Old is Still *Gold* : A Comparison of Cyber and Regular Fraud in the United States

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Consumer fraud in the US

- It happens at scale in the United States

  "25.6 million people were victims of a fraud incident in 2011"

  The Third FTC Survey

- Frauds source of consumer social and economic harm

- Internet has allowed efficient ways of fraud propagation

- We evaluate a comparison between cyber and regular frauds

What features we compare

Frauds

- Variation over time
- Reporting methods
- Top statistics

Fraudsters

- Operating locations
- Physical Coverage

Fraud Victims

- Reaction time
- Demographics

Datasets and Calibration

- The FTC Complaints

  - Fraud Description
  - Contact/Reporting Methods
  - Occurrence/Reporting Date
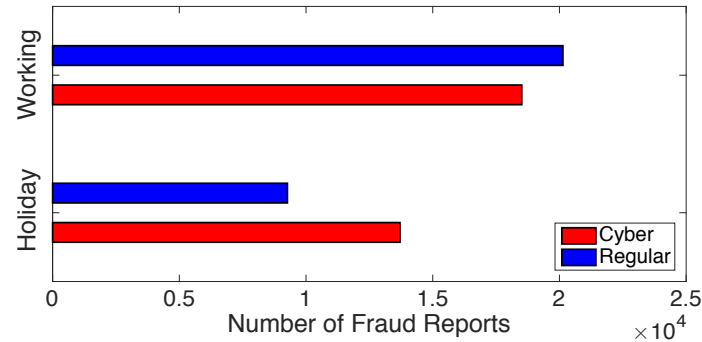 - **Zip code** information

- US Demographics

  - Population
  - Age Statistics
  - Education
  - Ethnic Information

- Data Calibration allows to tag complaints as regular or cyber

- A complaint is cyber if:

  - Fraudster contact method is online e.g. website, social network, email
  - The Fraud description is relatable to the Internet

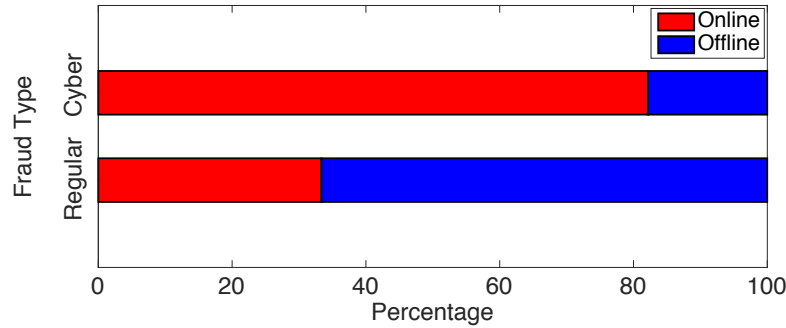- Cyber: **52.1%,** Regular: **47.9%**

Fraud variation with time of year

- Evaluate fraud count over a 20 day regular and winter holiday period

- Overall decrease in fraud reporting during the holidays

- **Cyber** frauds reduce by **26%** where **regular** fraud reduces by **56%**

Cyber and regular fraud reporting

Reporting Statistics

Cyber: **82% Online**
Regular: **62% Offline**

- Cyber victims mostly report crimes using online methods

- Regular fraud victims are more likely to report crimes using offline methods

- Reduced offline reporting in holiday season and spikes right after, online reporting is more consistent

Top 5 cyber and regular frauds

Cyber	%	Regular	%
Online Shopping and Sales	14.1	Impostor Fraud	29.8
Impostor Fraud	10.8	Telemarketing	20.1
Unsolicited Email	7.71	Debt Collection	16.1
Counterfeit Check Scams	7.40	Prizes and Sweepstakes	15.5
Prizes and Sweepstakes	7.40	Grants and Credit Loans	4.14

- Significant cyber presence of impostor scams and sweepstakes

- Fraudsters are adopting new technology to execute the same types of scams online

Analysis of fraudsters attributes

- Victim to fraudster distance:
  - Understand if cyber fraudsters leverage visibility on the Internet
  - Observe similar distance trends for cyber and regular fraudsters

- Top fraudster locations:
  - Most fraudsters tend to operate from Metropolitan areas; New York, Los Angeles, Washington, Miami and Chicago.
  - The San Francisco, Oakland, San Jose areas have higher concentration of cyber fraudsters
  - Location analysis also detects Buffalo, NY having a network of debt collectors.

Buffalo debt collectors accused of taking in 'tens of millions' by harassing consumers

By Phil Fairbanks

Published Wed, Nov 2, 2016

SHARE

A network of debt collection companies in Buffalo faces allegations that it took in "tens of millions of dollars" a year by harassing, threatening and deceiving consumers.

A new lawsuit in Buffalo federal court also accuses the companies and the men behind them – Douglas MacKinnon and Mark Gray – of inflating the debts of consumers and then falsely posing as law enforcement and court officials in order to collect the debt.

Buffalo debt collector pleads guilty in massive fraud

By Gene Warner , and Jerry Zremski

Published Wed, Nov 2, 2016

Travell Thomas has made a good living as a professional poker player, racking up more than half a million dollars in earnings.

But that's not his most lucrative occupation, according to federal prosecutors. They say the 38-year-old resident of Orchard Park ran a scheme that coerced thousands of victims nationwide into overpaying their debts by at least $31 million.

Analysis of fraud victims

- Reaction time of the consumers:
  - Understand if certain victims are more active in reporting
  - 70% of both victims categories report frauds within a week

- Demographic Analysis:
  - Race, in general does not have a significant impact
  - Individuals greater than 50 years tend to report more
  - Higher education individuals levels report more often

Takeaways…

- Cyber frauds are on the rise, regular frauds still hold a significant share

- Frauds have specific geographic points of focus

- Regular fraudsters are adopting new vectors on the Internet to execute the same traditional frauds online.

Thank You!

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Questions?