## Research Proposal - Cybersecurity and Crime

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### Introduction

The number of internet users has been steadily on the rise and projected to continue to rise. As digitalization expands, particularly since the outbreak of COVID-19, instances of cybercrime have similarly been increasingÂ [[6](#XMonteith2021Increasing)], despite being signiï¬cantly underreported.Â [[3](#XIOCTA2021)] This raises many questions about cybercrime and security. Among those questions is the eï¬ect of cybercrimes such as phising and identity theft on victims.

### Background and Signiï¬cance

The amount of internet users world-wide has increased from about 1 billion to 5.3 billion in the period between 2005 and 2022.Â [[7](#XStatistaInternetUsers)] This ï¬gure is expected to continue growing, as well as cybercrimeÂ [[5](#Xrise-of-cybercrime)], although it is severely underreported. Cybercrime has very signiï¬cant ï¬nancial costs that are also projected to increase at a high rate. According to the Europolâs Internet Organized Crime Threat Assessment (IOCTA)Â [[3](#XIOCTA2021)], cybercrime is becoming more aggressive and confrontational. Such crimes include but are not limited to cyberstalking, sexual extortion as well as child abuse. The eï¬ects of such crimes can be very severe.Â [[3](#XIOCTA2021)]

Many cybercrimes are carried out at a mass scale with very low costs. For example, phising attacks can be carried out with very little cost. Another example are DDoS attacks. DDoS attacks are performed by bots, are accessible to any individual, and can be carried out for as little as 10 USD.Â [[4](#Xgomez2020dark)] There are many estimations on the ï¬nancial costs of such attacks on individuals and companies, and they seem to be signiï¬cant. Cybercrimes are estimated to cost the world economy about 8 trillion USD in 2023.Â [[8](#Xcybersecurity-ventures-cybercrime-repo)] However, the psychological costs of such crimes are not as well studied.

The growth of internet usage and the rate of cybercrime is a cause for great concern for a number of reasons:

1. a 6% compound annual growth rate in internet users introduces billions of new potential victims.Â [[7](#XStatistaInternetUsers)]
2. Limited levels of awareness against cybercrime prevention.Â [[2](#Xenisa-raising-awareness)]
3. Unknown levels of awareness about the psychological and ï¬nancial damages to victims.

The sum of these reasons implies a highly neglected cause. However, there is reason to believe that there is much potential for things to improve. The number of unï¬lled cybersecurity jobs has grown from one million to 3.5 million between 2013-2021.Â [[8](#Xcybersecurity-ventures-cybercrime-repo)] McKinsey believes that there may be a big addressable market for cybersecurity. As of 2021, The total addressable market is predicted to be valued between 1.5 trillion to 2 trillion dollars, which is about 10 times as big as the vended market.Â [[1](#XMcKinsey2022Survey)] There has also been developments in rethinking cybersecurity models and frameworks with companies like RSA focusing on identity authentication and authorization. Although this might mean a great deal of potential for innovations in prevention, it has no implications for ï¬nancial and psychological recovery for victims.

### Research Methods

The research will perform a sentiment analysis on social media posts and comments as well as online forums and discussion boards.

### Expected Outcomes

The paper will provide a better understanding of the psychological eï¬ects of cybercrime on victims. Based on the results, the paper will discuss the ï¬ndings and propose suggestions for future research on the topic.

### References

[1] Â Â Â Bharath Aiyer, Jeï¬rey Caso, Peter Russell, and Marc Sorel. New survey reveals $2 trillion market opportunity for cybersecurity technology and service providers. McKinsey & Company, October 27 2022.

[2] Â Â Â EGA ENISA. Raising awareness of cybersecurity. Event Proceedings, November 2021.

[3] Â Â Â Europol. Internet organised crime threat assessment (iocta) 2021, 2021.

[4] Â Â Â Miguel Gomez. Dark web price index 2020. Technical report, 2020.

[5] Â Â Â GrainneÂ H. Kirwan. The Rise of Cybercrime. In The Oxford Handbook of Cyberpsychology. Oxford University Press, 05 2019.

[6] Â Â Â Samantha Monteith, Michael Bauer, Martin Alda, and etÂ al. Increasing cybercrime since the pandemic: Concerns for psychiatry. Current Psychiatry Reports, 23(3):18, 2021.

[7] Â Â Â Statista. Number of internet users worldwide from 2005 to 2021 (in millions), 2022.

[8] Â Â Â Cybersecurity Ventures. 2022 oï¬cial cybercrime report, 2022.