

Cyber Security Issues on E-Commerce

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ABSTRACT:

Cyber security is at a sensitive and critical juncture in the evolution of e-commerce. A major attack at this time, if successful, could significantly influence the future development of the e-commerce business model in general, and could have severe complexes for the victimized organization(s) in particular. This article advocates the issues in E-Commerce which are of different types, that may be ethical, social and political issues. Here the issues are described and the models to resolve the issues.

INTRODUCTION:

In today's digital environment, a broad spectrum of activities occur via the internet: commercial transactions between businesses and directly with consumers, the consumption of media and entertainment, the sharing of information, particularly sensitive data such as health care or banking records, not to mention social activities. Each day billions of transactions take place on the web and in the process an individual's digital footprint increases in detail with sensitive and personal information.

Advantages of E-Commerce:

- It's convenient. Not only can you shop from home and have it delivered to you,

you also have an electronic record of purchases, payments and deliveries.

- There are a lot of different ways to pay: credit cards (including disposable or low-limit cards), online payment services, gift cards, site credits, and so on, many of which allow us to control how much of our financial information we are sharing and how much money we can spend at a time.
- It has built-in safety tools: many sites are equipped with features such as icons and alerts that help us to protect ourselves from being scammed. If you use them, you make it much easier to keep your shopping safe.
- It's easy to do research before you buy by finding customer reviews on products, services, and even individual vendors/buyers online.

Ethical, Social, and Political Issues in E-commerce:

Internet, like other technologies, can: Enable new crimes, Affect environment and Threaten social values. Costs and benefits must be carefully considered, especially when there are no clear-cut legal or cultural guidelines.

Basic Ethical Concepts:

- Ethics-Study of principles used to determine right and wrong courses of action.
- Responsibility.
- Accountability.
- Liability-Laws permitting individuals to recover damages.
- Due process-Laws are known, understood.
- Ability to appeal to higher authorities to ensure laws applied correctly.

Analyzing Ethical Dilemmas:

Process for analyzing ethical dilemmas:

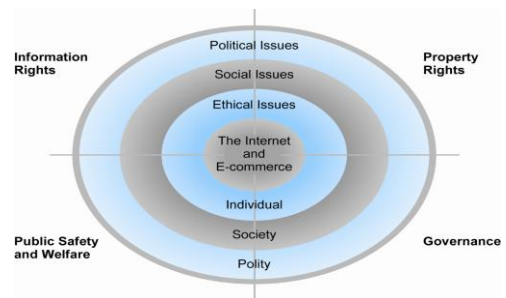
- Identify and clearly describe the facts.
- Define the conflict or dilemma and identify the higher-order values involved.
- Identify the stakeholders.
- Identify the options that you can reasonably take.
- Identify the potential consequences of your options.

Model for Organizing the Issues:

Issues raised by Internet and e-commerce can be viewed at individual, social, and political levels.

Four major categories of issues:

1. Information rights
2. Property rights
3. Governance
4. Public safety and welfare



1. Privacy and Information Rights:

Privacy

- Moral right of individuals to be left alone, free from surveillance or interference from other individuals or organizations

Information privacy

- Subset of privacy
- Includes both the claim that certain information should not be collected at all and the claim of individuals to control the use of whatever information is collected about them.
- Various laws strengthen ability of law enforcement agencies to monitor Internet users without knowledge and sometimes without judicial oversight.
- CALEA, PATRIOT Act, Cyber Security Enhancement Act, Homeland Security Act
- Government agencies are largest users of private sector commercial data brokers
- Retention by ISPs of user data a concern

Major ethical issue related to e-commerce and privacy: Under what conditions should we invade privacy of others?

Major social issue: Development of "expectations of privacy" and privacy norms.

Major political issue: Development of statutes that govern relations between record keepers and individuals.

Information Collected at E-commerce Sites:

Data collected includes Personally identifiable information (PII) and Anonymous information

Types of data collected:

- Name, address, phone, e-mail, social security
- Bank and credit accounts, gender, age, occupation, education
- Preference data, transaction data, clickstream data, browser type

Social Networks and Privacy:

Social networks encourage sharing personal details and Pose unique challenge to maintaining privacy However, use of personal information for monetizing social networks has met backlash Facebook's Beacon program and Facebook's Terms of Service change

2. Property rights:

- Intellectual property: Encompasses all tangible and intangible products of human mind
- Major ethical issue: How should we treat property that belongs to others?
- Major social issue: Is there continued value in protecting intellectual property in the Internet age?
- Major political issue: How can Internet and e-commerce be regulated or governed to protect intellectual property?

Intellectual Property Protection:

Three main types of protection:

1. Copyright
2. Patent
3. Trademark law
4. Balance two competing interests—public and private

Maintaining this balance of interests is always challenged by the invention of new technologies.

1. Copyright law: Protects original forms of expression (but not ideas) from being copied by others for a period of time. Look and feel copyright infringement lawsuits and Fair use doctrine

- Digital Millennium Copyright Act, 1998: First major effort to adjust copyright laws to Internet age and it implements WIPO treaty that makes it illegal to make, distribute, or use devices that circumvent technology-based protections of copyrighted materials.

2. Patents: grants owner a 20-year monopoly on ideas behind an invention

Four types of inventions: machines, man-made products, compositions of matter and processing methods

- Invention must be new, non-obvious, novel.

- Benefits: Encourages inventors and Promotes dissemination of new techniques through licensing.
- Danger: Stifles competition by raising barriers to entry.

3. Trademarks:

- Identifies, distinguishes goods and indicates their source
- Ensures consumer gets what pays for/expects to receive
- Protects owner against piracy and misappropriation

Infringement: use of trademark that Creates confusion with existing marks, causes consumers to make market mistakes, or Misrepresents origins of goods

- Dilution: Behavior that weakens connection between trademark and product.

Trademarks and the Internet:

- Cybersquatting
- Cyberpiracy
- Metatagging
- Keywording
- Deep linking
- Framing

3. Stages of Governance and E-commerce:

- Government Control Period (1970–1994)
- Privatization (1995–1998)

- Self-Regulation (1995–present)
- Government Regulation (1998–present)

4. Public Safety and Welfare:

Protection of children and strong sentiments against pornography Passing legislation that will survive court challenges has proved difficult:

- Communications Decency Act struck down
- Children's Online Protection Act struck down (but still be considered by lower courts)
- Children's Internet Protection Act upheld by Supreme Court (requires schools and libraries to install technology protection measures)

Efforts to control gambling and restrict sales of drugs and cigarettes currently mostly regulated by state law and unlawful Internet Gambling Enforcement Act.

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