

From Adoption to Assimilation

Economic Models in Information Security Governance

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Information security investment decisions increasingly require economic justification, yet formal economic models remain largely unused in organizational practice. Although prior research has developed a wide range of models for evaluating security investments, evidence suggests that their limited use cannot be explained by technical limitations alone. Instead, adoption depends on whether such models fit existing governance routines, decision processes, data practices, and accountability structures.

This study examines the organizational adoption and assimilation of information security economic models. Adoption refers to the extent to which economic models are used to support information security decision-making, while assimilation refers to the extent to which their use becomes embedded in recurring governance processes such as budgeting, investment approval, risk review, prioritization, and post-investment evaluation. This distinction is important because organizations may use economic reasoning occasionally without institutionalizing it as a stable decision-making practice.

The study is grounded in the Information Security Solutions adoption framework, which combines diffusion of innovation theory with the technology–organization–environment perspective. The framework is adapted to the context of information security economic model use by examining perceived gain, compatibility, complexity, costs, organizational readiness, top management support, external pressures, and visibility. It is further extended with three mechanisms identified in prior qualitative work: cross-functional collaboration capability, legal-regulatory alignment, and post-investment evaluation capability.

Empirically, the study proposes a cross-sectional survey of knowledgeable organizational informants involved in information security investment justification, budgeting, governance, or review. By testing how innovation characteristics, organizational conditions, and external pressures influence both adoption and assimilation, the study contributes to a more practice-oriented understanding of information security economics. The expected contribution is to explain not only whether organizations use economic models, but under what conditions such models become actionable and routinized within information security governance.

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