Towards an international "Who-cares-ometer" for cybercrime

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Stephen Cobb has been researching computer security and data privacy for 30 years, helping companies, consumers, and government agencies to manage cyber risks, with a focus on emerging threats and policy issues. He holds a master's in security and risk management and currently heads a US-based security research team for ESET, one of the world's largest security software companies.

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Agenda

1. What is a Who-cares-ometer?
2. Why survey the public about cybercrime?
3. What did we find in our latest survey?
4. What's next?

What is a Who-cares-ometer

- You found something, but who cares?
- How much should they care?
- Do people care about cybercrime?
- The EU has been asking that
- The Eurobarometer
- Let's do one for North America

Basic principles

- To solve a problem, first measure the problem

- Then assign resources to problem reduction

- Measure the problem again to determine efficacy of the problem reduction effort

- Adjust resources accordingly

Criminology 101: surveys, statistics, crime fighting, deterrence

- Crime is hard to measure – the "dark figure"
- Crime as a statistic has multiple definitions:

  Detections – multiple attempted home invasions

  Reports – police receive five burglary reports

  Apprehensions – three burglars arrested

  Convictions – two burglars sentenced

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Crimes reported versus crimes experienced

- Government crime stats began with crime reports

- But they realized many crimes were not reported

- So governments began to survey the public about their experiences as crime victims (using samples)

- Many governments have been slow to include cybercrimes in victim surveys

Issues with cybercrime measurement

- We are still defining the problem (what are attacks, incidents, breaches, impacts, costs?)

- Surveys by security vendors sometimes oversold

- Even good ones are subject to bias objections

- See "Sizing Cybercrime: incidents and accidents, hints and allegations" – VB 2015
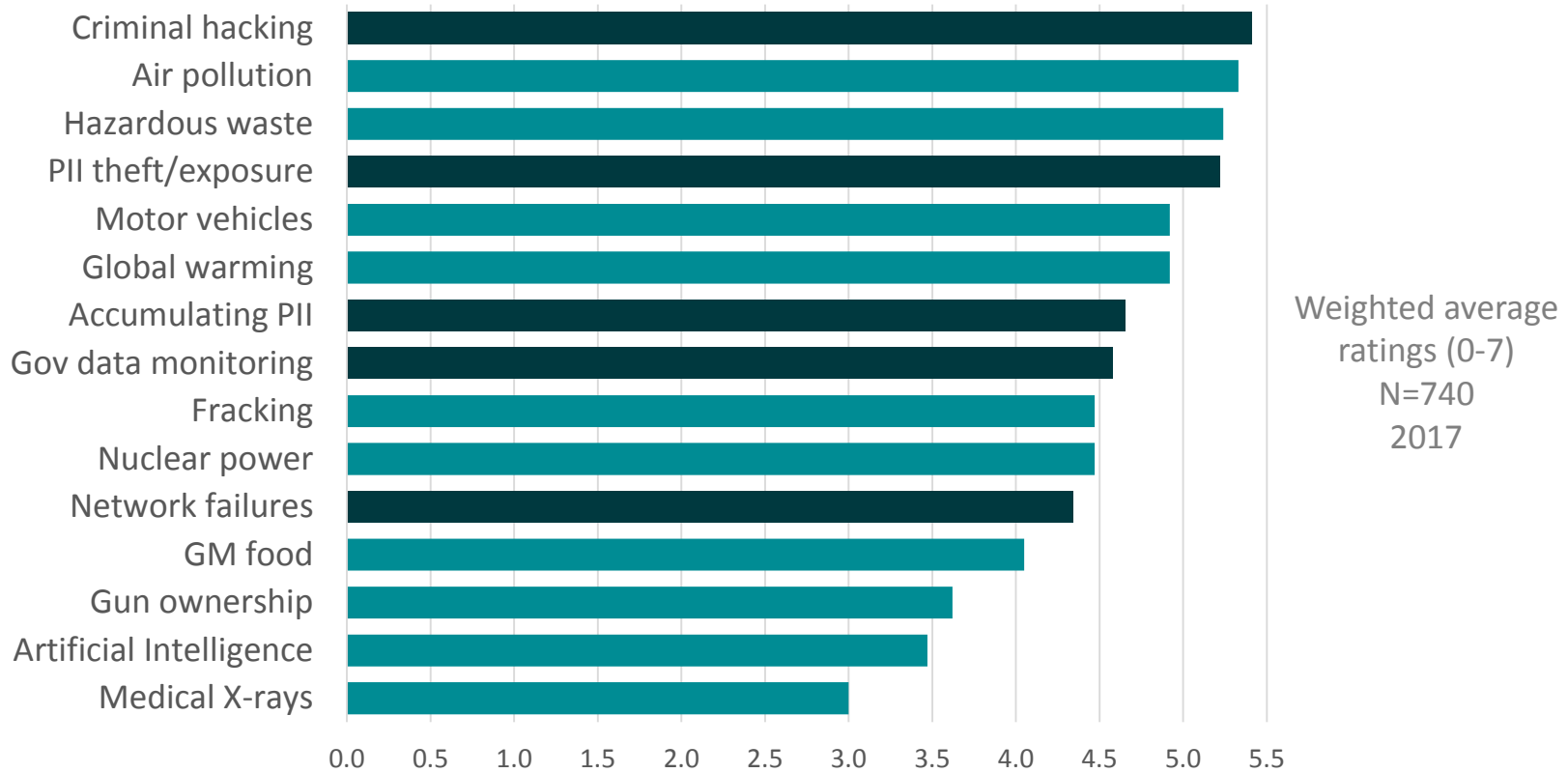
Why measure public attitudes towards cybercrime?

- The public are often victims of cybercrime

- The public play a role in cybersecurity

- Public policy on cybersecurity and cybercrime deterrence are influenced by the public

- The public are consumers of cybersecurity products and services

So, do people care about cybercrime?
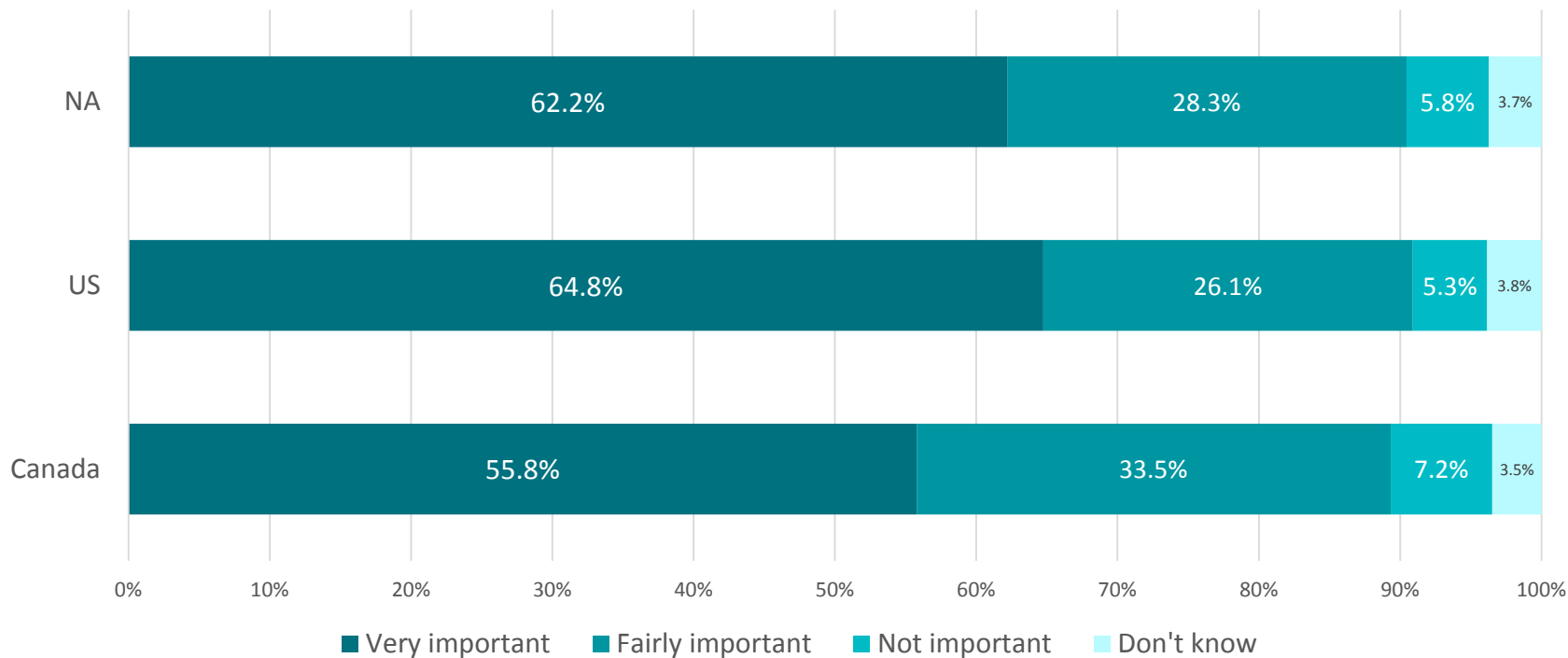
- YES

- A lot of people think cybercrime poses a risk to human health, safety, and prosperity

- A lot of people think cybercrime is a challenge to the internal security of their country

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How much risk you think the following hazards pose to human health, safety, or prosperity (NA)

Weighted average ratings (0-7)
N=740
2017

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Cybercrime as a challenge to internal security?

	Very important	Fairly important	Not important	Don't know
NA	62.2%	28.3%	5.8%	3.7%
US	64.8%	26.1%	5.3%	3.8%
Canada	55.8%	33.5%	7.2%	3.5%

Adults in US and Canada (N=3,500)

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Importance of 7 threats to national security: US/Canada
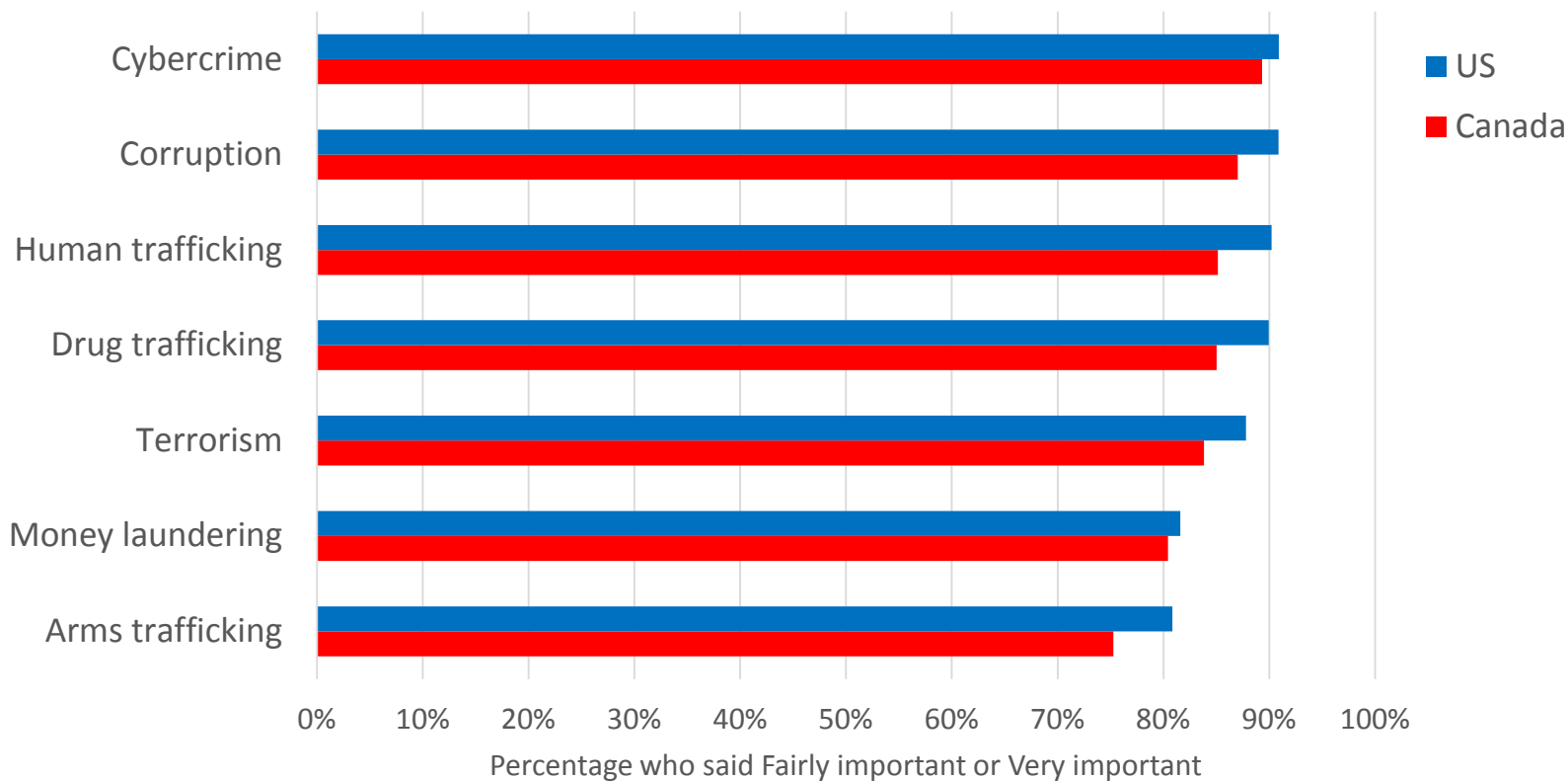
Importance of 7 threats to national security NA/EU2017
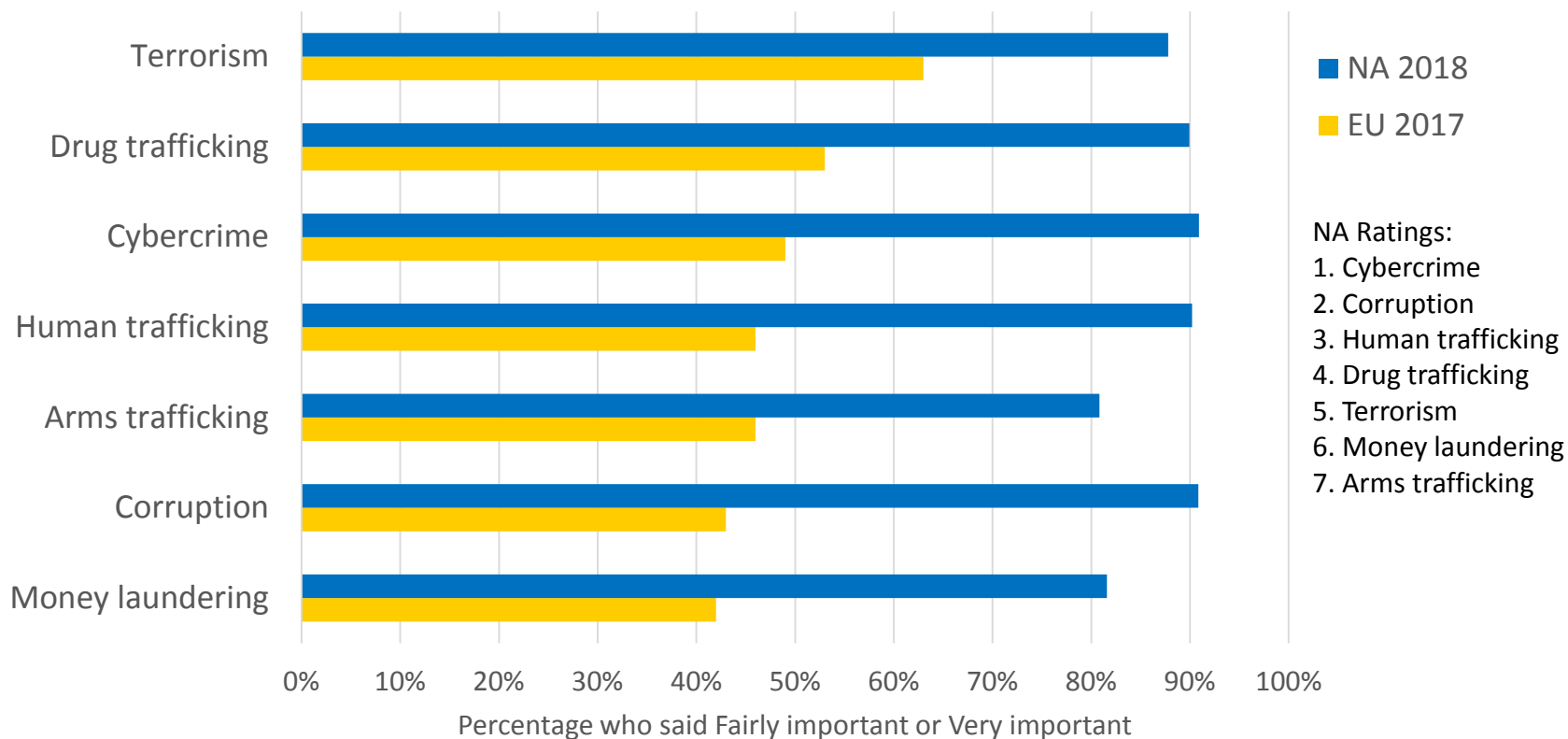
Are the police and other law enforcement authorities in your country doing enough to fight cybercrime? (NA)

Don't know, 12.7%

Totally agree, 14.0%

Totally disagree, 12.9%

Tend to agree, 31.6%

Tend to disagree, 28.9%
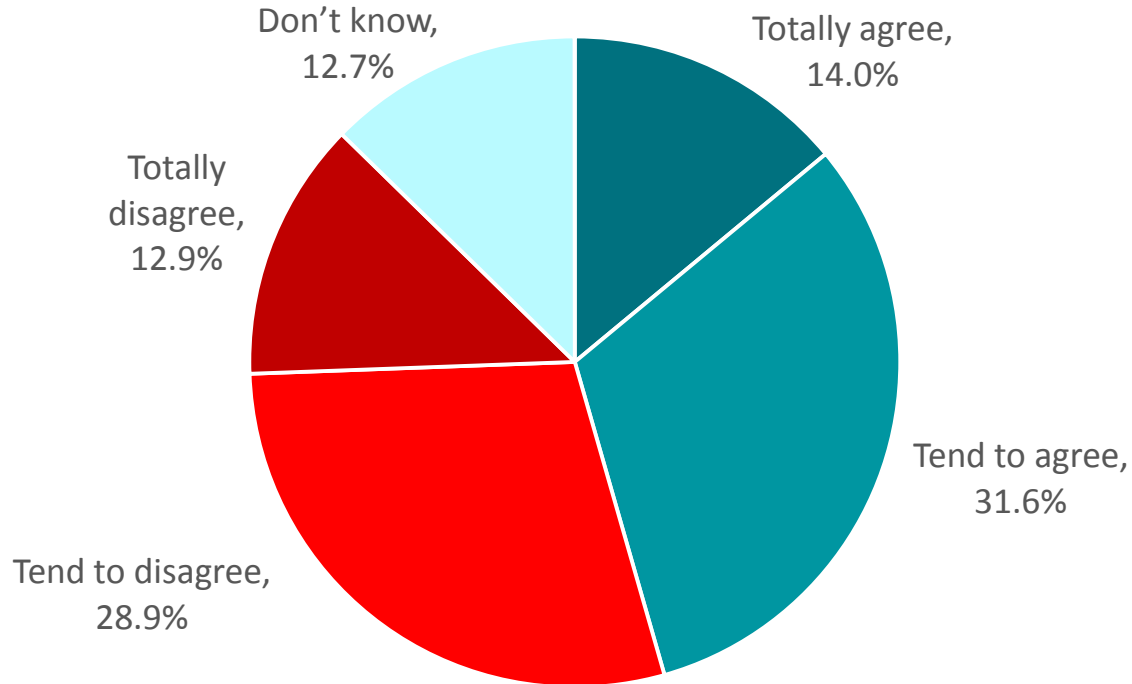
Percentage who think law enforcement is not doing enough to fight these crimes (NA)

N=3500

Are law enforcement authorities in your country doing enough to fight cybercrime NA/EU

	Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK
NA	14.0%	31.6%	28.9%	12.9%	12.7%
EU	13.0%	36.0%	27.0%	10.0%	14.0%

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Respondents who had experienced cybercriminal activity (NA)

Receiving fraudulent emails or phone calls asking for your personal details — **71%**

Discovering malicious software (viruses, etc.) on your device — **58%**

Being a victim of bank card or online banking fraud — **34%**

Your social network account or email being hacked — **31%**

Online fraud where goods purchased are not delivered, are counterfeit or are not as advertised — **29%**

Identity theft (somebody stealing your personal data and impersonating you) — **27%**

Being asked for a payment in return for getting back control of your device — **24%**

Not being able to access online services like banking or public services because of cyber-attacks — **23%**

Percentage responding "often" or "occasionally"

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Concerned about experiencing cybercriminal activity (NA)

Category	Percentage
Identity theft (somebody stealing your personal data and impersonating you)	83%
Being a victim of bank card or online banking fraud	80%
Discovering malicious software (viruses, etc.) on your device	78%
Your social network account or email being hacked	68%
Receiving fraudulent emails or phone calls asking for your personal details	67%
Not being able to access online services like banking or public services because of cyber-attacks	67%
Online fraud where goods purchased are not delivered, are counterfeit or are not as advertised	64%
Being asked for a payment in return for getting back control of your device	61%

Percentage responding "Very concerned" or "Fairly concerned"

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Experience of cybercriminal activity NA/EU2017

- Receiving fraudulent emails or phone calls asking for your personal details — 38%
- Discovering malicious software (viruses, etc.) on your device — 42%
- Being a victim of bank card or online banking fraud — 11%
- Your social network account or email being hacked — 14%
- Online fraud where goods purchased are not delivered, are counterfeit or are not as advertised — 16%
- Identity theft (somebody stealing your personal data and impersonating you) — 8%
- Being asked for a payment in return for getting back control of your device — 8%
- Not being able to access online services like banking or public services because of cyber-attacks — 11%

Percentage responding "often" or "occasionally"

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Concern about cybercriminal activity NA/EU2017

Category	NA	EU
Identity theft (somebody stealing your personal data and impersonating you)	83%	69%
Being a victim of bank card or online banking fraud	80%	66%
Discovering malicious software (viruses, etc.) on your device	78%	69%
Your social network account or email being hacked	68%	63%
Receiving fraudulent emails or phone calls asking for your personal details	67%	60%
Not being able to access online services like banking or public services because of cyber-attacks	67%	57%
Online fraud where goods purchased are not delivered, are counterfeit or are not as advertised	64%	58%
Being asked for a payment in return for getting back control of your device	61%	55%

Percentage responding "Very concerned" or "Fairly concerned"

Cybercriminal concern relative to experience (NA)
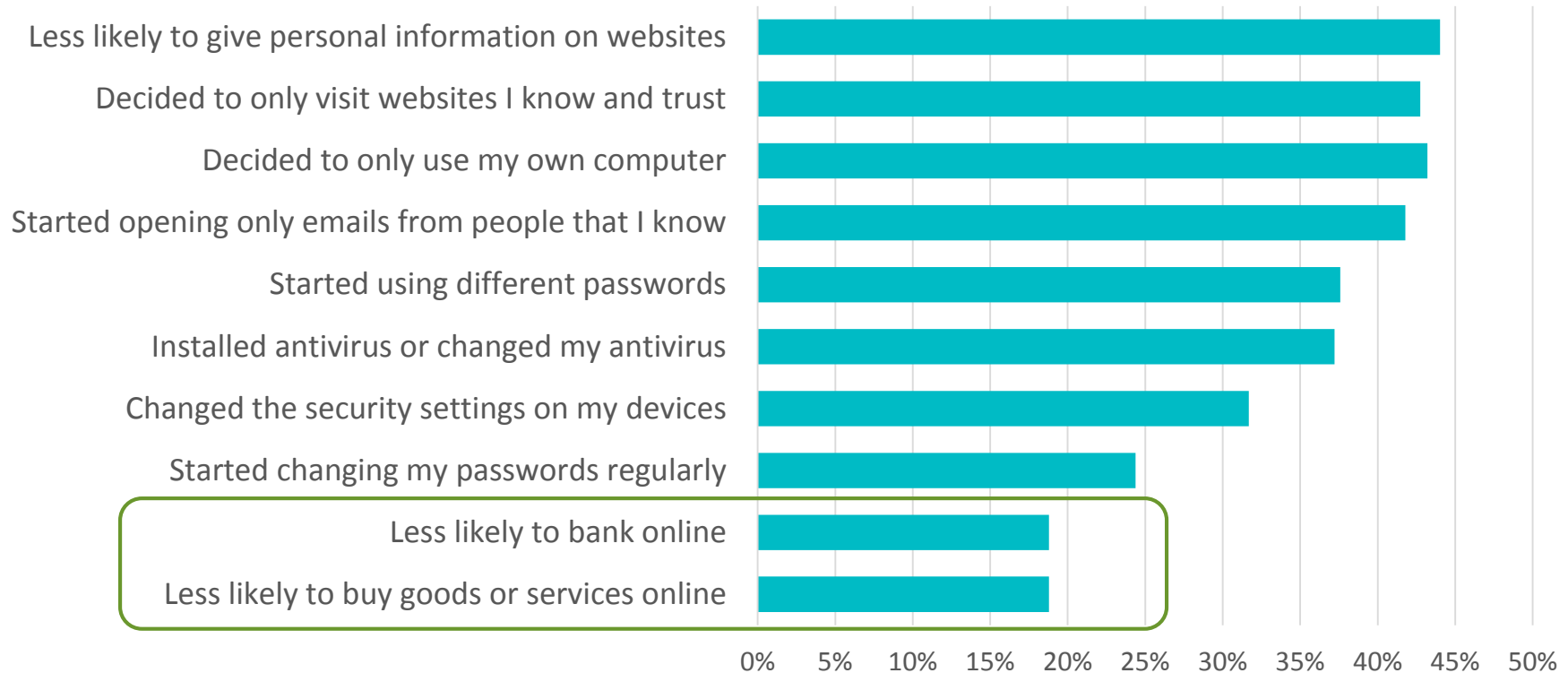
Importance of cybercrime as a challenge to internal security
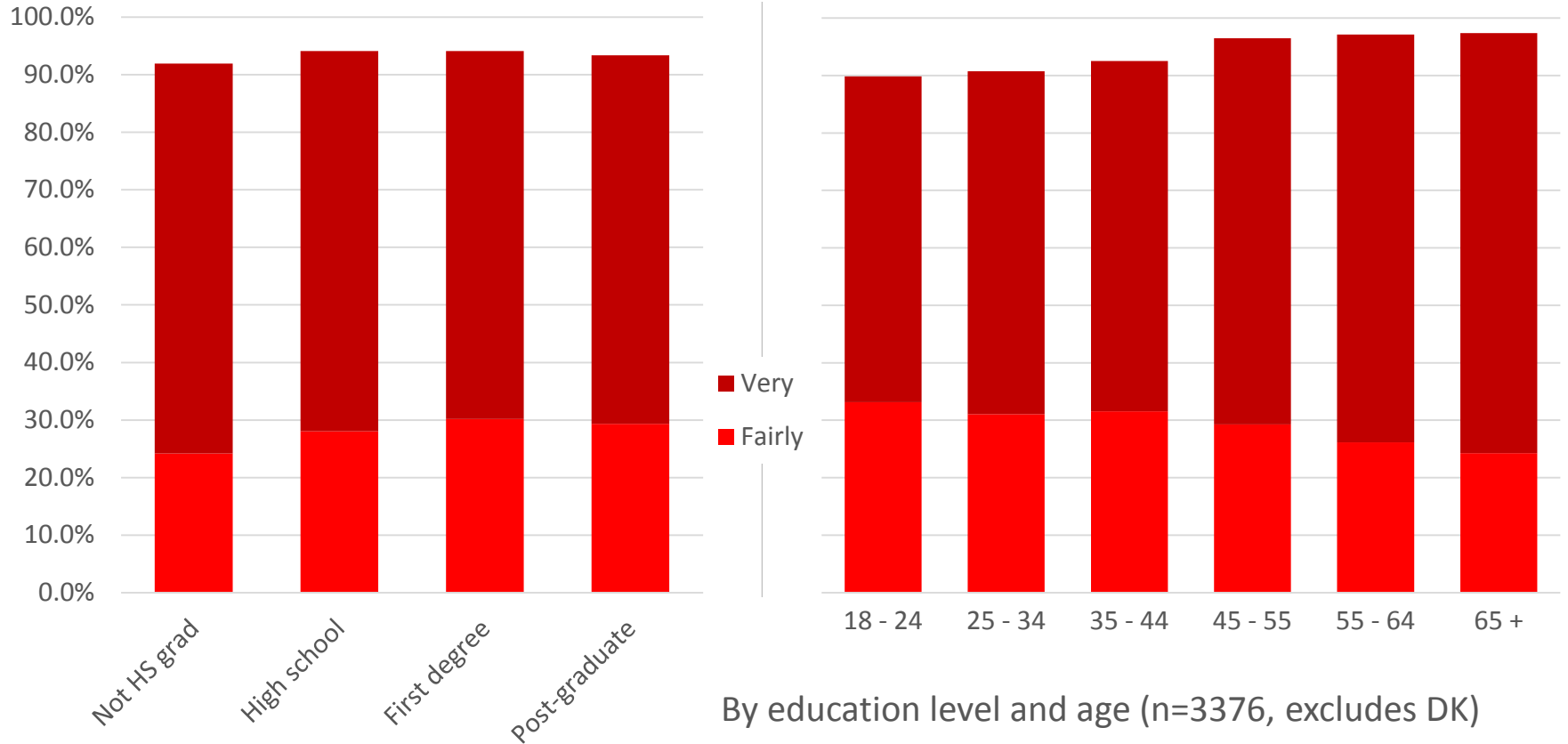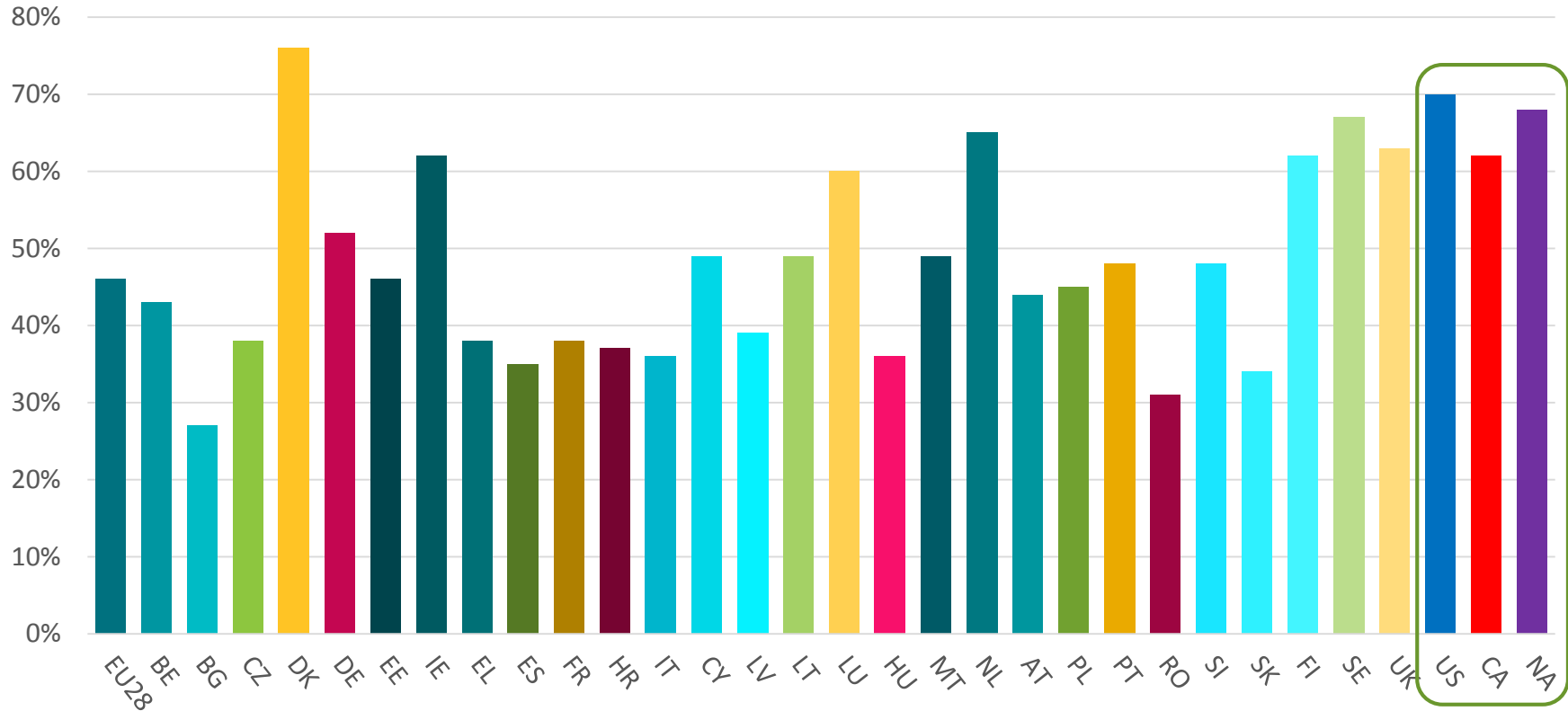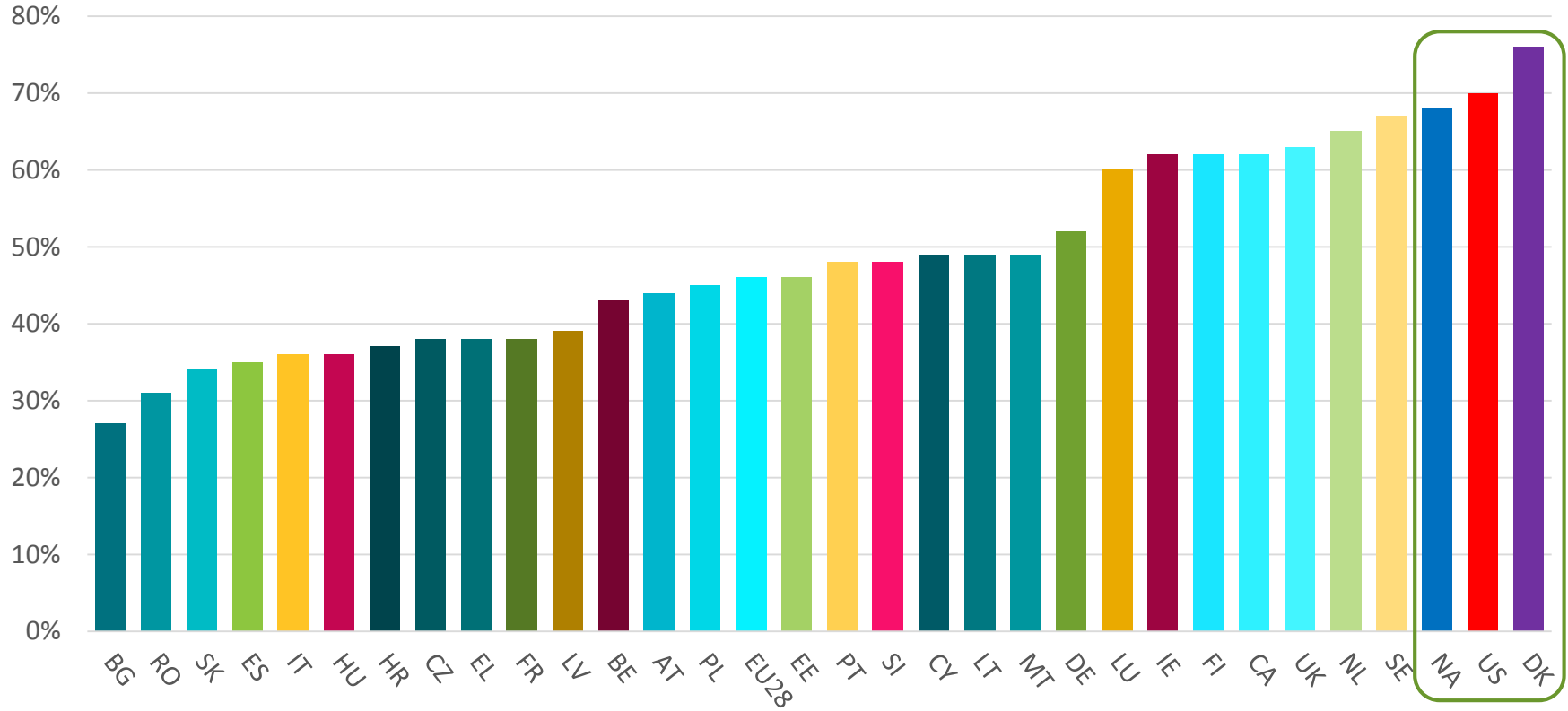
By education level and age (n=3376, excludes DK)

How well informed do you feel about the risks of cybercrime?

Percentage of respondents answering Very or Fairly well

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How well informed do you feel about the risks of cybercrime?

Percentage of respondents answering Very or Fairly well

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Have you experienced any of these forms of cybercrime?

Legend: Malware, Phishing, Online fraud, Social email hack, Denial of access, Card/bank fraud, Ransom, ID theft

Categories (x-axis): EU28, BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK, US, CAN, NA

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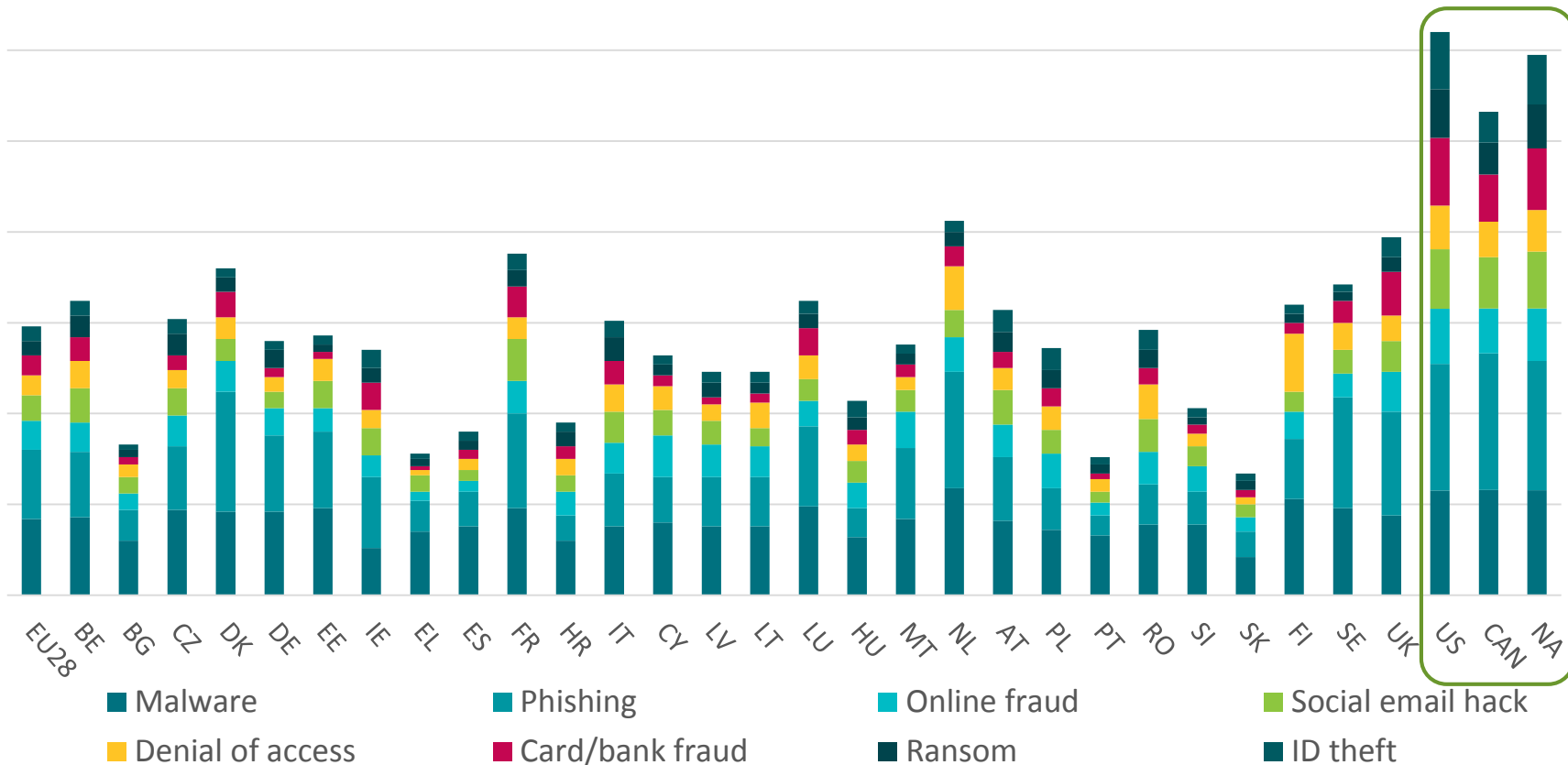
Have you experienced malware? (%)
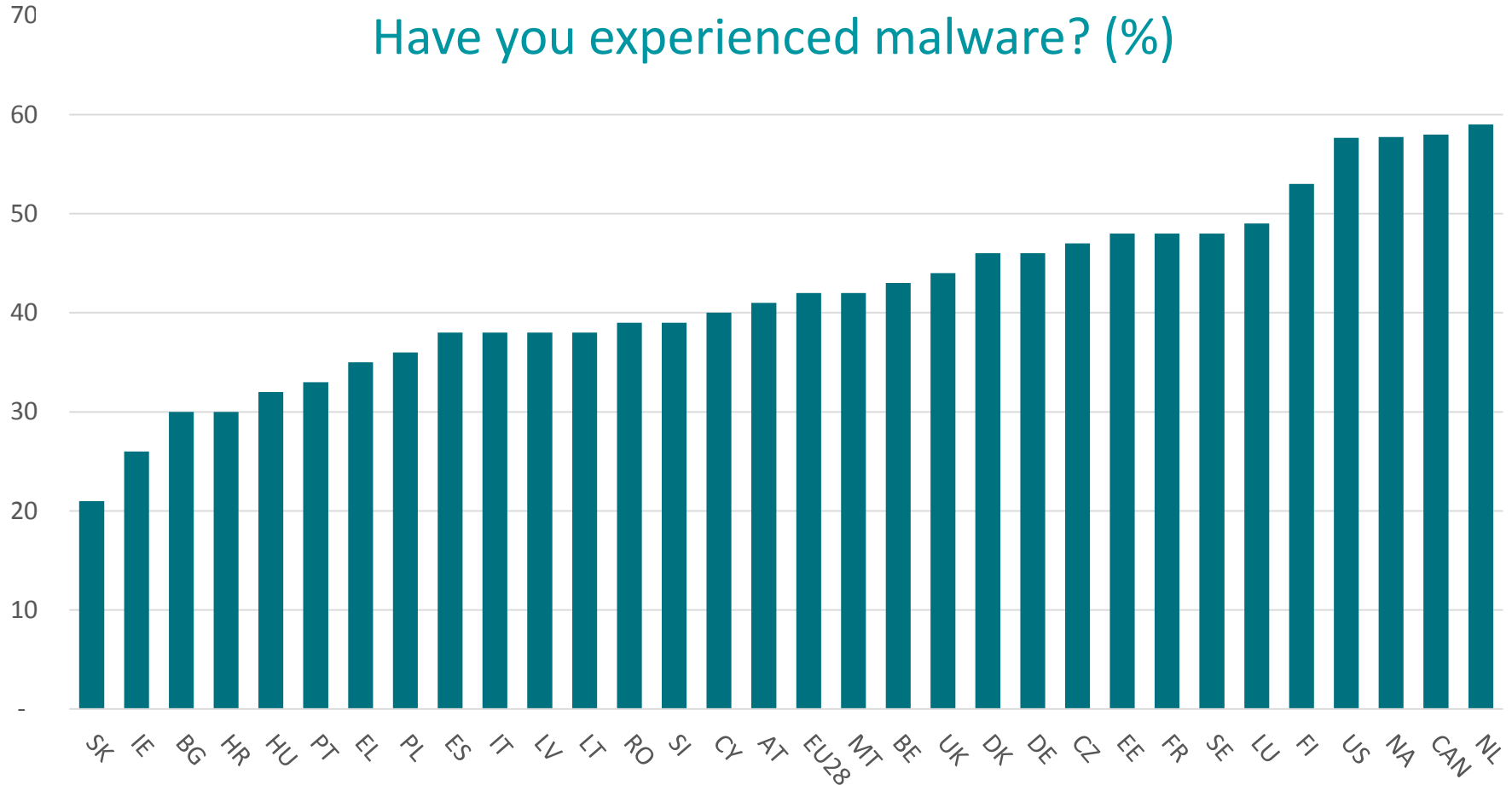
What's next?

- More demographic analysis

- Survey EU/US 2019 and beyond

- Deeper analysis, as in Moore and Böhme, 2015

- A longitudinal cybercrime who-cares-ometer?

How Do Consumers React to Cybercrime?

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"We find that directly experiencing cybercrime decreases the likelihood of shopping and banking online by 4-5 percentage points … expressing concern about cybercrime has nearly twice as much negative impact on online behavior than directly experiencing cybercrime."

Thank you!

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