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Effective Project Management by Integrating Self-managed Work Teams

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Abstract

Purpose of the article Cyber security has become a key factor in determining the success or failure of companies that rely on information systems. However, this entails considerable investment. Typical investments in information technology aim to create value, while investments in cyber security aim to minimize losses caused by cyber attacks. In the case of investment in cyber and information security, therefore, we must evaluate the amount of loss that will never actually occur. This is a really complicated problem, and several approaches have been proposed over the years to estimate the cost-benefit balance of security investments.

Methodology/methods This paper is based on previous research, where two most used methods ROI / ROSI and Gordon-Loe model were identified in the field of investment in cyber and information security. Both methods are described and the advantages and limitations for further research are identified.

Scientific aim The main goal is to select the most suitable method for further research in the field of investment in cyber and information security and set the direction for further research

Findings ROI / ROSI does not seem suitable for further research because it only tells us what percentage of return on investment will be provided during a given period. The separate use of this method (ROI / ROSI) gives us very limited results and it is necessary to combine it with other methods. On the other hand, the Gordon-Loeb model is much more complex although despite several limitations, especially for the coefficients $Ʌ$ and t. Further research will therefore focus on the constant t (probability of attack on a given information set) and its value will be modeled based on the SIR epidemic model on network with standard incidents.

Conclusions At present, there is no standardized approach to decision-making and the size of investments in cyber and information security. This is a very complex problem and it is very difficult to find one universal model. Nevertheless, there are several models that help in this decision-making process, and as the most appropriate method for further research is Gordon-Loe model.

Keywords: Return on investment, Return on security investment, ROI, ROSI, Gordon – Loeb Model, Investment, Information security, Cyber security

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