Asian Journal of Social Science Studies; Vol. 8, No. 3; 2023
ISSN 2424-8517 E-ISSN 2424-9041
Published by July Press

Corpus-based Critical Discourse Analysis on AI Policy: A Comparison Between North America and Developing Countries in East Asia

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Received: August 1, 2023 Accepted: August 30, 2023 Online Published: September 1, 2023

doi:10.20849/ajsss.v8i3.1371 URL: https://doi.org/10.20849/ajsss.v8i3.1371

Abstract

Artificial Intelligence (AI) has undergone a global transformative impact on people's lives. However, the realm of empirical research focused on AI within applied linguistics remains limited, predominantly dwelling on qualitative rhetoric and narrative analysis. This research aims to fill this gap by shedding light on the discursive constructions of AI policies between North America and developing countries in East Asia based on corpus data. Two corpora are constructed for quantitative study, utilizing keywords, collocates, and concordance analysis, and two dimensions of dialectical-relational approach are adopted to delve into the results. The findings reveals that both EA and NA prioritize AI-related efforts, but EA emphasizes more on economic and societal applications, while NA highlights governmental sectors' efforts, cooperation with allies, and national security in AI deployment. The results are closely associated with their social context. This nuanced understanding of AI policy research holds significant implications for policymakers, stakeholders, and scholars actively involved in shaping responsible AI regulations and governance practices on an international scale.

Keywords: artificial intelligence policy, critical discourse analysis, corpus

1. Introduction

Artificial Intelligence (AI) has ignited a momentous and ubiquitous revolution, profoundly reshaping various aspects of society, including governance, economy, and social interactions. As AI technologies continue to advance rapidly, policymakers around the world are faced with the crucial task of formulating effective policies to harness its potential while addressing the associated challenges and risks. Laws and policies surrounding AI are currently in the embryonic stages of development (Collett & Dillon, 2019, p. 13), but its quantity is continuously increasing. For example, many countries have introduced AI strategies and development plans, such as the United States, European Union, United Kingdom, Japan, China, India, and others. Numerous international organizations, private sectors, and multilateral forums have also engaged in relevant discussions, such as the Group of Seven (G7), the Group of Twenty (G20), and the Organisation for Economic Cooperation and Development (OECD).

The study chooses to compare North America and East Asia because they are the representatives of developed and developing countries. Developed countries, particularly the European Union and the United States, have taken the lead in implementing a significant number of artificial intelligence policies but developing countries, with China and India showing strong momentum, generally still have relatively fewer relevant policies. The idea also stems from the recognition that AI policies are shaped by a multitude of factors, including socioeconomic conditions, cultural contexts, and governance structures. While developed countries often possess greater resources, technological capabilities, and established regulatory frameworks, developing countries face unique challenges in adopting and regulating AI technologies, such as capacity building, resource constraints, and potential ethical dilemmas. By examining the AI policies of both groups, this study seeks to shed light on the global dynamics of AI governance and identify potential areas of convergence or divergence.

Critical discourse analysis (CDA) approach enables a systematic examination of the language, power relations, and ideological positions embedded within policy texts. Employing corpus, a quantitative and qualitative analysis of textual data allows us to move beyond the surface-level analysis of policy documents and delve into the discursive construction of AI governance. While discussions on artificial intelligence (AI) exhibit highly interdisciplinary characteristics (Dwivedi et al., 2021), there is currently a lack of research from a combined method of CDA and corpus linguistics specifically focusing on the regional disparities in AI development as

reflected in policy texts. This insufficient attention does not align with the significance of these topics.

This study aims to conduct critical discourse analysis based on a self-constructed corpus of AI policies from developing and developed countries. According to the country classification in the World Economic Situation and Prospects (WESP) report issued by the United Nations (p. 154), the corpus includes language data from two developed countries, the United States and Canada, and five Asian countries, namely China, Korea, Singapore, Thailand, and Vietnam, representing developing countries with existing AI policies. The study intends to explore the similarities and differences in policy approaches, underlying discourses, and key considerations between these two groups of countries. By identifying similarities and differences between developed and developing countries, we can gain insights into the global dynamics of AI governance and identify areas that require attention and collaboration. Specifically, the study seeks to address the following research questions:

RQ1. What's the respective characteristics of AI policies of these two regions?

RQ2. What's the similarities and differences?

RQ3. What's the discursive and social practice under the dialectical-relational approach?

This study makes significant and innovative contributions, particularly in three dimensions. Firstly, it offers essential policy support and guidance for AI development by analyzing existing discourse. The selection of the latest policies in recent years enhances the credibility and feasibility of the results. Secondly, it enriches the application of critical discourse analysis by incorporating linguistic research frameworks to address policy and international development issues, thereby fostering interdisciplinary research. Lastly, the use of a corpus in critical discourse analysis eliminates subjectivity and segmentation, resulting in more objective and universally applicable results.

2. Literature Review

2.1 AI Policy and Discourse Analysis

Generally speaking, traditional policy frameworks are used to identify policy with policy mechanisms, policy communities, value shifts, and the like. (Marshall, 2000: p. 125) Policy study frequently focuses exclusively on discourse. However, several policy studies revolving around discourses have been conducted, such as New Zealand government policy concerning outcomes of women (Kahu & Morgan, 2007), Egyptian ICT policy (Stahl, 2008), European higher education policies (Wodak & Fairclough, 2010), language policy (Johnson, 2011), the post-devolution policy of third sector involvement in welfare governance in the UK (Chaney & Wincott, 2014), health policy in China (Evans-Agnew et al., 2016), gender policy in Australia (Marshall, 2000), gender inequality in education policy in India (Khandal et al., 2023), from which we can say that the qualitative method remains the mainstream in policy discourse analysis.

Upon in-depth review of AI policy, several studies merit the notes. Robinson (2020) focuses on social and cultural values' influence on Nordic national AI policy, showing that certain cultural values like trust, transparency, privacy, etc., are incorporated into the strategies. Amit Kumar (2021) compares India and China's AI policies and strategies through a detailed analysis of the content of the policy. Bareis and Katzenbach (2022) address national AI policy as a peculiar form of co-shaping the development of society and argues that the narrative construction of the AI policy in China, the United States, France, and Germany are quite uniform, while their imaginaries are quite different, reflecting varied social context.

On AI policy discourse, Ulnicane et al., (2021) examine the rhetorical frame of AI policy documents to resolve public controversies around AI. Fuchs (2022) explores the AI policies under the critical discourse analysis from a Radical Humanist Perspective, digging into the ideologies of AI strategies of the EU, the United States under Donald Trump and China. Guenduez & Mettler (2023) examine the narrative characteristics and roles of government of 33 AI policies with structural topic modeling (STM) and qualitative narrative analysis. Roberts et al (2023) compare AI strategy of China and the European Union, assessing the key similarities and differences in three layers and providing policy recommendations for them. Given the current situation, discourse analysis on AI policies is still scarce, and none of them focuses on the comparison between developed and developing countries as well as using the corpus-based method.

2.2 Corpus-Based Critical Discourse Analysis

Discourse is "socially constitutive as well as socially shaped" (Fairclough and Wodak, 1997: 25), and language performs as discourse as well as social practice (Fairclough, 2001, p. 21). CDA emphasizes the need for interdisciplinary work in order to gain a proper understanding of how language functions in constituting and transmitting knowledge, in organizing social institutions, or in exercising power in different domains/fields in

our societies (Wodak, 2001, p. 11), and helps to explore "opaque as well as transparent structural relationships of dominance, discrimination, power and control" (Wodak & Mayer, 2009, p. 10), hence is normally adopted in the revelation of underlying power and ideologies in public discursive constructions, especially concerning inequality issues. However, CDA also has been criticized for its qualitative approach (Cheng, 2013, p. 1353), characterized by "fragmentary, exemplificatory" demonstration (Fowler, 1996: 8), circularity (Stubbs, 1997, p. 199), and "subtle, stimulating, and paradoxically, seductively pervasive" interpretations (Widdowson, 1995, p. 169). This study adopts Corpus Linguistics (CL) to complement the aforementioned deficiencies. As is primarily quantitative and interested in the local context of the situation (Cheng, 2013, p. 1353), CL can help quantify discoursal phenomena already recognized in CDA (Baker et al. 2008: p. 285). Combining CDA and CL, therefore, provides a more comprehensive and objective perspective on the analysis.

In the past, some scholars have already combined corpora methods with discourse analysis to investigate media discourses and English usages in other conditions, such as the representations of the EU in the British press (Hardt-Mautner, 1995), the refugee discourse (Baker and McEnery, 2005), words semantically related to corruption (Orpin, 2005), gender terms of British English (Baker, 2013), and the difference between "individuals" and "people" concerning lifelong learning (Piper, 2000), etc. These studies have laid a solid foundation for further exploration of the application of corpus-based CDA.

There are indeed several researchers who have sought the method of corpus-based CDA for policy analysis. For example, Mulderrig (2012) shows how the pronoun "we" helps the New Labour government legitimate its policy decisions so as to claim consensus over politically contestable claims. Khan & Zaki (2022) digs into the language ideologies underlying language education policy in Pakistan, Trump, and Biden Administrations' China Policies (Zhi Yongbi et al., 2022). Nevertheless, there are few concerning scientific policy discourses, let alone AI policies.

To sum up, the gaps in the current research are, first, the lack of quantitative research on AI policy, i.e., corpus-based analyses of linguistic data. Besides, there is a lack of discourse analytical perspectives in research on AI policy. Third, both CDA and CL methods lack the application to scientific and technical texts, mostly focusing on political texts, especially news. This paper fills in the gaps from the above three points by combining qualitative and quantitative approaches, offering a new pathway for both AI policy studies and discourse analysis.

3. Method

This study uses a mixed method (Creswell, 2015) with both quantitative and qualitative analysis, based on corpus data and data analysis through Fairclough's dialectical-relational approach (Fairclough, 2003).

3.1 Data Collection

This research is conducted through a macro comparison between North America and developing countries in East Asia. The data are collected from OECD AI policy observatory, an inclusive platform providing public policy on AI across OECD and its partners from all stakeholder groups. The selection of policies from this platform ensures adherence to internationally recognized benchmarks, specifically the OECD AI Principles. Consequently, this approach serves to mitigate potential researcher bias and subjectivity.

The criteria for document collection are defined as follows: Documents must pertain to AI topics rather than the broader AI ecosystem, be composed in English, possess open accessibility, and exhibit a policy or strategic nature. All documents conforming to these criteria are duly incorporated. In other words, documents with content that lacks a substantial AI connection, instead focusing on specific domains like education or vehicle construction, or those inaccessible to the public due to being confined within news reports or restricted websites, are considered ineligible for inclusion in the corpora. This stringent selection procedure results in a total of 7 and 8 documents for each corpus, as detailed in Tables 1 and 2. Discrepancies in the counts of tokens and types can be attributed to several factors. Firstly, when comparing the aggregate policy output of China, Korea, Singapore, Thailand, and Vietnam to that of the US and Canada, the former set of countries yielded fewer policies. Secondly, many policies from East Asian nations are published in their native languages rather than in English, and those documents are not included. Lastly, the word count of policies in East Asia generally falls short of those originating from the US and Canada.

3.2 Compilation of Corpus

Two corpora are compiled respectively as "Developed Countries Corpora" and "Developing Countries Corpora" based upon the documents from the US and Canada, and China, Korea, Singapore, Thailand, and Vietnam. In the later sections, they are called North America (NA) and East Asia (EA) corpora since the initial letter of

"Developed Countries" (DC) and "Developing Countries" (DC) are the same and cannot be distinguished. All documents are manually cleaned and only body parts are included in the corpus. They were enacted in 2017 and beyond, mostly in 2021 and beyond, making them highly current and instructive for future AI policy.

Table 1. Detailed information of the NA corpus

Country	East Asia Corpus	Tokens	Types
China	Next-Generation Artificial Intelligence Development Plan	2664	806
China	Ethical Norms for New Generation AI	1607	619
China	White Paper on Trustworthy Artificial Intelligence	8107	1786
Korea	National Strategy for Artificial Intelligence	9231	2138
Singapore	National Artificial Intelligence Strategy	2087	9120
Thailand	The (Draft) Thailand National AI Strategy and Action Plan (2022 – 2027)	197	117
Vietnam	National Strategy on R&D and Application of AI	3209	837
	Total Corpus	34130	4426

Table 2. Detailed information of EA corpus

Country	North America Corpus	Tokens	Types
Canada	CIFAR Pan-Canadian AI Strategy Impact Report	4427	1474
Canada	Directive on Automated Decision-Making	1088	404
US	National AI R&D Strategic Plan: 2019 Update	18328	3110
US	National Security Commission on AI Final Report	132158	8545
US	Government by An Algorithm: AI in Federal Administrative Agencies	44034	6018
US	Four Principles of Explainable Artificial Intelligence	10277	1972
US	Summary of The 2018 Department of Defense Artificial Intelligence Strategy: Harnessing AI to Advance Our Security and Prosperity	5083	1348
US	Public Views on Artificial Intelligence and Intellectual Property Policy	13144	2329
	Total Corpus	228539	25200

3.3 Data Analysis

This study will adopt Antconc 4.2 as the tool to build two corpora, one is for North America and another one is for East Asia. The data is analyzed based on their keywords, collocations and concordance. Keywords analysis is to reveal the *statistically* significant words characterizing a document, text, or corpus, and this procedure is inherently comparable. (Rayson, 2019, p.320) By comparing EA and NA as target corpus and reference corpus respectively, it allows for a clear illustration of their characteristics and differences. Collocation refers to the phenomena of certain words frequently occurring next to or near each other. (Baker, 2006, p.96) As Sinclair (1991) notes, "when two words of different frequencies collocate significantly, the collocation has a different value in the description of each of the two words". (p.155) Collocation will be visually demonstrated through the GraghColl of Lancsbox 6.0. Concordance (or KWIC index: Key Word in Context) can provide many naturally occurring examples that are often inaccessible to introspection. (Stubbs, 2001, p.62) It makes repetitions visible, and corpus Linguists tend to emphasize the repetitive and routine nature of language use. (Stubbs, 2001, p.240) Through keywords, collocation and concordance analysis, the underlying discursive pattern will be revealed in a comprehensive way.

Fairclough's (1992, 2003) dialectical-relational approach is adopted as the framework of discussion. It proposed that linguistic phenomena are social phenomena of a special sort, and social phenomena are (in part) linguistic phenomena (1989, p.23), especially in revealing the power in or behind the discourse. In this study, two dimensions are adopted to reveal the social context and underlying power of AI policy: discursive and social practice.

4. Results

The corpus of EA and NA are compared with each other as target corpus and reference corpus respectively, and the Top 50 results are as Table 4 and 5. In order to be able to maximise the reflection of regional patterns rather than national ones, the results are sorted by the range of target corpus. Results show that the minimal range of Top 50 of EA is 5, and NA is 3. Country names have been omitted due to their high frequency in policies of respective nations, which does not contribute substantially to revealing regional priorities. Additionally, functional words such as linking verbs, auxiliary verbs, articles, prepositions, pronouns, and conjunctions, which lack significant meaning, have been excluded from the analysis.

Table 3. Top 50 Keywords of EA

No.1-10	No.11-20	No.21-30	No.31-40	No.41-50
AI	promote	building	participate	various
social	ethics	planning	market	companies
education	society	key	strategy	actively
application	basic	related	life	computing
development	improve	improving	up	training
public	people	strengthen	platform	plans
economic	solutions	will	industry	talents
enterprises	system	developing	projects	high
products	management	implementation	services	governance
data	environment	providing	sectors	global

Table 4. Top 50 Keywords of NA

No.1-10	No.11-20	No.21-30	No.31-40	No.41-50
may	some	context	explanations	commerce
not	should	partners	defense	noted
include	states	needed	funding	DOD
federal	would	particularly	congress	allies
tools	department	require	agencies	secretary
critical	actions	tool	enforcement	USPTO
could	technologies	united	ML	commission
state	leadership	agency	explanation	firms
efforts	prior	emerging	controls	patent
act	algorithmic	enabled	military	commenters

Concerning commalities, only the words concerning the theme of AI are bascially shared, such as “data” and “algorithmic”, indicating a common focus on technological advancements. Based on this similarities, collocations of AI are investigated in Lancxbox 6.0 to uncover the underlying correlations between AI and other “valuable” words, as shown in Figure 1 and 2. The statistics are based on MI3 that above the value of 15, and the collocation frequency is above 5.

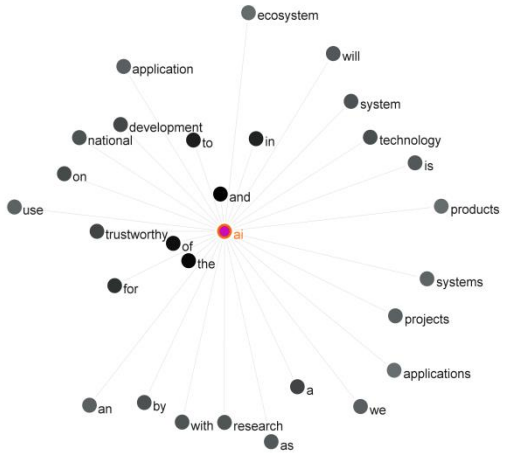

Figure 1. "AI" in EA

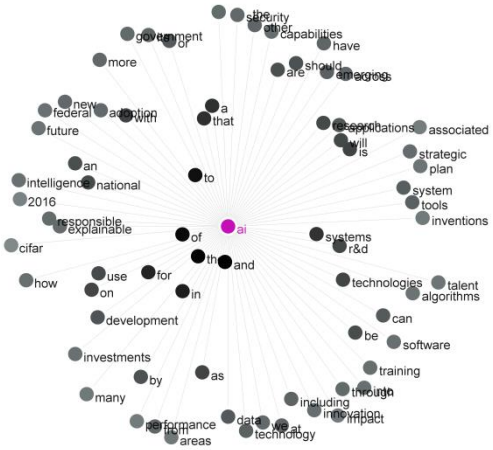

Figure 2. "AI" in NA

In both contexts, "AI" tend to co-occur with terms such as "technology", "development", "applications", "projects", and "systems". This observation indicates that AI has a semantic preference for words associated with technological advancements and their implementation. Besides, "national" appear in both lists, hinting at a context that involves a national perspective.

Yet most words vary. In the EA corpus, economic terms are much more emphasized, such as "economic", "emterprises", "products", "market", "strategy", "companies", "industry", and "services". 5 random hits of "economic" in Table 5, for example, demonstrate that "economic" is often preceded by verbs and adjectives, and verbs often have a positive connotation of promoting or facilitating. It is mainly followed by a noun that expresses a favourable outlook or a domain.

Table 5. Concordance line of "economic" in EA

More effectively **promote**	economic	**prosperity**, social progress, and sustainable
connected data sets in **different**	economic	**sectors**, socio-economic fields serving the
in all aspects of social and	economic	**sphere**. In light of new circumstances and
and safety and promote **sustainable**	economic	**growth** - Universalizing the basic skills of AI
powerful solution that can **increase**	economic	**vitality** and resolve various social problems.

Besides, EA contains words indicate a broader societal perspective. Words like "public", "social", "society", "people", "community" and "education" are uniquely present in EA, reflecting a focus on local and community-related concepts. From the concordance lines of "society" in Table 6, it is notable that expressions comcerning the implementation of AI is frequently occur before "society". This distinctive attribute underscores the pronounced emphasis on applying AI to public and social domains within this context.

Table 6. Concordance line of "society" in EA

utilization of data in all areas of	society -	Establishing government-wide data platforms through
the **widespread application of AI** in	society	depends on the commercialization of technology
the **potential impact of AI** on	society,	economy, and Government cannot be understated.
enable **AI applications** that serve	society.	We need a coherent plan that
building a moderately prosperous	society	in all respects. Step 2 By 2025 AI

In contrast, NA focuses more on legal, administrative, and regulatory terms, exemplified by "federal",

"congress", "department", "agency" and "secretary". It also features specific references to entities like "DOD" (Department of Defense), "USPTO" (United States Patent and Trademark Office), and "commission". Particularly noteworthy is their contextual association with the United States. These words collectively underscore the strong governmental presence and the intricate web of policy-making within this semantic domain. Examples of "federal" are shown in Table 7.

Table 7. Concordance line of "federal" in NA

R&D effort in AI across the	Federal	**government** will increase the positive impact
this should include assessing gaps in	federal	**legislation**, gathering input from agency
and to help coordinate	Federal	**activities** in AI—tasked the NITRD National
DOJ should consult with PCL Officers in	federal	**agencies**. Acknowledgment of continued work
CBRS enables shared federal and non-	federal	use of the band. This work

In line with the discussion of legislative and regulatory matters, NA more frequently uses modal verbs like "should", "would", "could", and "may". These modal verbs often indicate possibility, necessity, or permission, and they are frequently used in regulatory and legal contexts to express conditions or requirements. The fact that these four modal verbs appears as top 15 keywords in NA signifies their prominence in constructing government, regulation, and administrative actions.

Another distinctions evident in the keyword lists of NA are the presence of the terms "allies". "Allies" is predominantly utilized to reference international relations, as shown in Table 8. "Partners" frequently occur after "allies", indicating that the cooperation and communication among partner countries are emphasized by the US.

Table 8. Concordance line of "allies" in NA

strategy toward China that mobilizes democratic	allies	and **partners** in support of a rules-based international
the United States and its	allies	should utilize targeted export controls
the United States engage with	allies	and **partners** on legal reforms to (a) implement a
heentities within NATO, major non-NATO	allies,	and **friendly foreign countries**
including actions in collaboration with	allies	and **partners**.

Finally, "defense" and "military" suggest a context related to national security matters. Table 9 shows that US stresses the application of AI for militery purposes.

Table 9. Concordance line of "miltary" in NA

it can be used for civilian and	military	purposes. The AI promise—that a machine can perceive,
fellows, talent exchange participants, or	military	reservists. A third group is willing to
technologists, have reaped the	military	rewards of new technology.
It is a national security imperative for the U.S.	military	and the nation as a whole to have access
iteratively, and responsibly to enhance	military	decision-making and operations

As Wodak & Fairclough (2010) state, "Discourse analysis is concerned with the analysis of texts, in a broad sense, in their relation to other elements of social processes" (p. 21). This pattern of discourse is inextricably linked to context, and the external contexts associated with these three findings will be discussed in detail in "social practice" of the next section.

5. Discussion

5.1 Discursive Practice: Intertextuality, Production, and Consumption

Intertextuality is the presence of actual elements of other texts within a text, where quotations are typical representations. (Fairclough, 2003: 40) In AI policies, both EA and NA are habitually quoting the related texts to support their stands. For example, there are 131 quotations in the *US National AI R&R Strategy-2019 Update* and 20 in *China's Whitepaper on Trustworthy Artificial Intelligence*, and almost all of them are scientific and academic research or past policies and documents. When all these materials are correlated intertextually, a discursive context is produced that AI is being developed nationally under the guidance of the government in a progressive way. Scientific research concerning AI exploration, application, and regulations are cited so that the trustworthiness and preciseness of the discourse are ensured. These quotations can facilitate the easier acceptance of policies by the general public and promote the effectiveness and achievement of policy goals.

In addition, multiple drafts and revisions also demonstrate interdiscursivity. One of the documents this study adopted, *US National AI R&D Strategy-2019 Update*, is actually an update to the 2016 version. It is said in the Strategy that "to maintain this progress in ML to achieve advancements in other areas of AI, and to strive toward the long-term goal of general-purpose AI, the Federal Government must continue to foster long-term, fundamental research in ML and AI". It echoes the fundamental notions of the previous strategy while raising updates according to newly emerged capabilities. Similarly, *the (Draft) Thailand National AI Strategy and Action Plan (2022-2027)* is a very brief draft that basically reflects the direction of national development, and the full document will be illustrated based on it. Such reproduction connects directly to social semiotics in that it responds directly to the fast change in the digital and technological environment.

As texts are produced and consumed in specific ways in a specific social context (Fairclough, 1992, p. 78-79), AI policies can be regarded as national and official texts with particular political imprints. For North America, the policies are mainly from the government and administrations, sometimes research organizations, and for Asia are the same. For example, the government of Canada published the *Directive on Automated Decision-Making*, the US Patent and Trademark Office (USPTO) issued *Public Views on Artificial Intelligence and Intellectual Property Policy*, and the government of Vietnam enacted *the National Strategy on Research, Development, and Application of Artificial Intelligence (AI)*, etc. When the discourse is owned by authorities, it often carries the potential for "invisible power" and ideology. Universal and commonsensical practices often originate from the dominant class or bloc and become naturalized (Fairclough, 2001, 27). Policies are directly disseminated to the public through official government websites or media, and as recipients of these policies, the public is largely "structured" in their understanding and reception.

5.2 Social Practice: Context of AI Policies

In both East Asia and North America, there is a noticeable alignment in their priorities when it comes to AI-related pursuits. This implies that despite geographical and cultural differences, both regions recognize the potential and significance of artificial intelligence. This shared emphasis could stem from the global recognition of AI's transformative capabilities across various sectors. Since the 21st century, advancements in technology, big data, and deep learning have greatly enhanced AI's productivity and contributed to global economic advancement. For instance, the US and China are representatives in North America and East Asia to invest in AI industry. According to *AI Index Report 2023*, The U.S. led the world with the total amount of $47.4 billion in 2022 in terms of AI private investment (p.189), and China dominates industrial robot installations (p.172).

East Asia's preference for the application of AI in the economic and social spheres is associated with its level of development and current status. East Asian countries have a strong presence in industries like manufacturing, electronics, and technology. Therefore, the region recognizes AI's potential to optimize production processes, automate tasks, and improve business operations. Also, compared to developed regions such as North America, Asia-Pacific "is lagging but the availability of a large pool of user data implies that the region can move ahead" (Haseeb et al., 2019, p. 1309). Hence, goods and services provided by AI can be a great impetus for the economy. "There is ample evidence that, historically, automation fosters productivity growth" (Furman & Seamans, n.d., 2019, p. 162). The AI-driven digital economy markets "are in many ways different from 'old economy' markets" (p. 175). The market capitalization of digital firms far surpasses that of traditional firms, with higher market cap and revenues per employee (Makridakis, 2017, p. 53). Additionally, by extending the application of AI to societal sectors, East Asia aims to improve public services, healthcare, education, and overall quality of life. EA explicitly acknowledge AI's direct contribution to the economy in their policies. For exmaple, *China's Next Generation Artificial Intelligence Plan* notes that "by 2020 overall AI technology and application reach globally advanced level. AI industry becomes new economic growth point", and Viet Nam stresses that

"along with digital transformation, the application of AI contributes to promoting growth in a number of economic sectors" in *National Strategy on R&D and Application of AI.*

North America, especially the US's emphasis on governmental actions and legal frameworks, cooperation with allies, and AI application in national security is rooted in its political and historical context. The distinctive governmental structure of North America is marked by a degree of decentralization, resulting in frequent cooperative approaches that involve both federal and state entities. Consequently, governmental bodies are frequently invoked in AI policies. Furthermore, North America, especially the United States, boasts a rich history of cultivating international alliances, primarily centered around mutual defense and security objectives. Evidently, entities like NATO (North Atlantic Treaty Organization) exemplify the intrinsic value of allies within the region's security framework. The historical trajectory of AI's utilization for military and defensive purposes is also worth noting. Growth and spread of information technology account for a lot of changes in the American way of war since 1945. (Mahnken, 2010) Innovations from previous decades have created a legacy of leveraging cutting-edge technologies for security purposes, underscoring North America's perception of technology as a tool that can enhance its strategic capabilities and maintain its geopolitical interests, and this may shape the U.S.'s inclination to invest in AI for national security.

6. Conclusion

This study examines AI policies in North America and East Asia by OECD AI Observatory. Employing Critical Discourse Analysis as the framework and conducting data analysis through a corpus, the study underscores several key insights: Firstly, both EA and NA demonstrate a shared emphasis in AI-related endeavors. Secondly, EA directs a heightened focus towards applying AI across the economic landscape and various societal domains. Thirdly, NA attaches more importance to the role played by the government and other sectors, highlighting regulatory and legislative measures, co-operation with allied partners in the field of AI, and the application of AI in the maintenance of national security. Crucially, these findings bear a profound correlation with the regional contexts. The developmental lag observed in developing East Asian countries, as compared to North America, underscores the pivotal role of AI application in propelling their digital market forward. Beyond economic considerations, a holistic societal perspective emerges as a transformative force across all sectors, encompassing education and healthcare domains. North America's historical precedent of championing cutting-edge technologies and fostering collaborative partnerships with global allies is further evidenced in its approach to AI policies.

This study acknowledges several limitations that need to be addressed for a more comprehensive understanding of AI policies. Firstly, the available text data for analysis was restricted, primarily due to the scarcity of policies in East Asia and the non-English language of those policies. Consequently, the conclusions drawn from English-language policies in East Asian countries may not fully capture the nuances and intricacies present in policies formulated in their native languages. Moreover, this paper focuses on AI policies in North America and developing countries of East Asia. While these are important regions for AI development, the exclusion of other regions such as Europe, Africa, and South America may limit the generalizability of the findings.

Currently, discourse analysis of policy texts, particularly in the field of technology policy, remains relatively underexplored. Future research can delve into the following areas: multilingual researchers can analyze policies in both native languages and English simultaneously; various approaches, such as multimodal analysis and historical analysis, can be employed to analyze technology policies from different perspectives; and the discourse surrounding AI policies in other regions, such as Africa and South America, can be further explored. In conclusion, further research is needed to advance the discourse analysis of policy texts, particularly in the context of technology policies, and to explore AI policies in different regions and through different analytical lenses.

Fund Project

This work was funded by the General Project of Philosophy and Social Science of Jiangsu Province, 2023SJYB0913.

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