Significance from the Viewpoint of Economics

ABSTRACT
In this work, from the viewpoint of economics, the author analyzes the interrelationship between information security countermeasures and economic activities by statistical methods. The sophisticated micro data set in this work, which includes countermeasures, (psychological) awareness on information security and various other attributes, is collected through a Web-based survey that uses sophisticated social investigation methods.

Framework
- Applying Results for the Benefit of Society
- Economic Model & Statistical Analysis - Economic Behavior
- Data Collection - Web-based Survey

Economic Models
- Investigating interrelation between countermeasures and effects that firm improves market value based on the idea of intangible assets in Brynjolfsson et al. (2002)
- Examining whether workers’ awareness of information security is different in its attributes or not

Some Findings
- There are positive relationships between the expected effects and some management countermeasures on information security such as information sharing and education
- Human resources and information sharing are the important two factors regarding the security system in the firm
- Workers’ awareness of information security is different in its attributes such as organizational attributes and the education about information security countermeasures

Some Findings

Themes
Economic Effects on Information Security
- Economic Loss by Information Security Incidents
- Positive Effect of Strategic Information Security Investment
- Incentive Mechanism to Invest in Information Security

Economic Behavior on Information Security Countermeasures
- Awareness
- Communication

Information Security Management System
- Information Security Management System
- Business Continuity Management System

Economic Impact of Government etc

Main actors dealing with the information security policy and countermeasures in Japan
<table>
<thead>
<tr>
<th>URL</th>
<th>Main Objective</th>
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<tbody>
<tr>
<td>NISC <a href="http://www.nisc.go.jp/">http://www.nisc.go.jp/</a></td>
<td>Information security policy</td>
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<tr>
<td>MIC <a href="http://www.moumu.go.jp/">http://www.moumu.go.jp/</a></td>
<td>Information security policy</td>
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<td>METI <a href="http://www.meti.go.jp/">http://www.meti.go.jp/</a></td>
<td>Information security policy</td>
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<td>CCC <a href="https://www.ccc.go.jp/">https://www.ccc.go.jp/</a></td>
<td>Counter-bot measures</td>
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<td>JADAC <a href="http://www.dekyo.or.jp/">http://www.dekyo.or.jp/</a></td>
<td>Countermeasures against unsolicited email</td>
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<td>IPA <a href="http://www.ipa.go.jp/">http://www.ipa.go.jp/</a></td>
<td>Countermeasures against computer viruses</td>
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<td>Provision of information on vulnerabilities</td>
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<td>JNSA <a href="http://www.jnsa.org/">http://www.jnsa.org/</a></td>
<td>Countermeasures on network security</td>
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<td>NPA <a href="http://www.npa.go.jp/">http://www.npa.go.jp/</a></td>
<td>Countermeasures against cyber-crimes</td>
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A Keyword is “Education”