sensitive to fairness as for example Swedish, because of high level of economic inequality in the US society. The wider wealth and income gap in society, the more sensitive it is towards fairness and corruption level. Investigating of this phenomenon has to include different social and economic aspects with Gini coefficient analysis for different countries which creates the perspectives for further researches.

It needs also to make a stress on money illusion, the existence of which was challenged from the beginning of 1960s. What is money illusion? Akerlof and Shiller (2009) argue that money illusion "occurs when decisions are influenced by nominal currency amount". There were a lot of discussions if it was needed to take into account money illusion for making any kinds of economic forecasts. The most nominal researches were done by Fisher, Keynes, Friedman and Shiller. Akerlof and Shiller assume that money is perceived like a veil of transactions instead of being a unit an account, because its inflation rates are not consisting as a matter for changing monetary value of the transactions due to the human psychological incline to overestimate the real consumer value of money. However, the authors describe the case of an economy which growth is sustainable and is not tend to inflation shocks. But if we investigate another example of Ukrainian economy at the beginning of 1990s we have had the opposite situation with national currency. Because of the distrust to the national government economic agents were keen to change their money to commodities as soon as possible. As a result pace of money inflation was faster then the real deterioration of the economy which had a vastly negative causality on Ukrainian GDP. To sum up, I want to point out that the phenomenon of money illusion is more complex than it is explained now basing only on the Fisher quantative model. However, money illusion can be defined as an illusion of over or underestimated money which determines the transactions' monetary value and relates to the level of confidence among the economic agents of the specified economy.

Stories as a mover of society and economic conditions themselves are considered by Akerlof and Shiller as an epidemic: "Stories are like viruses. Their spread by word of mouth involves a sort of contagion. Epidemiologists have developed mathematical models of epidemics, which can be applied to the spread of stories and confidence as well". The main idea of storytelling as phenomenon to be investigated in economic science is that entities can manipulate stories for satisfying their interests. Let's go back to Kahneman and Tvesrky who argue about willing to risk. If you knew a story about negative experience of your friend or the friend of your friend, who used the car of some XXX trademark, you would never buy the car of this company even if it enhanced the models. Because the stories can create stereotypes, thus people unconsciously prejudge decision-making process spreading storytelling.

## 2. Implementation of behavioral approach to current economic crises of Eurozone

From this point of view behavioral approach can be used to analyze the current economic conditions in the European Union (EU then) taking into consideration presented research. First of all, the European Union which was created first as the European Coal and Steel Community, it experienced a lot of reforms, enlargements and other changes. All of these transformations brought some impact on the EU, doing it more susceptible to the negative impact of the external factors and in the same time making its unamity more challenging, due to the fact that more and more countries joined the EU which made it more complicated to combine countries with different economic and social policies, culture, and mentality in one union. However, to deepen the EU integration it was decided to create the Monetary Union, like a next stage of the European unification. Moreover, due to the new theory of optimum currency zone (2000s) it is causality between the level of integration and the even development of its members. However, nowadays countries of Eurozone faces the divergence of the debt difficulties which have grown into economic and social crises accompanied with public dissatisfaction.

It was already mentioned the confidence as the important issue for the future development of every country. Over the years the confidence in the strong EU sustainable economic growth caused the growth of consumption, increasing of domestic credit and stock markets. However, the dynamic was not similar in all of the countries which caused asymmetric shocks and concentration of the capital in the regions with more attractive conditions.

The point that the human perceives his/her losses more heavily than the happiness from achievements is one of the reasons which influence on the economic behavior of society as a whole. Thus, in the period of economic crises, economic agents become too sensitive to the additional expenses, that is why they are not inclined to make risk investment operations even if they can multiply their income in long-term perspective. Tendency to risk is compensated by fear of lowering their standard of living. What does it mean from the macroeconomic point of view? It is the reduction of consumption and drop in investments together that cause the reverse multiplication effect, freezing investment projects, output reduction and as a result, the declining of GDP. The closest example can be provided concerns the EU is as follows: debt crises in periphery countries and their policy of austerity created fear of unemployment and homelessness among the citizens who lost their hope for state support. Thus overconfidence has transmitted in underconfidence. Now only state authority can recover and compensate this lack of confidence. It means the main challenge for the state economic authority becomes to make its society confident in sustainable economic growth of the country.

Reinhart & Rogoff, in their book "This Time is Different" (2009) make a deep empiric analysis of economic crises with the connotation that economic agents usually overestimate the possibility of markets to stay stable because of "invisible balancing hand". In the 1930s implementing the Keynesian theory of regulated markets and spurring economy via fiscal and monetary instruments, the USA began to recover. Nowadays with the predominance of non-monetary mainstream, it is not very popular to proclaim that only the state can become the engine of confidence, rehabilitation and economic recovery. However, the USA, with its policy of "quantative easing," achieved success and now the tendency to economic recovery had been observed. It means that money supply has the impact on economy not only in short-term but also in medium-term perspective. Returning back to Eurozone, it is necessary for its citizens to feel state support via an effective employment policy, infrastructure development, financial markets stabilization and stimulus of entrepreneurship. Moreover, even if it costs additional expenses in the form of controlled budget deficit, still it will have positive economic results in future and the Eurozone has temporarily to ease criteria for its member states to reach economic recovery in medium-term period.

## Conclusion

To sum up, few researches I am sure will argue with the assumption that the emerging of behavioral approach was not just a response to the imperfection of the existed economic theories, but became one of the mainstreams which changed the economic thinking of the last century. The very beginning of the behavioral economics goes to 18th century and in 20th century it turned into the alternative psychological economic theory. The main idea of behavioral approach lies in the beliefs that it is not possible to get efficient economic forecasts by simplifying the behavior of the economic agents to the rational decision-making process. The models built on this assumption have significant deviation in the period of stable economic growth and often do not work in the moment of financial crises. Normative economic theory suppose three characteristics of human way of thinking, they are: "unbounded rationality", "unbounded willpower", and "unbounded selfishness" which are impossible to observe in real economy. Behavioral economics aims to reveal the shortcomings of this approach and creates the new vision of "not always rational" human behavior.

That is why behavioral approach is the most useful in the period of financial crises when the markets are too sensitive to any economic changes, thus implementation of the normative theories in most cases fails. At the beginning of the paper the citation from Reinhart & Rogoff book was mentioned to highlight the issue of overconfidence which misleads people and creates general attitude that economic crises is impossible in the developed countries. However, a debt crisis in the Eurozone has shown that overconfidence causes undue risks for the markets which cannot be predicted by the existent economic models. Thus, another approach has to be implemented to analyze the markets and build future economic policy, approach which will correlate with the "bounded" decisions of economic agents – behavioral economics.

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