Economicperspectiveanalysisofprotectingbigdatasecurityandprivacy

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Abstract:
This paper investigates the economic perspective analysis of protecting security and privacy of big data. Traditionally, the pressing cyberthreats appear from emailed attachments. Recently, cyberattacks increasingly stealing or compromising data and are the potentials for physical damage to critical infrastructure. The risks of the data breach or compromised data collection are often favored by potential financial benefits (e.g., blackmail, fraud, false information, intellectual property thefts, business competition). That is, an important factor for current and future economical investments is due to the motivation of cybercrime activities. In this paper, we first analyze a question about our effort on security and privacy in terms of economic perspectives. That is, do we need to protect big data in a secure, private, and most effective manner, while the growing amount of security threats, attacks, and data breaches together with the increasing market for security products arises? Secondly, we perform the investigation from several perspectives: the economic perspective of big data security and privacy, investment decisions, fighting cybercrimes through big data, and cyberinsurance for big data. Our objective is to provide economic justification of technical decisions taken to protect the big data and the amount of costs that organizations often spend for it.