

Implementing Information Security Controls—Now or Later?

Analysis of the Study

The paper "Implementing Information Security Controls: Now or Later? Delay Discounting of Losses and Gains" by Søgne, Szekeres, and Snekenes (2025) examines the interface between organizations' delay to implement security and delay discounting—the psychological predisposition to attach lower weight to future gains and losses of such decisions. The question is if security investments as loss prevention outweighs as future gains in informing decision-making and information security policies.

The study is grounded in three main questions: how the next generation of businesses assess the risks of cyber pandemics, whether loss-framed messages should be utilized best to elicit immediate action, and how they can minimize delay discounting of cybersecurity choice. The researchers provide answers to the questions through quantitative training where choices of subjects to take security measures now or in the future are quantified. Statistical testing verifies companies are more likely to participate if they see security investments as losses avoided, not gains in the future. This is testimony to behavioral economics because it indicates individuals are more likely to avoid risk than be rewarded. The study is based on social science theory, specifically cognitive bias, risk perception, and organizational behavior. Delay discounting indicates decision-makers' preference for convenience over security, and risk perception theory indicates risk underestimation. These psychological and behavioral characteristics can be read to inform policies promoting forward-looking investment in cybersecurity.

Research Methods and Data Analysis

Søgne et al. (2025) use a quantitative experiment to measure delay discounting of cybersecurity decision-making. Study participants received hypothetical investment options for cybersecurity and were requested to decide whether or not to implement security actions now or at some later point in the future. The study used delay discounting models to estimate the discounting of future payoffs from cybersecurity by the participants, comparing responses framed as gain or loss.

For statistical testing, statistical regression models were used by the authors to study decision-making patterns. Authors determined that respondents were more concerned with cybersecurity if they were being presented with loss-framed messaging compared to gain-framed rewards. The authors also tested risk perception factors that impacted the

probability of security investment postponements for organizations and put heavy focus on the significance of messaging in the policy-making process.

Conclusion

The study provides essential information on how financial decision-makers justify the postponement of investments in cybersecurity. The results indicate the need for policy reform and behavioral change to help with timely implementation of security policies. Using the loss-framed messaging, authors show that policymakers and organizations can successfully avert cybersecurity complacency. The study also records that marginalized groups are disproportionately targeted when there is a lag in cybersecurity investment in public services, exposing them further. In conclusion, the research findings add to computer systems' security by ensuring risk management best practices and enhanced decision-making policies.

References

1. Søgne, M. M., Szekeres, A., & Snekenes, E. A. (2024). Implementing information security controls: Now or later? Delay discounting of losses and gains. *Cybersecurity*, 11(1), tyaf001.
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