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Artificial Intelligence and Challenges to Human Rights Legislation – Some Proposals for Southeast Asia Developing Countries

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ABSTRACT

Artificial intelligence technology (AI) with its great influence is considered one of the outstanding achievements of the Fourth Industrial Revolution. As a technological invention, the first value of Artificial Intelligence is to serve people's lives and bring material convenience to humans. However, the downside of Artificial Intelligence is that can support and become an agent for human rights violations has posed several legal challenges to states in preventing the misuse of Artificial Intelligence. This article summarizes information in analytical reports of certain reputable research agencies to explore basic legal issues related to artificial intelligence and the impact of artificial intelligence on human rights. Through observation method, descriptive method, and case study in some developing countries in Asia, the article points out the gaps in human rights law, and the challenges facing Southeast Asia developing countries in achieving the dual goal of ensuring human rights and making the most of AI achievements. Thereby, the article suggests some solutions for the challenges and impacts on human rights arising from the widespread development of artificial intelligence in developing countries in the future.

***Keywords**: AI, human rights, Asia, Developing countries.*

I. INTRODUCTION

Nowadays, artificial intelligence (AI) has been changing the world we are living in, from how we work to how we enjoy life, from health care to education, governance, and social operation. There are many different definitions of artificial intelligence (AI). According to Wikipedia, artificial intelligence is the intelligence represented by an artificial system. This term is often used to refer to a branch of computer science where an intelligence created by humans can help computers to automate intelligent behaviors like humans[2]. Meanwhile, Bellman (1978) defines artificial intelligence as the automation of activities consistent with human thinking, such as decision-making activities, and problem-solving; Rich and Knight (1991) assert that artificial

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[2] *Artificial Intelligence* (2023) *Wikipedia*. Available at: https://vi.wikipedia.org/wiki/Tr%C3%AD_tu%E1%BB%87_nh%C3%A2n_t%E1%BA%A1o (Accessed: 12 June 2023).

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intelligence is the science of studying how computers can perform tasks that humans currently do better than computers. One of the most updated concept of artificial intelligence that is meaningful for the study of its social aspects (cited from the report of the Interim Committee on Artificial Intelligence of the British Senate) is "*Artificial intelligence is a composition of processes and technologies that enable computers to supplement or replace specific tasks inherently performed by humans, such as making suggestions and solving the problems"*[3]. In short, the concepts of artificial intelligence often refer to two major aspects: (1) Self-learning of machines; and (2) The replacement of humans with machines. In particular, as a scientific invention that is increasingly being improved, AI in the future will have the ability to be self-aware of itself and become a species or new race that could compete and potentially destroy human civilization. AI has great significance for human development, but it also has many negative effects on society. In particular, the impact of AI on human rights is one of the issues receiving more and more attention from states around the world. Some basic human rights directly affected by AI are the right to equality and non-discrimination, the right to participate, the right to protection of privacy and personal information, the right to freedom of expression, the right to freedom of expression, and the right to employment.

Rights to equality and non-discrimination are affected as AI systems reflect social prejudices and create inequalities in society, especially in the issues relevant to individuals and minorities. Many AI systems contribute to users' decisions and propose recommendations by using and evaluating data related to social, occupational, race, health, and skin color, resulting in severe discrimination against disadvantaged individuals and groups. For example, a computer system used to detect the recidivism risk of individuals in the U.S. criminal justice system misclassifies African Americans as "high risk" of recidivism - at twice the rates of whites (Filippo et al., 2018). In addition, there is evidence that AI activities can "*systematically and unfairly discriminate*" in many essential parts of social life, such as access to services, employment, financial aid, and criminal justice. When widely used, biased AI systems can be an obstacle to ensuring the right to equality and non-discrimination[4].

Rights to privacy and protection of personal data are also affected by AI systems. The operation of AI systems is accessing and analyzing sets of data. To operate smoothly, AI requires the collection of a lot of information. Analyzing data using an AI system can reveal the private and

[3] AI Now, "The AI now report: the social and economic implications of artificial intelligence technologies in the near term", 2016. Available at https://ainowinstitute.org/AI_Now_2016_ Report.pdf; United Kingdom of Great Britain and Northern Ireland House of Lords Select Committee on Artificial Intelligence, "AI in the United Kingdom: ready, willing and able?", 2018.

[4] Matthew L. Smith, Sujaya Neupane, ―Artificial Intelligence and Human Development: Toward a research agenda‖ (White Paper), International Development Research Centre 2018, pg.11, 59.

personal information of individuals. Most AI systems are used by companies (especially tech companies like Google, Facebook, and Twitter) and by many governments. Companies use personal information for business purposes to make profits, while governments use AI systems for management purposes, such as video control systems, and facial recognition systems in many countries around the world. Control and privacy are two sides of the same coin. The greater the control is, the more right to privacy is affected. AI control systems are used more and more, thereby the rights to privacy and personal data protection are more and more violated. Facial recognition systems can extract personal information from existing data. The emergence of AI control systems results in a situation where a huge amount of data about individuals both online and in real life is improperly stored, misused, and abused. Moreover, the application of AI in the digital age exerts other impacts on privacy and personal data in different ways. For example, online shopping systems are often equipped with devices that collect and construct a huge database of customers without their knowledge or consent. Other examples are the systems that reveal the identity of a person who wishes to remain anonymous, the systems that infer and generate sensitive information about people from their non-sensitive information, the systems that create a resident profile based on their information, and the systems that make decisions based on the collected information.

Another right affected by AI is freedom of expression. AI has a serious impact on the right to access, find, and share information. Many AI systems are designed to work within the interface of social networks and search engines to control user information in various ways. Media are controlled tightly, the data is no longer freely created, used, and shared. A good example is that Facebook removes the image of "Napalm Girl" because it finds the image to be erotic without considering its historical significance.[5] The problem is even more serious when the information controlling power of AI is used for illegitimate purposes to propagate, control, and distribute information. As a result, AI can affect people's democracy and self-determination. AI systems are being used more widely to propagate, control and guide behavior through social networks. On one hand, many campaigns are created and controlled by misinformation to propagate and guide public opinion. On the other hand, if people find that their information is controlled, monitored, and directed, they will no longer trust the information they receive and no longer feel safe to freely express their thoughts. Consequently, it changes people's expression behaviors.

[5] Julia Carrie Wong, "Mark Zuckerberg accused of abusing power after Facebook deletes 'napalm girl' post", The Guardian, 9 September 2016. Available at https://www.theguardian.com/technology/2016/sep/08/facebook-mark-zuckerberg-napalm-girlphotovietnam-war; see also A/HRC/38/35, para. 29

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AI also affects the right to work. The popular use of AI technologies to replace humans poses big challenges to the right to work. The application of automation and technology is responsible for the increasing unemployment rate. The labor market is affected not only by a decrease in employment opportunities but also by a change in the structure of the labor market, in which traditional jobs are increasingly reduced and High-tech-related jobs become more and more popular. However, disadvantaged groups in society face difficulties in accessing jobs that require high education and technical skills. Apple, Samsung, and Foxconn factories in China cut 60,000 jobs because of robotic applications. According to E-Commerce Group JD.com Inc, a robot is 4 times more productive and works more stably than a skilled worker[6]. Recently OECD estimates the heterogeneity of tasks in narrowly defined occupations using data from the Programme for the International Assessment of Adult Competencies (PIAAC)). Due to existing technologies, 14% of jobs in member states are at high risk of automation; 32% of other jobs may have a big change in the way they operate. Recent OECD analysis reveals a decline in employment rate from the occupations deemed “highly automated” in 82% of regions in 16 European countries. Furthermore, the analysis indicates a significant increase in "low automation" jobs in 60% of regions to offset job loss. The analysis supports the idea that automation can change the mix of jobs without reducing total employment.[7]

The development of AI systems in social life is an unrevivable trend. Like the emergence of the industrial and machine revolutions, AI brings a lot of value to social life but also results in many negative consequences and impacts on people. Therefore, the important point is how to take advantage of the values AI brings and find solutions to settle or minimize the negative impact of AI on human rights. To do that, the law should play a key role in controlling AI to both utilize it and constrain its disadvantages. However, in the age of AI, the law faces many difficulties and challenges. The law should include a system of rules controlling AI to ensure that all actors involved in the construction and operation of AI systems are responsible for promoting human rights. Governments need to develop a system of policies and laws that regulate and ensure conditions for actors to comply with their obligations, and encourage them, especially businesses, to ensure their responsibilities for human rights. Governments must also have accountability and build a system to control their use of AI.

In the age of AI, international law protects human rights mainly by current human rights conventions and documents. The United Nations have not established the regulations and

[6] Mi, H. (2018) *Năm 2018: Trí Tuệ Nhân Tạo Bùng Phát ở đông Nam Á*, *SO HUU TRI TUE*. Available at: https://sohuutritue.net.vn/nam-2018-tri-tue-nhan-tao-bung-phat-o-dong-nam-a-d23517.html (Accessed: 12 June 2023).

[7] https://vista.gov.vn/vn-uploads/tong-luan/2021_05/tl4_2021.pdf retrieved on June 26, 2022

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mechanisms to address the impacts and risks of AI on human rights[8]. At the regional level, except for the European Union[9], other continents have no regional legislation governing AI issues. Meanwhile, many states do not pay attention to AI governance for human rights[10]. AI is a vast field with different types of applications that impact human rights in various degrees. Facing the development of AI, the current international legal regulations are obviously not enough to meet the requirements of handling human rights violations produced by AI.

II. AI AND HUMAN RIGHTS IN DEVELOPING COUNTRIES IN SOUTHEAST ASIA

(A) The potential of AI applications and the role of AI applications in economic promotion in developing countries in Southeast Asia

Southeast Asia is one of the fastest-growing regions in the world. Despite its success in economic development, overall progress in the Sustainable Development Goals (SDGs) of the region is slow. Agriculture remains a key sector of Southeast Asian economies.

According to World Bank, agriculture accounts for about 11% of ASEAN GDP in 2020. In some countries, such as Cambodia and Myanmar, agriculture accounts for more than 20% of GPD. Moreover, the majority of ASEAN labor force is in agriculture. Agriculture in Southeast Asia is experiencing a technical transformation. For example, smartphones with AI and big data manage crops more efficiently while drones help farmers improve farming productivity. For smallholder farmers who have less than 2 hectares of arable land, new technologies not only increase efficiency but also improve their family incomes. In Vietnam, MimosaTEK introduces precision agriculture to smallholder farmers through cloud-based devices and sensors that support crop monitoring. Furthermore, this company utilizes IoT to develop a smart irrigation system allowing farmers to use their mobile phones to monitor weather conditions and adjust the water system. This project is being piloted in Can Tho and is expected to expand to the rest of the Mekong Delta. Agricultural technology and "smart farming" are encouraged by the Thai government. Since 2020, the digital economy promotion agency of Thailand has subsided farmers and agri-tech businesses with an allowance of THB 10,000 (US$300) to THB 300,000 (US$9,000). Today, a number of farmers in Thailand start using drones in farming activities,

[8] Christiaan van Veen và Corinne Cath, ―Artificial Intelligence: What's Human Rights Got To Do With It? Data & Society Points, 26/6/2022

[9] Europe is one of the pioneer regions in AI governance for ensuring human rights. In December 2018, the European Commission on Judicial Effectiveness (CEPEJ) issued an Ethical Charter on the use of AI in the judicial system to ensure that the use of AI in judicial activities is respected. In August 2019, European Union developed the Ethical Guidelines for Trusted AI.

[10] Le Thi Thuy Huong, Vu Cong Giao, The impact of artificial intelligence on human rights: Some theoretical and practical issues, Proceedings of the Artificial Intelligence Conference and issues facing the law and human rights, organized by Faculty of Law, VNU, Hanoi, May 28, 2019

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such as sowing seeds and spraying pesticides, etc. In addition to agricultural technologies, farmers use e-commerce platforms to sell their products directly to city dwellers. In Indonesia, people in Bali and Java often use an e-grocery platform named Sayurbox where they can order fresh agricultural products directly from locals. Online agricultural shopping growing at a fast pace helping Southeast Asia become a key market for agricultural technology investment. Additionally, Southeast Asia is one of the fastest-growing digital economies in the world. The number of digital consumers in Southeast Asia nearly tripled between 2015 and 2018, increasing from 90 million in 2015 to 250 million in 2018, and more than 300 million by the end of 2020[11].

Southeast Asia is a region investing heavily in AI. Singapore is an outstanding example when it quickly considers AI as one of the spearheads to approaching the 4th industrial revolution. With advances being made quickly in both capacity and knowledge, AI in Southeast Asia has a diverse ecosystem and initially improves social life through potential applications in many fields, such as healthcare, manufacturing, agriculture, transportation, finance, etc. Developing countries in Southeast Asia such as Vietnam, Thailand, and Indonesia are all adaptable countries that set ambitions to develop their digital economy based on the prospects that AI could bring. These countries are leading the innovative movement of AI applications in biotechnology, healthcare, high technology and telecommunications, financial services, etc.

Many startups in Vietnam, Thailand, and Indonesia are pioneers in the development of AI with many flexible applications. For example, Sale Stock, an e-commerce service provider in Indonesia, uses AI to predict fashion trends in the world and make production plans accordingly; Bumrungrad International Hospital in Thailand is the first medical research institute outside of North America to implement the IBM Watson software program, an AI architecture developed to optimize cancer diagnosis; a startup in Vietnam named Sero provides an electronic farming management solution to help farmers promptly detect pests and diseases through an AI system that analyzes the images and sends them to farmers via an application on the mobile phone.

(B) AI and challenges to human rights in Southeast Asian countries

Southeast Asian countries are in the early stages of AI application[12]. In the region, AI attracts much attention in recent years and is considered an important driving force for socio-economic development. That's why the number of AI-related studies, products, and associations increases

[11] Google, Temasek, and Bain & Company, "E-Conomy SEA 2020 Report," Google, accessed May 6, 2021, https://storage.googleapis.com/gweb-economy-sea.appspot.com/assets/pdf/e-Conomy_SEA_2020_Report.pdf

[12] https://www.kearney.com/digital/article/-/insights/racing-toward-the-future-artificial-intelligence-in-southeast-asia retrieved on June 24th, 2022

more and more. However, the adoption and applicability of AI in Southeast Asian countries are uneven. Government AI Readiness Index provided by Oxford Insights and the International Research Development Center scores the governments according to their preparedness to use AI in the management and delivery of services; six Southeast Asian countries are in the top 100, including Malaysia (rank 22), Philippines (rank 50), Thailand (rank 56), Indonesia (rank 57), and Vietnam (rank 70). Many countries in the region still face difficulties in basic Internet access. For example, the online internet access rates of Timo Leste, Myanmar, and Laos are only 30.3%, 33.1%, 35.4% respectively[13]. However, with the available resources, AI is expected to develop very quickly in these countries. The number of Southeast Asian companies and startups investing in or integrating AI into their systems is increasing. Thailand also joins the digital race with the Thailand 4.0 Initiative - an economic model that prioritizes technology and automation to achieve upper-income status. This initiative could lead to the rise of AI in Thailand.[14]

In addition to the general challenges posed by AI to human rights, developing countries in Southeast Asia also face more serious challenges stemming from specific causes, such as:

Most of the developing countries in Southeast Asia are not involved in the production of AI systems. The technologies using AI in these countries are mainly imported from the US and China. While their technology levels are low, using such imported AI technology to monitor their people could result in limited ability to master the technologies[15]. There is uncertainty in controlling all data when using the applications provided by other countries. Furthermore, in developing Asian countries, people are often more wary of government surveillance than corporate surveillance. However, the effects of corporate surveillance, especially by big tech companies like Facebook and Google, could be uncontrollable and even dangerous when their AI technologies are combined with huge amounts of data that are leased to predict and change user behaviors for their advertisers.[16]

Southeast Asian countries tend to apply AI for economic development rather than impact human rights. Governments of developing countries in Southeast Asia appreciate the importance of developing AI strategies and initiatives to promote benefits and reduce risks. For example,

[13] https://coconet.social/2020/ai-impacts-economic-social-cultural-rights/ retrieved on June 24th, 2022
[14] https://theaseanpost.com/article/prospect-ai-southeast-asia-0 retrieved on June 24th, 2022
[15] AI Global Monitoring Index (AIGS 2019) mentions seven Southeast Asian countries (data not available for Brunei, Vietnam, Cambodia, and Timor Leste). It shows that most of the countries in the region use two or more types of surveillance technologies through smart/safe city development, facial recognition, and smart policies; and all of these countries use technology imported from China and the US.
[16] 85% of Internet users in Asia use Facebook, https://www.internetworldstats.com/stats3.htm retrieved on June 26th, 2022

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Indonesia launches a national AI strategy with the aim to reach a value of USD 366 billion by 2030. Indonesia's strategy emphasizes the importance of ethics, skills, infrastructure, and data analysis as key components of AI ecosystem. For the development and implementation of any AI-related policy, the strategy also emphasizes the importance of multi-stakeholder engagement, including government, enterprises, educational institutions, and the local community. Apart from Indonesia and Singapore, other countries like Malaysia and Thailand consider AI and digital technology as an opportunity to modernize traditional fields to make them more innovative and efficient.[17] For example, new technology can use drones and sensors to assist farmers in monitoring their fields and crops in rural areas, provide remote healthcare services, etc. At the regional level, a number of ASEAN master plans and strategic initiatives are established to boost the development and integration of their digital economies. These strategies highlight the connection between digital connectivity and infrastructure, development skills, the realization of smart cities, and the transition to Industry 4.0. However, these strategies mainly focus on utilizing the strengths of AI to speed up economic development without paying due attention to ensuring human rights against the impact of AI.

In developing countries, the legal framework to support AI development is incomplete. For example, most policies are too outdated to respond to emerging trends of new technologies and services associated with AI. New platforms break the traditional models; the law on digital labor with existing laws is unable to keep pace with the changes in contract economics, while more suitable policies are not available. It is estimated that 73% of economies in the Asia-Pacific region adopt e-transaction laws, while only 38% of countries in the region apply Consumer Protection Law and 29% of them adopt laws on privacy. Similarly, Cybercrime Law is only applied in 56% of developing economies while the rate in developed economies is more than 90% (UNCTAD, 2015). In some regions, the current policies are revised, and controversy about whether it is the right policy to help the digital economy develop. Moreover, the incomplete legal and regulatory framework for e-commerce, including electronic transactions, undermines trust in digital services.

The development and application of AI with many benefits is a development trend in society. However, it also poses many risks and challenges to society, especially in ensuring human rights. If AI is not fully understood and enforced aggressively, the consequences it produces can be serious and unpredictable. The development of AI and technology is very fast, while

[17] (No date) *The promise and challenge of the age of Artificial Intelligence*. Available at: https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Artificial%20Intelligence/The%20promise%20and%20challenge%20of%20the%20age%20of%20artificial%20intelligence/The-promise-and-challenge-of-the-age-of-artificial-intelligence-In-Brief.ashx (Accessed: 12 June 2023).

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governance and legal policies are lagging behind. Therefore, the international community and states need to take more efforts in promoting research, and initiatives, formulating and implementing legal policies on AI governance to meet the needs for the development and application of AI for now and in the future.

In the early stages of AI application, developing countries in Southeast Asia need a National Strategy for AI development. In that strategy, special attention should be paid to the following issues:

First, Infrastructure development. Governments of developing countries should have policies encouraging the private sector and international financial institutions to invest in telecommunications infrastructures, such as land rent exemption (depending on each project and scale), preferential tax rates, reduction of infrastructure costs for research, AI application development and technology transfer, etc, thus AI application could be promoted in various fields, such as financial services, healthcare, retail, transportation and logistics, industrial production, tourism, education, etc.

Second, develop a strategy focusing on completing AI-related laws that consider people as the center. First of all, the application of AI must contribute to promoting economic growth and sustainable well-being. Nextly, AI applications must respect human-centered values and equality. Some criteria to identify a complete legal system that could regulate and support AI applications are specialized law on regulating relations and use of robotics, a system of state agencies responsible for robotics, a national program on developing the robotics industry, and a pilot regulatory framework for testing robotics technology.

Third, to take advantage of the opportunities offered by AI, developing countries should pay special attention to fundamental issues for AI development, such as databases, high-quality human resources, and user consensus. AI needs data because AI depends on it to perform analytical algorithms with six ethical principles – equality, trust, safety, security and privacy, transparency, and responsibility. The number of Data Scientists is currently very low, even in major AI centers of the world, it is extremely low in Southeast Asian countries while AI needs talented people to develop more powerful and sophisticated AI programs. Lastly, AI needs the acceptance of users – the "native residents of the digital age" in the countries to complete the product before it is launched to the world market.

To do all of the above tasks, it requires careful research and policy formulation, intergovernmental cooperation, intergovernmental knowledge sharing and consensus building, open and regular discussions with civil society and the private sector, specifically technology

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developers. However, governments currently lack the necessary coordination and preparation for an AI revolution.[18]

III. CONCLUSION

As Artificial Intelligence is a matter of concern, we need to pay attention to its impact on human rights. This partly stems from the fact that AI still has many limitations, including its dependence on the desire of the developer as well as the owner. Southeast Asia is developing and is expected to be a prominent market in the future. However, this prominent position means that the states should carefully evaluate the role and scope of AI in pursuing development. Specifically, governments must ensure the harmony between the benefits of AI and their negative impacts, develop an adaptable workforce for the future, and formulate the right laws.

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[18] *Frontier issues: The impact of the technological revolution on labour markets and Income Distribution | Department of Economic and Social Affairs* (no date) *United Nations*. Available at: https://www.un.org/development/desa/dpad/publication/frontier-issues-artificial-intelligence-and-other-technologies-will-define-the-future-of-jobs-and-incomes/ (Accessed: 12 June 2023).

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14. AI Global Monitoring Index (AIGS 2019) mentions seven Southeast Asian countries (data not available for Brunei, Vietnam, Cambodia, and Timor Leste). It shows that most of the countries in the region use two or more types of surveillance technologies through smart/safe city development, facial recognition, and smart policies; and all of these countries use technology imported from China and the US.
15. 85% of Internet users in Asia use Facebook, https://www.internetworldstats.com/stats3.htm retrieved on June 26th, 2022
16. https://www.mckinsey.com/~/media/mckinsey/featured%20insights/artificial%20intelligence/ai%20and%20se%20asia%20future/artificial-intelligence-and-southeast-asias-future.ashx
17. https://www.un.org/development/desa/dpad/publication/frontier-issues-artifining-intelligence-and-other-công nghệ-sẽ-định nghĩa-cao cấp-của-việc làm-và-thu nhập

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