“Get a Free Item Pack with Every Activation!”

Do Incentives Increase the Adoption Rates of Two-Factor Authentication?

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Motivation

- Gaming applications use **incentives** to propagate **2FA adoption**
- **How can this effect be translated to other fields** such as online banking?

Methodology

- **Two online surveys** with different target populations
  - General audience: N = 288
  - Gaming-focused: N = 462
  - US and German participants
- Questions about **service usage, 2FA adoption and likelihood to adopt** in different scenarios
- **Three focus group sessions** with 15 participants to discuss different incentive designs

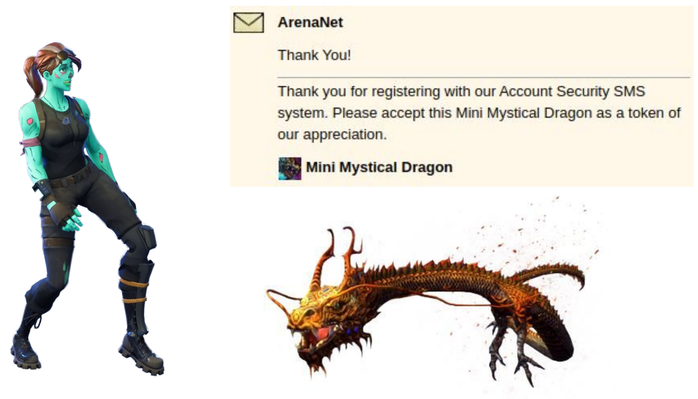

Fig. 1: Examples for cosmetic incentives in video games (Fortnite, Guild Wars 2)

Results

- Although widespread in gaming, **cosmetics** (e.g. sticker sets) **were the least popular**
- **Monetary incentives work best**
- No significant differences between survey samples, gaming or general audience, US or German participants

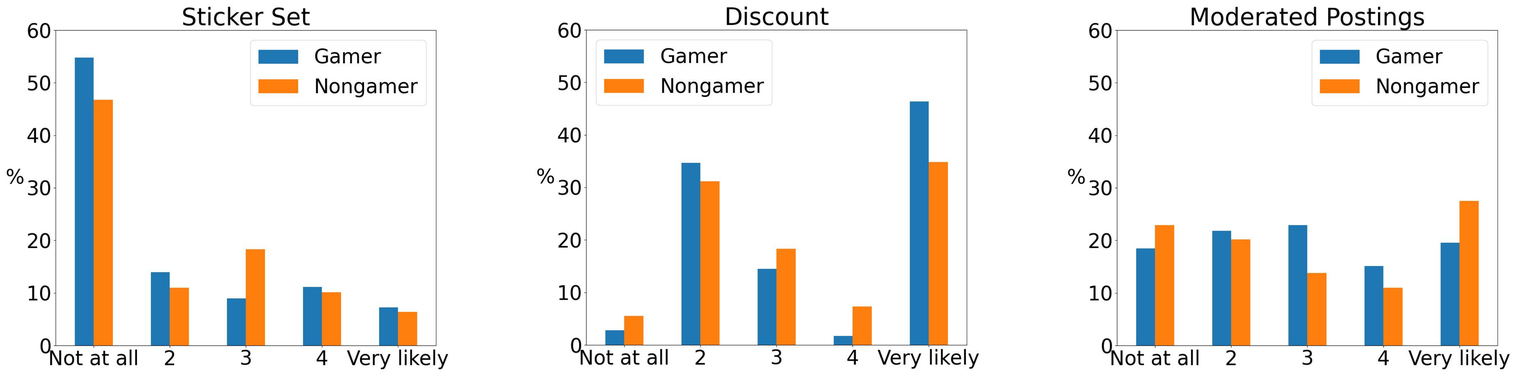

Fig. 2: Answer distribution: “*How likely is it that you would activate 2FA in the following scenarios?*”

“It depends on what kind of token you have. If I think about my TAN generator, it’s horrible.”
(participant during the focus groups)

Discussion

- Which **types of 2FA and incentives are preferred is highly subjective**
- **Misconceptions** about security of 2FA methods based on e.g. SMS or email
- **Adoption** of 2FA **influenced by perceived account value**
- **Distrust in company intentions** when incentives are offered

“I would be a little skeptic whether they would sell my [phone number] later on, especially when I get something in return for [enabling 2FA].”
(participant during the focus groups)

Suggestions

- **Consider monetary benefits** as 2FA incentives where applicable
- **Offer** set of **alternative** 2FA methods or incentives
- Try to **educate users** as to why 2FA should be adopted and how it increases account security