

Cyber risk: An analysis of self-protection and the prediction of claims

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For a Brazilian dataset, we study the occurrence of cyber risk claims by analysing the impact of self-protection and the prediction of their occurrence. We bring a new perspective to cyber risk by analysing the probabilities of acquiring security protection using propensity scores.

We study of whether acquiring cyber protection improves network security using a matching method allowing fair comparison among similar companies. Surprisingly we observe that the presence of advanced protection, the incidence of claims is higher than with minimal one.

Regarding the claim prediction, we created a system considering a feedforward multilayer perceptron neural network and measured its performance.

References

- [1] AZEVEDO, ALANA K., BERGEL, AGNIESZKA I. AND EGÍDIO DOS REIS, ALFREDO D., *Cyber risk: An analysis of self-protection and the prediction of claims*. Available at https://cemapre.iseg.ulisboa.pt/private/publications/view_public.php?id=1024 (2020).