

Technological Development and Legal Progressiveness in Indonesia

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Abstract. This research discusses technological developments and legal progressiveness in Indonesia. In Indonesia, technological developments such as the internet, smartphones, and artificial intelligence have had a significant impact on society and the economy. However, the progress of law in Indonesia is not always in line with technological developments. There are a number of legal issues that have emerged as technology advances, such as data privacy, cybersecurity, and digital copyright. The government and legal institutions in Indonesia need to continuously review and update legal regulations to overcome these challenges. This research will also discuss efforts that have been made by the government and legal institutions to keep up with technological developments. For example, the establishment of new regulations governing personal data protection, law enforcement against criminal acts in cyberspace, and efforts to protect intellectual property rights in the digital era. As such, it will investigate the relationship between technological developments and legal progressiveness in Indonesia, as well as how both can support each other to create an environment conducive to innovation and sustainable economic growth. The problem that will be discussed in this study is how technological development and legal progressiveness in Indonesia. The research method used is a normative research method with a statute approach and analyzed using content analysis.

Keywords: Technology Development, Progressive Law.

1 Introduction

Technology has become a major driver of change in various aspects of human life. In Indonesia, technological development has experienced a significant surge in recent decades. This is reflected in various fields, such as economics, education, government, and society generally. In this essay, we will explore the rapid development of technology in Indonesia and its impact on various aspects of life. One of the most striking indicators of the rapid development of technology in Indonesia is the increasingly high internet penetration. More and more Indonesians have access to the internet, either through personal computers or mobile devices. This phenomenon has triggered the birth of a fertile digital ecosystem in Indonesia. People can easily access information, communicate with others, and shop online. [1] E-commerce has become one of the fastest-growing economic sectors in Indonesia, presenting various business opportunities and new jobs. Technological developments have also affected the education sector in Indonesia. [2] Many schools and colleges have adopted technology in the teaching and learning process. Distance learning has become more possible and efficient, especially during

the Covid-19 pandemic. Technology also opens access to lessons and educational resources for those living in remote areas, where it was previously difficult to access quality education. In the government sector, technology is used to increase efficiency and transparency. The government has launched various digital initiatives, such as online government services, applications for monitoring and reporting environmental issues, and technology-based health services. This aims to facilitate public access to public services and reduce complicated bureaucracy.[3]

However, technological developments also present a number of challenges. One of them is the issue of cybersecurity. With more and more data being stored and exchanged digitally, cybercrime is also on the rise. Governments and companies must work together to protect critical infrastructure and sensitive data from cyberattacks. In addition, there are also issues related to data privacy. [4] In an effort to optimize their services, companies often collect users' personal data without their knowledge or permission. There needs to be strong regulations to protect individual privacy and regulate the use of personal data. In conclusion, the rapid development of technology in Indonesia has had a significant impact on various aspects of life. While technology has opened up huge opportunities, challenges such as cybersecurity and data privacy must also be taken seriously. With careful planning, sound regulation, and investment in skilled human resources, Indonesia can continue to harness the positive potential of technology to support economic growth and the welfare of its people. [5]

In this modern era, technological development has become one of the main characteristics of our time. Technology has changed many aspects of our lives, from the way we communicate, work, learn, to how we access information. However, along with the rapid development of technology, various complex and challenging legal issues arise. In this essay, we will discuss some legal issues that arise due to the rapid development of technology. One of the main issues that arises is data privacy and security. Technology has enabled companies and governments to collect and store large amounts of individuals' personal data. This raises questions about who has access to the data and how it is used. Data protection laws and privacy regulations have come into effect in many countries, but major challenges remain in regulating and supervising the use of personal data. The development of digital technology has made it easy to reproduce and distribute intellectual works such as music, films, and books illegally. Copyright is a major concern in this internet age, and copyright law must adapt quickly to address the growing abundance of copyright infringement. Copyright enforcement in cyberspace is becoming an increasingly difficult task due to the global nature of the internet. [1]

Technological developments have also brought the presence of increasingly sophisticated cybercrime. Cyberattacks can damage businesses, governments, and individuals, and it is often difficult to track down the perpetrators of these crimes. Laws relating to cybercrime must be constantly updated to address emerging threats, while also ensuring the protection of individual human rights in cyberspace. Governments often seek to police communications and online activity in an effort to maintain national security. However, such actions can be contrary to individual human rights and freedom of speech. [6] The debate about the extent to which governments can intervene in individuals' online lives is a thorny legal issue. In dealing with legal problems that arise due to the rapid development of technology, a wise and balanced approach is needed. The law must be able to protect individual rights while also allowing technological innovation to continue to flourish. Good regulation and regulation are key to achieving this balance. In addition, it is important to constantly update the law in accordance with the constantly changing technological developments. Active involvement of the public, technologists, and other stakeholders in policymaking is a must. Only with a holistic and responsive approach can we overcome the legal problems faced in this era of rapidly evolving

technology. Based on this description, the problem in this study is how technological development and legal progressiveness in Indonesia.

2 Research Methods

The research method used is a normative research method. [7] By using a statute approach related to technological developments and legal progressiveness in Indonesia. The statute approach is to examine matters concerning legal principles, legal views and doctrines, and laws and regulations related to the environment, and accurate and accountable data related to technological developments and legal progressiveness in Indonesia. In addition, an in-depth examination of the legal facts is also held to then seek solutions to the problems that arise in the symptoms concerned. [8]

3 Results and Discussion

3.1 Technology Development and Public Security Threats

The development of technology, while providing many benefits and conveniences in everyday life, also brings a number of security threats that must be considered by society and government. In this, we will discuss some of the security threats associated with technological developments. Cybercrime is a serious threat that arises along with the development of information technology. Skilled computer hackers can steal personal data, access bank accounts, or damage vital computer systems. Cyberattacks can also be carried out by terrorist groups or foreign countries as a form of threat to national security. Therefore, data protection and cyber infrastructure are critical. With surveillance technologies such as CCTV cameras, *tracking devices*, and massive data collection by tech companies, individual privacy is increasingly threatened. Personal information that is too widely available can be misused and lead to actions that harm individuals. [9]

Critical infrastructure such as electricity, water, and transportation systems are increasingly connected to the internet, allowing them to become targets for cyberattacks. Attacks on this infrastructure can cause mass power outages, chaos in clean water supplies, or even threats to national security. Technology has also enabled the rapid and widespread spread of disinformation and fake news. This can disrupt social and political stability, as well as affect elections and public decisions in general. Social media has become a platform for fraud, harassment, and other crimes. False identities and relatively easy anonymity make perpetrators of crimes difficult to identify and punish. Terrorist groups are increasingly using technology to organize and launch attacks. This includes online propaganda, attack planning, and recruitment through social media. Society's dependence on technology is also a threat. If vital technological systems experience disruption or attack, then society can experience significant hardship and chaos.

Faced with these threats, people need to raise awareness about cybersecurity, take personal protection measures such as the use of strong passwords and antivirus software, and support regulations governing the ethical and safe use of technology. Governments must also play an important role in crafting policies that can protect society from these threats, while respecting individual rights and privacy. With a balanced approach and joint efforts, people can enjoy the benefits of technology while still keeping them safe.

3.2 Technological Development and Legal Progressivity in Indonesia

The rapid development of technology has profoundly changed the social, economic, and political landscape. It covers developments in the fields of communication, information, transportation, science, and various other sectors. In this context, progressive law is very important because it must be able to keep up with technological developments and face various challenges that arise. There are several reasons why progressive laws are so important in coping with technological developments. Technological developments often involve the collection and use of personal data. Progressive laws should ensure that individual rights related to data privacy and security remain protected. This involves creating regulations governing the collection, use, and storage of data, as well as giving individuals control over their personal information. Technology can be used for a variety of purposes, including cybercrime, the spread of false information, and other illegal activities. Progressive laws must create a strong legal basis to prevent misuse of technology and provide firm consequences for perpetrators of these crimes. [10]

Technological developments allow for tremendous innovation, but also carry risks. Progressive laws must strike the right balance between encouraging innovation and ensuring that technology development takes into account social, ethical, and environmental impacts. In the digital age, national security also depends on the ability to protect critical infrastructure from cyberattacks and other technological threats. Progressive laws should create a legal foundation that enables governments to address these threats quickly and effectively. Progressive laws must also ensure that access to justice remains open to all, including in the use of technology. This includes the use of technology in courts to improve the efficiency and accessibility of the justice system. Laws can play an important role in shaping social norms related to the use of technology. Through proper regulation, laws can help direct people's behavior in the responsible and ethical use of technology. Progressive laws must also provide strong protections for consumers in an increasingly complex digital business environment. This involves regulation of online commerce, consumer protection in online transactions, and efficient handling of consumer complaints.

In conclusion, progressive law is key to addressing the impact of rapid technological development and ensuring that these developments align with social values, human rights, and the public interest. Static and outdated laws will not be able to address the challenges that arise in this digital age. Therefore, the important role of governments, legal experts, the technology industry, and civil society is to work together in designing, implementing, and updating progressive laws that are in line with current and future technological developments. The rapid development of technology has brought great changes in various aspects of human life around the world, and Indonesia is no exception. Advances in information, communication, and industrial technologies have affected many aspects of life, including economy, education, and culture. Along with these developments, the law in Indonesia must also move forward in order to accommodate the challenges and opportunities arising from this digital era. One thing to note is how technological developments have triggered progressivity in the legal sector in Indonesia [1]:

- a) **Technology and Data Protection Regulation:** In recent years, Indonesia has sought to develop stricter regulations in terms of data protection and privacy, especially by passing Law No. 11 of 2020 concerning Electronic Information and Transactions (ITE Law). The law covers issues such as data privacy and cybercrime, providing a legal framework to protect citizens from misuse of technology. This is a positive step in responding to the rapid development of technology.

- b) E-Commerce and Regulation: The growth of e-commerce in Indonesia poses new legal challenges in terms of online commerce regulations and consumer protection. The government has responded by issuing various regulations that support the development of the e-commerce industry while protecting consumer rights.
- c) Digital Courts: Indonesia has introduced digital courts, which enable legal processes to be more efficient by utilizing technology. This includes online case registration, the use of video conferencing in hearings, and access to legal documents electronically. This helps reduce bureaucracy and improve access to justice.
- d) Cybercrime Eradication: Cybercrime has become a serious threat in this digital age. The Government of Indonesia is working with relevant agencies to strengthen regulations and improve law enforcement capacity to counter cyberattacks and cybercrime.
- e) Use of Technology in Education: Technology has also been adopted in education, especially during the COVID-19 pandemic. This raises legal questions about online education rights, protection of children in cyberspace, and access to education for all citizens.

However, there are also challenges that need to be overcome. One of them is to ensure that Indonesian law is always relevant to the ever-changing technological developments. The legislative process needs to become more responsive and faster in the face of technological change. In addition, the protection of individual rights and privacy in the digital age must also be carefully considered, so that technological developments are not used as an excuse to violate human rights. In order to ensure that Indonesia can take maximum advantage of technological developments while still protecting its people, the role of the government, civil society, and private sector is crucial. This collaboration will help create a progressive and balanced legal framework that can accommodate rapid technological developments and encourage innovation while ensuring that individual rights remain protected. With a prudent approach, Indonesia can continue to move forward in facing the challenges and opportunities that come along with technological developments.

4 Conclusion

Based on the results of research related to technological developments and legal progressiveness in Indonesia that rapid technological developments have brought significant changes in the lives of Indonesian people and around the world. These advances have presented great opportunities, but also complex challenges that require progressive and prudent legal handling. Protection of individual rights, especially the right to privacy and data security, must take precedence in this digital era. The law should provide adequate protection and ensure that citizens do not become victims of misuse of technology. Technological regulation, such as e-commerce, consumer protection, and regulation of online commerce, must keep pace with industry developments. The law must create a framework that enables innovation but still protects the interests of consumers.

The use of technology in the judiciary and law enforcement must be increased to improve the efficiency and accessibility of the justice system. National security must be safeguarded in the face of complex cyber and technological threats. The law should give sufficient authority for the government to protect critical infrastructure and state security. The eradication of cybercrime and the spread of false information need special attention in progressive laws. The law must also play a role in shaping social norms related to the use of technology, so that

people's behavior in the use of technology becomes responsible and ethical. Access to justice and consumer protection in a digital business environment should be an important focus in progressive law. In order to cope with rapid technological developments and maximize their benefits, Indonesia must ensure that its laws are always relevant, progressive, and able to accommodate ongoing technological changes. Collaboration between governments, legal experts, the technology industry, and civil society is key to creating a balanced legal framework, one that encourages innovation while protecting individual rights and the public interest. With a thoughtful and responsive approach to technological developments, Indonesia can face the digital future with confidence and justice.

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