

Willingness to take risks—a personality trait

October 30 2017



Individuals' general factor of risk preference remains relatively stable over time.
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People differ in their willingness to take risks. An individual's propensity for risk taking can also vary across domains. However, there is new evidence showing that there is also a general factor of individual risk preference, which remains stable over time - akin to the general Intelligence Quotient (IQ). Researchers from Switzerland and Germany report these findings based on over 1500 participants in the journals *Science Advances* and *Nature Human Behaviour*.

Should I invest my money or leave it in my savings account? Have surgery or not? We make decisions like these knowing that they have consequences and involve risks. But what is the nature of the [risk preference](#) driving risk-related decisions? Does our risk preference depend on the context or is it largely consistent across situations? Both is true, according to findings from a large-scale study from researches of the Max Planck Institute for Human Development in Berlin and the University of Basel, with funding from the Swiss National Science Foundation.

To assess the risk preferences of 1'507 adults aged between 20 and 36 years, they used three distinct approaches: Self-reports on hypothetical risk scenarios, experimental behavioral tests involving financial incentives as well as information on actual risky activities in everyday life. In total, participants completed 39 tests over the course of a day. To examine how stable the risk preference is over time, the researchers had 109 participants repeat the tests after six months. Previous studies on risk preference mostly used just one or only a few selected measurement instruments.

Stable factor over time

"Our findings indicate that risk-taking propensity has a psychometric structure similar to that of psychological personality characteristics. Like the general factor of intelligence, there is also a general factor of risk preference," says Dr. Renato Frey from the University of Basel and the Max Planck Institute for Human Development. "In other words, your willingness to take risks may vary across different areas of your life, but it will always be affected by the underlying general factor of risk preference." Backing up this idea, the study's findings show that individuals' general factor of risk preference remains stable over time.

Another finding of this study is that the hypothetical scenarios and the

reports on actual risk-taking behavior both painted a similar picture of an individual's risk preference. However, a rather different picture emerged from the experimental behavior tests. A detailed analysis of these inconsistencies revealed that for different behavior test participants used different decision-making strategies. These depended on the type of behavioral task - whether it presented risk in a context of a game, for example, or in a more abstract form. "These results show that behavioral tests, which tend to be the preferred approach of economists, often give an inconsistent picture of people's risk preferences that is difficult to explain with unified theories of [risk behavior](#)," says Prof. Dr. Jörg Rieskamp from the University of Basel.

A better understanding of risk behavior

These results are important both methodologically as well as theoretically: "Our work is a wake-up call for researchers, who need to think twice about the various measurement traditions. In particular, there needs to be a better understanding of what exactly the behavioral tasks measure. It seems clear that they don't assess risk preference across situations," says Prof. Dr. Ralph Hertwig from the Max Planck Institute for Human Development. "But our finding of a general factor of risk preference—based on self-reports and frequency measures of actual risky activities—suggests that risk preference is a personality characteristic in its own right. This insight will make it possible to examine the biological underpinnings of risk preference in future studies."

More information: Renato Frey et al, Risk preference shares the psychometric structure of major psychological traits, *Science Advances* (2017). [DOI: 10.1126/sciadv.1701381](https://doi.org/10.1126/sciadv.1701381)

Andreas Pedroni et al. The risk elicitation puzzle, *Nature Human Behaviour* (2017). [DOI: 10.1038/s41562-017-0219-x](https://doi.org/10.1038/s41562-017-0219-x)

Provided by University of Basel

Citation: Willingness to take risks—a personality trait (2017, October 30) retrieved 27 April 2024 from <https://phys.org/news/2017-10-willingness-risksa-personality-trait.html>

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