DECISION UNDER RISK: PARADIGM SHIFT EXCLUDING THE ALLAIS PARADOX

Valeriy Galasyuk, «COWPERWOOD» LLC AF, Dnipro (Ukraine).

E-mail: v.v.galasyuk@gmail.com

DOI: 10.32342/2074-5362-2019-1-26-3

Key words: decision-making under risk, utility, decision value, value of economic interest, the paradigm of four basic types of decisions, economic risk, probability, the Allais paradox.

Since 1953, many scientists and scholars dealing with the issues of making economic decisions under risk have been seeking a solution to the Allais paradox. The research process related to resolving this paradox resulted in the development of a new science – behavioral economics and gave birth to the "prospect theory" developed by D. Kahneman and A. Tversky, as well as R. Thaler's "nudge theory".

The author of this article proposes a fundamentally new approach to making economic decisions under risk, based on the provisions of the "G-theory". When making economic decisions under risk, firstly, it is proposed to refuse the "utility paradigm", which dominates economic theory and practice and to transit to a new "paradigm of four basic types of decisions". Such a transition leads to the fact that when choosing the best of economic decisions, they should be compared not by the decision value, but by the value of the economic interest to implement each of the decisions. Secondly, it is proposed to take into account the reversibility of two alternative basic types of decisions, in a situation where the subject does not control an object, namely: the decisions "to start to control an object" and "to continue not to control the object". The value of the interest to implement an economic decision is proposed to be measured as a difference between the values of these two alternative decisions. Thirdly, it is proposed to refuse the concept of identifying risk with probability, which dominates economic theory and practice, and to switch to the consideration of economic risk which is differentiated between added and subtracted conventionally-cash flows. One should take into account that for added conventionally-cash flows, the consideration of probability simultaneously takes into account the risk of decreasing these flows as well, and for subtracted conventionally-cash flows, the consideration of probability leads to a decrease in their absolute value. Since for subtracted conventionally-cash flows, the risk lies in not the decrease in their absolute value, but in the increase in it, an additional special consideration of the risk is required.

The approach proposed by the author allows us to use a new way of implementing rational decision-making procedures under risk and, most importantly, excludes the existence of the Allais paradox.

References

- 1. Bernstein, Peter L. (1995). Against The Gods: The Remarkable Story of Risk. New York, John Wiley&Sons, 368 p.
- 2. Mary Douglas. (1990). Risk as a Forensic Resource. *Daedalus*, vol. 119, no. 4, pp. 1-16.
- 3. Bernoulli D. (1738). Specimen theoriae novae de mensura sortis. Commentarii academiae imperialis petropolitanae, pp. 175-192.
- 4. M. Allais. (1953). Le Comportement de l'Homme Rationnel devant le Risque: Critique des Postulats et Axiomes de l'Ecole Americaine. *Econometrica*, vol. 21, no. 4, pp. 503-546.
- 5. Daniel Kahneman, Amos Tversky. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, vol. 47, pp. 263-292.

- 6. John yon Neumann, Oskar Morgenstern. (1953). Theory of Games and Economic Behavior. Princeton, Princeton university press. Fifth printing, 641 p. Available at: https://archive.org/details/in.ernet.dli.2015.215284
- 7. Frank H. Knight. (1964). Risk, Uncertainty and Profit. New York: Sentry Press, 381 p. Available at: https://mises.org/sites/default/files/Risk,%20Uncertainty,%20and%20Profit 4.pdf
- 8. Harry Markowitz. (1952). Portfolio Selection. *The Journal of Finance*, vol. 7, no. 1, pp. 77-91.
- 9. Alfred M. King. (1994). Total Cash Management: A Company-Wide System for Forecasting, Managing, and Improving Cash Flow. Mcgraw-Hill, 352 p.
- 10. Bowman E.H. (1980). A risk-return paradox for strategic management. *Sloan Management Review*, no. 21. pp. 17-31.
- 11. Ramenskaya, L.A. (2016). Paradokc otrizatel'noj wsaimocwjasi dochodnocti i ricka ("Paradokc Boumana"): obsor teorii i jempiritscheckich iccledowanij [The Paradox of the Negative Relationship between Yield and Risk ("The Bowman Paradox"). A Review of Theory and Empirical Research]. Bulletin of Udmurt University. Series "Economics and Law", vol. 26, no. 4, pp. 51-56. Available at: https://cyberleninka.ru/article/n/paradoks-otritsatelnoy-vzaimosvyazidohodnosti-i-riska-paradoks-boumana-obzor-teorii-i-empiricheskih-issledovaniy
- 12. Vitlinsky V.V., Velikoivanenko G.I. (2000). *Vinancowij risik i metodi iogo wimirjuwannja* [Financial risk and methods of its measurement]. *Finances of Ukraine*, no. 5, pp. 13-23.
- 13. Vitlinsky V.V., Velikoivanenko G.I. (2004). *Risikologija w ekonomizi ta pidpriemniztwi* [Risk in economics and entrepreneurship]. Kyiv, 480 p.
- 14. Watsham, Terry J. Parramore, Keith. (1997). Quantitative Methods in Finance. Thomson, 2-nd edition, 395 p.
- 15. Paul J.H. Schoemaker. (1982). The Expected Utility Model: Its Variants, Purposes, Evidence and Limitations. *Journal of Economic Literature*, vol. 20, no. 2, pp. 529-563.
- 16. Galasyuk V.V. (200). Ocnowy teorii vinancow w kontekcte problemy dickontirowanija uclownych denezhnych potokow [Fundamental Principles of Finance Theory in the Context of the Problem of Discounting Conditional Cash Flows]. Bulletin of the National Bank of Ukraine, no. 4, pp. 53-56.
- 17. Galasyuk V.V. (2000). *Problemy teorii prinjatija jekonomitscheckich reschenij* [Problems of the theory of making economic decisions]. Dnepropetrovsk, Science and Education, 261 p.
- 18. Galasyuk V. (2018). Fair Exchange Value of Objects in Purchase-Sale, Gift and Exchange Transactions. Dnipro, ART-PRES, 208 p.
- 19. Galasyuk V. (2002). Ponjatie jekonomitscheckogo ricka w kontekcte konzepzii CCF [The concept of economic risk in the context of the concept of CCF]. Bulletin of the accountant and auditor of Ukraine, no. 15-16, pp. 26-34. Available at: http://www.galasyuk.com.ua/downloads/publications/riski.pdf