



IPACSO
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CYBER SECURITY

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Economic Incentives for Cyber-Security Innovation
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Economic Incentives for Cyber-Security Innovation

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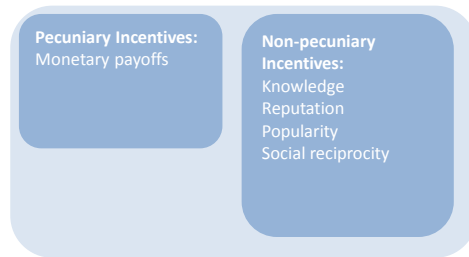
Economic Incentives for Cyber-Security Innovation

I. Basics on Incentives and Innovation

Economic incentive: A positive inducement (motivation) that leads to a specific action or behavior. An incentive is the outcome of a rational cost-benefit trade-off.

The **rational actor** seeks to maximize payoff. Motivation for innovation could be driven by monetary incentives vs gaining reputation.

Fig. 1 Different Types of Incentives



Source: Jentzsch (2015)

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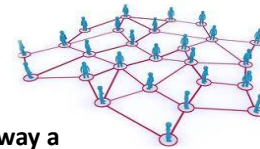
I. Basics on Incentives and Innovation

Innovation

“The implementation of a **new and significantly improved product** (good or service) or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.” (OECD 2005: 46).

Disruptive innovation

“A technology whose application **significantly affects the way a market functions**. An example of a modern disruptive innovation is the Internet, which significantly altered the way companies did business and which negatively impacted companies that were unwilling to adopt it.” (Investopia 2015)



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II. Innovation Value Chain

CSP Innovation can be represented by an Input-Output Model

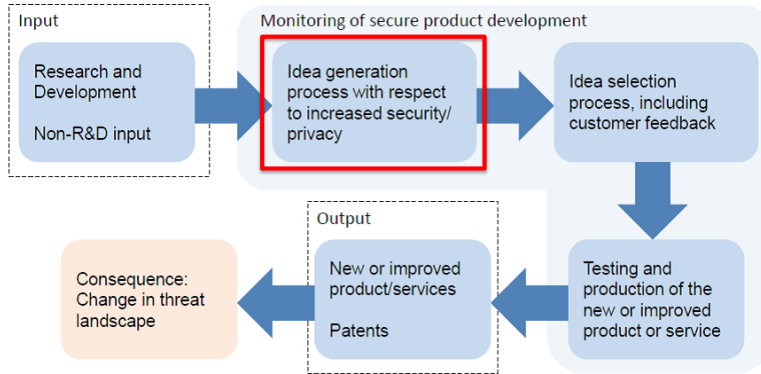


Fig. 2 Innovation Value Chain

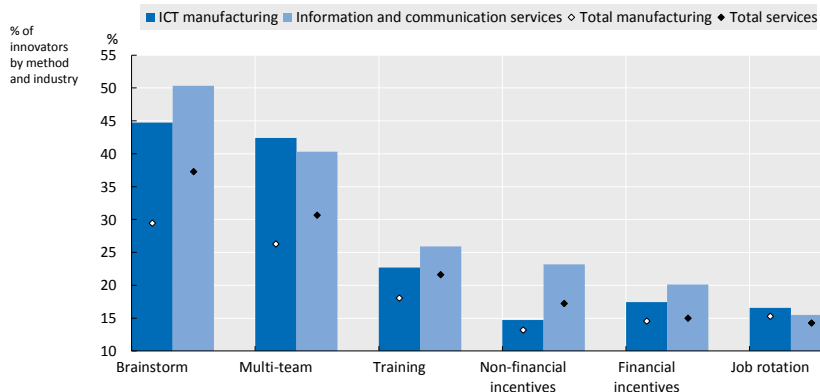
Source: Jentzsch (2015)



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III. Incentivization Schemes in Use

Fig. 3 Methods to stimulate creativity across 22 European countries in information industries vs. other sectors, 2010

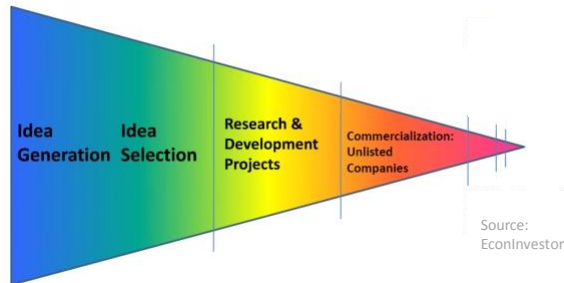


Source: OECD computations based on Eurostat, Community Innovation Survey (2010)



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IV. Some Recent Insights from Research in Incentive Schemes



Economic incentives for stimulation?

- How do financial incentives affect the creative process?
- How does the mechanism (competition & beauty contests) affect innovation?

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IV. Some Recent Insights from Research on Incentive Schemes

Introducing financial incentives?

Individual rewards:

- Financial incentives have little effects on performance in different types of tasks (Eckartz et al. 2013)

Group level rewards:

- Can lead to free-riding, blocking and fear of external evaluation

Other incentive schemes:

- Reward for individual contribution as well for impact on group (Toubia 2006)

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V. Conclusions

- Innovation can be represented as Input-Output Model
- Different incentives can be and are established at different stages of innovation process
- Next step in IPACSO is to create potential guidelines on incentive schemes that work and schemes that are potentially counter-productive for innovation

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