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Cybersecurity Risk Discussion with Relevant Laws

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ABSTRACT

In the context of post Covid 19 pandemic, This paper outlines What are Cybersecurity risks? For online transactions? And What are suggestions for Protecting consumer interests in online transactions?

By using analysis, experiences, observations, practical situation with cases studies of our country-Vietnam, and also use qualitative, analysis, synthesis research methods, this study suggest that When detecting that the account has an abnormality or mistakenly transferred or received, consumers need to contact the bank directly to solve it, do not bring it online to inquire, and do not send the OTP password to any individual request. Currently, most banks use Smart OTP, biometric authentication..., customers should also switch to this method, limit the use of receiving OTP passwords via SMS to avoid being cheated. Second, to prevent online risks clients need Not to provide personal information, bank account, OTP password, Internet banking and mobile banking username and password for strangers.

Keywords : Cybersecurity Risks, Threats, Online Consumers, Protection, Suggestions

I. INTRODUCTION

Current situation of information security in Vietnam

Of the 48,646 cyberattacks on critical IT systems in the first half of 2022, exploit attacks still accounted for the majority with nearly 53% of total attacks; followed by network scanning attacks (15.65%), APT attacks (14.36%); authentication attacks (9.39%); malicious code attack (7.58%)

According to Senior Colonel Do Minh Kim, Deputy Head of Division 3 - Department of Cybersecurity and High-Tech Crime Prevention (Ministry of Public

Security), many targeted cyber attacks (APTs) have been conducted against computer systems. important information systems of countries, enterprises, and economic groups, causing serious consequences on economic security and business operations.

Challenges to network security, privacy, and information safety are always in a state of high alarm. Information from the Ministry also said: that Vietnam is in the top 10 countries suffering from cyber-attacks and dangerous malware infections, ranked 7th in the number of victims of cyberattacks, and ranked 2nd among countries. most infected with crypto-mining malware.

(source: vnetwork.vn)

In the Draft Law on the identification of organizations and individuals doing business in cyberspace, they include:

- Organizations and individuals doing business by themselves or through online platforms having transactions in cyberspace with consumers, which we are now accustomed to calling e-commerce (online sales platforms) .
- Business organizations and individuals set up, operate and provide online intermediary platform services to consumers.

We also summarize related studies:

Table 1- Previous studies

Authors	Year	Content, results
Williams et al	2020	Companies must implement well-defined software upgrade procedures, should use secure networks like virtual local area networks, and conduct regular penetration tests of their systems. By understanding factors that make individuals, health care organizations, and employers more susceptible to cyberattacks, we can better prepare for the next pandemic.
Maleks Smith et al.	2020	Globalisation, digitalisation and smart technologies have escalated the propensity and severity of cybercrime. Whilst it is an emerging field of research and industry, the importance of robust cybersecurity defence systems has been highlighted at the corporate, national and supranational levels. The impacts of inadequate cybersecurity are estimated to have cost the global economy USD 945 billion in 2020
Gomesh & Deshmukh	2022	The internet brought a new revolution to the financial sector and it has changed the way of operations in the last two decades. Now, people have the option to carry out banking transactions from a place of their choice without having to go to a nearby bank office. E-banking has become an integral part of the banking system and has become a popular method of transaction for the majority of people. A user has a wide range of options for managing his money through numerous internet banking methods. While internet banking is an aid for customers, they still have to be vigilant to keep their accounts safe from cybercriminals and hackers, as everything on the internet is prone to security threats. Internet security measures followed by the majority of the bank sites to protect their information are not up-to-date as compared to the dynamic cyber threats. Such problems have made it easy for confidential financial information to fall into the hands of third parties and cybercriminals. Although there are several security measures to stop data breaches, there are still flaws in these systems. The goal of this study article is to look at the number of cyber security issues in internet banking in India and the consumer's

		awareness of these issues and preventive measures used by them. Our research is particularly based on primary data
Aseri	2021	Online shopping, and e-commerce in general, have gained popularity and provide more convenient and less stressful options transacting online. Consumers can now enjoy accessing products from distant stores according to their preference, a factor that gives consumers the ability to choose without considering distance and long queues. While online shopping promises to be a better option to the consumer, the channel is susceptible to threats, referring to elements that have the potential to inflict serious harm on a user's privacy leading to data breaches and a compromise of data security. As a consequence consumers are uncertain on whether to trust online shopping. This paper includes information on the threats of online shopping and highlights consumer perceptions, including negative consumer perceptions. The paper provides awareness on cyber security issues, including ways online shoppers and merchants can protect themselves from data breaches and attacks through methods such as phishing and adware.

(source: author synthesis and analysis)

II. METHODOLOGY

In this study, the authors choose analysis, experiences, observations, practical situation with cases studies of our country-Vietnam, but it also uses will use qualitative, analysis, synthesis research methods. Relevant regulations and experiences from European countries also researched.

III. MAIN FINDINGS

3.1. Online transactions risks

First risk is identity risk. Verifying the identity of a partner is not easy and can lead to illegal activities such as money laundering, forging documents. Online transactions made when buyers and sellers do not know each other so there are risks.

Second, risks in differences in culture, language, payment habits, international law...

Third, risks from hackers. For instance, hackers can use email or mobile to send sms messages to consumers in which they played roles of banks and ask for consumer personal information such as bank account, username and password of clients account, OTP password in internet banking or mobile banking, etc…then they steal money of clients easily. Or they can send link for consumers to click then they steal money.

Fourth, so called cyber security risks.

Fifth, Using online payment, also known as electronic payment, customers will receive many promotions, discount codes of stores, buy cheaply so they can save costs.

In case you go on a business trip away from home, travel and need to spend a lot of money. At this time, carrying cash in large quantities will not be safe due to the situation of pickpockets and robberies that are difficult to control. With electronic payment, you only need a smartphone connected to the internet to be able to pay easily 24/7. In particular, personal information is highly confidential, so customers are not afraid of being exposed.

In addition to e-wallets, users can pay online via domestic and international bank transfers, etc.

Electronic payment systems can be hacked at any time if users do not have good security or follow security regulations.

The situation of writing the wrong amount of money transferred via bank accounts or e-wallets is not uncommon nowadays. There have been many cases of overpayment or transfer to the wrong object.

Anti-DDoS solution and Web/App protection for businesses DDoS attacks with hundreds of Gbps (Gigabits per second) traffic are capable of bringing down many Web Server systems of targeted businesses. However, VNETWORK's customers will still be assured of safety. We have the security platform of VNIS (VNETWORK Internet Security) that helps to comprehensively protect the enterprise's Web Server against all forms of DDoS attacks as large as thousands of Tbps (Terabit Per Second).

VNIS has been recognized by the world's leading security organization, Gartner, as the platform representing the world's leading Content Delivery Networks (CDNs). Learn more about VNIS's smart web application and website security features below.

(source: vnetwork.vn)

3.2. Cybersecurity risks and Protecting consumer interests in online transactions

Aseri (2021) mentioned risks for online shoppers:

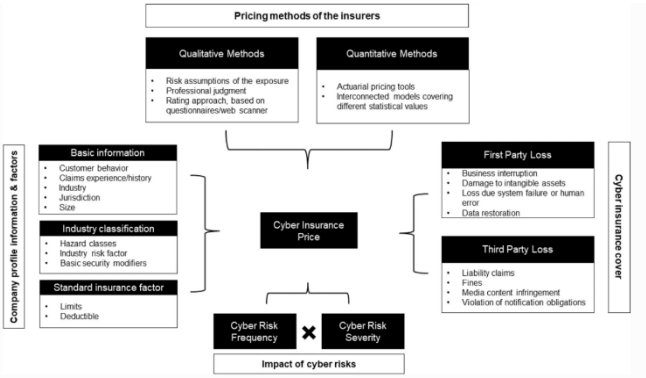
Firs is Phishing: One of the most prevalent security breaches affecting online shoppers are executed through phishing. As the name purports, a user is lured into giving his or her important passwords and credit card details using a click bait. Phishing is a situation where fraudsters transmit emails which they falsely claim to be affiliated to highly reputed firms so as to extract an individual's personal data. Phishing uses disguised emails as its main weapon, the goal being to trick a user with an urgent message such as a request from the user's bank requiring the user to download a form. The malpractice can be categorized according to the user's intentions. It can be done to extract important information from the client, by tailoring a message to resemble a bank. Phishing can also lure a user into downloading malware, the files usually come with .zip extensions or Office documents embedded with malicious code, ransom ware is one of the most common malicious codes and has been detected in 93% of phishing emails.

Second is Fake Online Stores.

Third is Theft of data : Data theft has become an issue as online merchants accumulate important client information on their databases. System administrators and other workers who are authorized to access servers can access data without the owner's knowledge. A survey conducted by the British Retail Consortium (BRC) saw 62% of the respondents acknowledge data theft by system administrators and other workers as a threat.

We also look at:

Figure 1 – An overview of the current cyber information/risk landscape



(source: from EIOPA (2018) and Romanosky et al. (2019)).

Then we can refer to European experiences in dealing with cybersecurity crime:

Launching funding programs for companies and other entities to support their transition to a secure Industry 4.0 ecosystem, including financial support for joint cyber security activities.

Small and medium-sized enterprises are an important driver of innovation and economic growth of the European Union member states. Therefore, in developed countries, enterprises are encouraged to introduce innovations and R&D to secure

environments for new Industry 4.0 ICT, including their components and systems. One of the instruments of financial support is Commission Decision (C (2016) 4400) of 5 July 2016 on the signing of a contractual arrangement on a public-private partnership for cyber security industrial research and innovation between the European Union, represented by the Commission, and the stakeholder organization and Regulation (EU) No 513/2014 of the European Parliament and of the Council of 16 April 2014 establishing, as part of the Internal Security Fund, the instrument for financial support for police cooperation, preventing and combating crime, and crisis management and repealing Council Decision 2007/125 / JHA. From January 1, 2014, to December 31, 2020, the following were allocated and awarded as part of the Facility:

- measures to prevent and combat cyber crime, raising the level of security of citizens and businesses in cyberspace, in particular projects building the capacity of law enforcement and justice authorities, projects ensuring cooperation with the industry sector to empower and protect citizens, and projects improving the ability to deal with cyber-attacks ;
- measures to increase the administrative and operational capacity of the Member States in the field of critical infrastructure protection in all sectors of the economy, in particular projects promoting public-private partnerships to gain trust and facilitate cooperation, coordination, emergency planning and exchange and dissemination of information and best practices between public and private entities.

The instrument should complement and strengthen actions taken to develop cooperation between the relevant European Union bodies and the Member States to achieve the objectives of the Instrument in the field of police cooperation, prevent and combating crime, and crisis management.

The instrument supports actions taken in the Member States, in particular actions to improve police cooperation and coordination between law enforcement authorities, including between relevant Union bodies, in particular Europol and Eurojust, joint investigation teams and any other form of joint cross-border operations, access to information, their exchange and interoperable technologies; networking, identification, exchange and dissemination of know-how, experience, and best practices, information sharing, knowledge of situations and perspectives, emergency planning and interoperability; exchange, training and education of staff and experts of relevant authorities.

The presented recommendations concern broad possibilities to encourage undertaking and strengthening cross-border cooperation when applying for EU funds. On the one hand, companies wanting to implement innovative solutions regarding new ICT technologies in Industry 4.0 and how to secure them. On the other hand, state institutions and bodies wishing to implement appropriate technological constructions, in proportion to the actions taken and the legal and formal scope of their obligations in counteracting cyber crime, also to improve international jurisdiction when it comes to developing countries or countries which are not members of the European Union.

IV. DISCUSSION

In our country we discuss relevant laws to protect consumers:

Vietnam's digital economy is projected to exceed US$43 billion by 2025 as the country continues to pursue projects in e-government, internet of things, smart cities, financial technology, artificial intelligence etc. With cyberspace blurring regional and national boundaries, Vietnam will likely face an increase in cyber threats, and sophisticated attacks.

In recent years, the Vietnam government had issued numerous regulations in its effort to strengthen the local cybersecurity landscape, including:

• Directive No. 22/CT-BTTTT issued in May 2021 by the Ministry of Information and Communications

focused on strengthening the prevention and combat of law violations and crimes on the Internet.

• Decision 1907/QD-TTg issued in 2020 which approves the Ministry of Information and Communications raise awareness and disseminate knowledge about information security for 2021-2025.

• Prime Minister's Directive No.14/CT-TTg in June 2019 enhanced safety measures on cybersecurity of the public sector whereby at least cybersecurity spend must account for 10% of an organisation's total annual IT expenditure in 2020-2025.

• Personal Data Protection Draft Decree, once enacted is set to be the first comprehensive legislation on personal data.

These efforts have yielded positive results given in 2020, Vietnam ranked 25th out of 194 countries in Global Cybersecurity Index (GCI). This ranking is a significant improvement from 2018 and 2017 when Vietnam was placed in the 50th and 100th positions respectively. In addition, this result exceeded Vietnam's target to enter the GCI's top 30 countries in 2030 as per the Prime Minister's Decision No. 749/QD-TTg dated 3 June 2020.

(source: pwc.com).

V. CONCLUSION

First, Clients/consumers are advised to be vigilant when conducting online transactions. When detecting that the account has an abnormality or mistakenly transferred or received, please contact the bank directly to solve it, do not bring it online to inquire, and do not send the OTP password to any individual request. Currently, most banks use Smart OTP, biometric authentication..., customers should also switch to this method, limit the use of receiving OTP passwords via SMS to avoid being cheated.

Second, to prevent online risks clients need:

- Not to provide personal information, bank account, OTP password, Internet banking and mobile banking username and password for strangers
- Not to click on strange links.

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