Parahyangan Catholic University

Faculty of Social and Political Sciences

Department of International Relations

Accredited A

SK BAN-PT NO: 451/SK/BAN-PT/Akred/S/XI/2014

The Digital Economy Impacts on India and Indonesia Based on Knowledge-Economy Index

Thesis

By

Catharina Dheani Suryaningtyas

2014330187

Bandung

2018

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Preface

To sweet Lord Jesus, the Almighty, thank you for the abundant blessing, love, and lights throughout the entire of my life.

To Mom, Dad, and my family. Thank you so much for everything, the love, and all incredible indescribable moment. All your genuine and generous support is uncountable.

To Mas Sapta, my thesis supervisor, Mbak Ratih, Bang Tian, Mas Irawan, (the late) Mbak Diandra, and all my respectable lecturers, thank you for all the moral and intellectual's guidance during my university career.

To my dearest friends in the University, Vallencia, Marlyn, Prima Gitta, Giasinta, Alvernia, Daniel, Bobby, Maria Mediatrix, Maria, Annissa, Joel, IREC squad, we finally graduated together. Thank you for the amazing, thrilling, and heartwarming journey. Wishing us a toast of timeless and blessed friendship. Good luck for the rest of the journey. Have an amazing and awesome career!

To all my supportive colleagues, friends, and everyone whose name cannot be mentioned, thank you for kind prayers and wishes. Hoping all the goodness comes back to you.

"Even the darkest night will end and the sun will rise. Everything will come to us at the right time. Be thankful."

Abstract

Name : Catharina Dheani Suryaningtyas

Student ID : 2014330187

Title : The Digital Economy Impacts on India and Indonesia Based on Knowledge-Economy Index

Digital revolution has brought the digital economy era in many countries as a part of knowledge-based economy. Themed in the digitalization, the research aims to complement previous qualitative comparative research between India and Indonesia. Through the research questions,"What are the key impacts from the digital revolution towards developing countries?","How does India utilize digital revolution to create the national digital ecosystem that benefits India's economic development?", and "Why Indonesian government under Jokowi's administrative can make Digital India as an inspiration thus Indonesia can further implement digital policies that transform its economic development?", the research analyzes the six key areas in digital economy landscape that impact the economic growth in developing countries. The research uses the qualitative method in comparative policy analysis and causal-process tracing method to benchmark between two primary actors, India and Indonesia's digital economy landscape. Rooted on the neoliberalism theory, Knowledge-Economy Index (KEI tool) developed by World Bank, public-private partnership and foreign direct investment concepts, this research gives theory-relations between the contemporary reality and the ideal context of digital economy.

Digital economy brings a new set of economic and political opportunities and challenges towards developing countries as it reinvents new business models to create entirely new market and industries. Throughout the research, it is found India's government involvement in establishing a well-articulated national digital strategy that also aptly mirrors its current position in the Knowledge-Economy Index is necessary to shape its conducive national digital ecosystem and knowledge-economy policy. Finally, this research gives an ample of relevant lessons and facts from the digital economy landscape in India to be properly implemented in Indonesia. At the International Relations context, the research is expected to broaden the perspective of comparative politic study, that policy focus on digital economy can be compared between states.

Keywords: Digital Economy; Digital Divide; Knowledge-Economy Index; PPP; Indonesia; India; Foreign Direct Investment

Abstrak

Name : Catharina Dheani Suryaningtyas

Student ID : 2014330187

Title : Dampak Ekonomi Digital terhadap India dan Indonesia Berdasarkan Knowledge-Economy Index

Revolusi Digital telah membawa sebuah fenomena baru yaitu, ekonomi digital yang dikembangkan di banyak negara sebagai bagian dari knowledge-based economy. Bertemakan digital, penelitian ini bermaksud untuk melengkapi penelitian kualitatif sebelumnya mengenai perbandingan India dan Indonesia. Melalui pertanyaan penelitian,"Bagaimana India memanfaatkan revolusi digital dengan tepat untuk menguntungkan pertumbuhan ekonomi negaranya", dan "Mengapa Indonesia menjadikan India layak sebagai inspirasi kebijakan ekonomi digitalnya sehigga Indonesia dapat mentransformasi perkembangan ekonominya", penelitian ini menganalisa enam kegiatan pokok dalam ekonomi digital yang dapat meningkatkan laju pertumbuhan ekonomi di negara berkembang. Penelitian ini menggunakan metode kualitatif dalam analisa perbandingan kebijakan negara dan pelacakan proses kausal untuk melihat adanya negara yang dapat dijadikan sebuah patokan untuk negara lain, dalam hal ini kasus Strategi Digital India untuk menjadi patokan Indonesia. Berakar pada teori neoliberalisme, konsep kerjasama publik dan privat, serta konsep investasi asing, penelitian ini mengkorelasikan teori dan konsep tersebut dengan kenyataan kontemporer fenomena ekonomi digital yang terjadi dalam negara – negara.

Ekonomi digital telah membawa dampak sosial ekonomi dan politik, serta peluang dan tantangan bagi negara berkembang. Hal ini dikarenakan ekonomi digital membuka peluang adanya bisnis model baru sehingga menghadirkan pasar dan industry baru di dalam negara. Dalam penelitian ini, dinyatakan bahwa keterlibatan pemerintah India dalam menyusun dan mementuk sebuah strategi digital nasional yang jelas dan terartikulasi dengan benar penting untuk menumbuhkan iklim kondusif digitalisasi di India. Pada akhir penelitian, ditemukan pelajaran dan fakta yang relevan yang disintesiskan dari keadaan di India untuk diterapkan di Indonesia sesuai cara pandang Indonesia. Dalam konteks Hubungan Internasional, penelitian ini memperluas perspektif studi komparatif yang biasanya hanya membandingkan politik negara, dalam penelitian ini dapat digunakan untuk melakukan perbandingan yang ditujukan mencari sebuah patokan dalam kegiatan ekonomi digital antar negara.

Kata Kunci: Ekonomi Digital; Perbedaan Digital, Knowledge-Economy Index; Kerja Sama Publik dan Privat; Investasi Asing

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LIST OF ABBREVIATIONS

EIR	:	Economic and Incentives Regime
FDI	:	Foreign Direct Investment
GDP	:	Gross Domestic Product
ITA	:	Innovation and Technological Adoption
KEI	:	Knowledge-Economy Index
KBE	:	Knowledge-Based Economy
PPP	:	Public-Private Partnership
SME	:	Small Medium Enterprises
ICT	:	Information and Communications Technology
O2O	:	Offline to Online
QCPA	:	Qualitative Comparative Policy Analysis

CHAPTER I

INTRODUCTION

1.1 Background of the Problems

The realms of International Relations is a multidisciplinary-based knowledge which issues and trends are hastily revolving, thus requires the expanding of analysis unit, settings, and actors. The evolvement of contemporary issues has succeeded in expanding the involvement beyond state actors or in the other words the non-state actors have been placed much in many of issues and trends of International Relations. Hand in hand with the rapid growth of information, communications, and technology (ICT), the nation-state has been encountering a more borderless world. We have witnessed there are lots of business transaction which does not require the hardware and complex bureaucracies where ICT and innovation have simplified inter-state transaction, encouraged economic digitalization, and shorten the supply chains regardless of the defined and rigid border or the domestic law of certain states.[1] The economic digitalization itself has been acknowledged in the realms of knowledge-based economy which is characterized by the emergence of ICT.

The essential elements in the digital economy is a structural shift from the industrial economy toward an economy characterized by intensive use of information & technology, intangibles and services and a parallel change toward new work organizations and institutional forms.[2] This radical evolution of ICT has not only

[1] Eric Schmidt and Jared Cohen, *The New Digital Age*, (New York: John Murray, 2013), p. 25
[2] Harbhajan S. Kehal and Varinder P. Singh, *Digital Economy: Impacts, Influences, and Challenges*, (Hershey, USA: Idea Group Publishing, 2005), p. 3

affected the individual unit within state, but also the government or the state level itself who wants to formulate and implement the policy related to digitalized realms. The effect on the embeddedness of ICT into state's conduct including the national economies has been creating:[3]

- New ways of conducting and delivering business (e.g. e-commerce, sharing economy, integrated supply chains)
- New tasks and opportunities for government (e.g. e-government, privacy policy legislation, digital industrial policy)
- New issues in socio-economic and political development (e.g. availability of information access, computer literacy, the digital divide)

Due to the ICT development, digital technologies are spreading throughout the world at a faster pace than previous waves of technological innovation, and are reshaping consumer behaviour, social interaction, business models and governments. Digitalisation has important implications for developing countries' growth prospects and productivity by exploiting economies of scale and network effects, raising the productivity of labour and capital and facilitating access to global value chains.[4] The digital economy also contributes to greater inclusion by lowering transaction costs and deleting spaces and ownership associated with certain activities like e-commerce, sharing economy, and e-governance. Despite the prevailing benefits of the digital

[3] Carl Dahlman, Sam Mealy and Martin Wermelinger, "Harnessing Digital Economy for Developing Countries", OECD Research Report-2016, accessed on May 5, 2018, https://www.oecd-ilibrary.org/deliver/4adffb24-en.pdf?itemId=%2Fcontent%2Fpaper%2F4adffb24-en&mimeType=pdf, p. 5
[4] Ibid, p.6

economy, potential drawbacks also inevitable. A serious risk is unfolding of a growing digital divide between developed and emerging economies as well as within emerging countries between cities and rural areas and between educated and non-educated population.

These past decades, with the darting ICT implementation, many states have begun to craft its national interest to the digital economy by establishing national digital strategy. Indonesia is also one amongst Southeast Asian countries who is populous and has been aware to actually shape its national digital strategy to boost the digital economy. be it in the urban and sub-urban arenas. President Jokowi has launched the E-Commerce Roadmap and Indonesia Go Digital Vision 2020. to make Indonesia become the digital superpower among Asian countries in 2020.[5] The state's official acknowledgement of e-commerce is embodied through Presidential Regulation No 74 of 2017 on E-Commerce Road Map for the Year 2017-2019 as referred to the "E-Commerce Road Map".[6] This occurrence is supported by the fact that Indonesia has reached 100 million internet users with 3 hours minimum of internet usage per day.[7]

From the demand perspective, the increasing amount of internet users has corresponded to the positive amount of growth online buyers in Indonesia. Twenty percent of the total netizen in Indonesia are actually the active online buyers and

[5] News Desk Jakarta Post, "Indonesia Issues E-Commerce Road Plan", thejakartapost.com, accessed on October 10, 2017, http://www.thejakartapost.com/news/2017/08/09/indonesia-issues-e-commerce-road-map.html
[6] Ibid
[7] Indonesia-Investment Editorial Team, 'Indonesia Has 100 Million Internet Users, Internet Penetration at 40%', indonesia-investments.com, accessed on October 10, 2017, https://www.indonesia-investments.com/id/news/todays-headlines/indonesia-has-100-million-internet-users-internet-penetration-at-40/item6827

expected to grow more in 2020. It is accounted that by the end of 2016, we have already possessed approximately 70 million small-medium enterprises actors who have transformed their business model to e-commerce based.[8] In the same year also, it had predicted that smartphone users in Indonesia encountered a gradual increase until go through the amount of 30%-35%. Those numbers above are exactly boosting the optimism the e-commerce business actors in Indonesia.

Above the facts mentioned, Indonesia as the fourth populous country in the world is predicted to benefit the impact from digitalization. However, the lack of policy implementations, structural and institutional barriers caused a minimum delay to Indonesia's readiness towards the digital economy. The digital economy requires government awareness of the country's position in digitalization, government policy to shape, supportive infrastructure to deploy, public-private partnership to execute and high-performing labor productivity to conduct, in which many of the mentioned issues are still lagging in Indonesia. The digitalization phenomenon does not grow with limitations that arrive from governmental and societal sides. It cannot be denied in Indonesia, there are underlying factors slowing down the growth of digital economy.

First hindrance comes from the Indonesian government related to the indolent process in drafting, formulating, and legislating the policy and national laws that corresponds to the digital innovation growth and global trans boundary research and development. Second, low internet penetration in many rural areas in Indonesia or

[8] Indonesia-Investment Editorial Team, 'Indonesia Has 100 Million Internet Users, Internet Penetration at 40%', indonesia-investments.com, accessed on October 10, 2017, https://www.indonesia-investments.com/id/news/todays-headlines/indonesia-has-100-million-internet-users-internet-penetration-at-40/item6827

uneven infrastructure supply due to limited allocation budget and the third is the digital divide phenomena where socio-economic inequality impacts on the existing gap in accessing the ICT infrastructure. For example, in terms of basic requirement of the digital economy which is internet connection, the majority population who lives at rural area has been less agitated with the internet connection reach, however many of Indonesian companies have begun to offer their products through the e-commerce instead of the traditional approach of market conduct.

Based on the tool developed by World Bank which is KEI Index, there are two developing countries in Asia which currently rapidly progressing to an advanced digital society and digital economy, they are India and China.[9] China is the country which has contradictory perspective with Indonesia as it embed the protectionist measures to its development to further flourish the internal China's industry while India as a democratic country with huge populations like Indonesia, can show a long history of governmental policy related to its ICT growth to boost the country's digital economy realms with a lot of openness to the foreign investment. During Jokowi state visit on December 12, 2016, Indian Prime Minister, Modi told Jokowi about his government's efforts to transform India through innovative initiatives such as "Make in India", "Digital India", "Skill India", "Smart City", "Swachh Bharat" and "Start-Up India". Modi further invited Indonesian business to discuss of partnership and the opportunities

[9] Asian Development Bank Research Team Report, ''Innovative Asia: Advancing the Knowledge-Based Economy: Country Case Studies for the People's Republic of China, India, Indonesia, and Kazakhstan", (Metro Manilla, Philippines: The World Bank, 2014), p. 1

presented.[10] In 2016, Indonesia's President, Mr Jokowi visited India to further look on opportunity to establish a digital economy partnership with India including to discuss policy-making learning with focus on digital industry.[11] Indian government is aware of a potential that there are lucrative opportunities for this huge population country to delve in the realms of innovation and digitalization. Modi in his statement always tries to invite more investors that can boost India's local digital SMEs actors' capabilities to compete globally. Huge population in India and Indonesia certainly represent some of its most attractive and important consumer markets.

By the understood facts above, hence, Indonesia has chosen India to establish a long-term partnership on the ICT realms and economic digitalization, therefore, it strengthens the notion that India can be the benchmark country for Indonesian government to measure its success in those realms. By the defined characteristic, India also has governance system and huge growing population similar to Indonesia. Up to this time, all the challenges to transform conventional economic approach to digital economy are obvious for Indonesia, but the opportunities for Indonesia unlimited. It is inevitable that a policy that is transformative and moving towards knowledge-based economy mindset should be embedded to face the new era of economy. Therefore, a benchmarking policy research that is explorative and comparative in the nature is needed to acquire in-depth and comprehensive

[10] Press Information Bureau Government of India, 'India-Indonesia Joint Statement during the State visit of President of Indonesia to India,' pib.nic.in, accessed on October 09, 2017, http://pib.nic.in/newsite/PrintRelease.aspx?relid=155284

[11] Seminar Digital Diplomacy on Small Medium Enterprises: The New Power in the Economy, 15 & 16 Nov 17, https://www.kemlu.go.id/id/berita/berita-perwakilan/Pages/Digital-Diplomacy-on-Small-Medium-Entreprise-The-New-Power-in-the-Economy%E2%80%9D-.aspx

understanding towards all the opportunities and challenges created by the technology revolution to move in digital economy realms.

As such, this research conducts the benchmarking study between Indonesia and India to complement the existing previous research. This research further complements it in the anchor of digital economy between both countries. It is observed that previous researches have not specifically concentrated on digital economy realms, thus, this research is expected to match the empty puzzle. The first research which does a comparative and benchmarking study between India and Indonesia, is authored by Abdullah Hessterman, Wesseling Alam, and Raychaudhuri Tapan. They conducted the comparative historical establishment of India and Indonesia. The book was published in 1989.[12] The second research which also uses India and Indonesia as a comparison to produce a policy guidance for certain developing countries was authored by Vikram Nehru, it was titled "Manufacturing in India and Indonesia: performance and policies".[13]. Finally, the third research was created in 2007 by Payal Malik & Divakar Goswami. The research was titled "Regulatory reforms and improved sector performance: A comparative analysis of Indonesia and India", it was presented at "Research for Improving ICT Governance in AsiaPacific," (Communication Policy Research South) in Manila, Philippines, January, 2007.[14]

[12] Comparative History of India and Indonesia, accessed on May 5, 2018 https://brill.com/abstract/title/726

[13] Vikram Nehru, Bulletin of Indonesian Economic Studies: Indonesia in comparative perspective series, "Manufacturing in India and Indonesia: performance and policies", Volume 49, (2013) - Issue 1, accessed on May 5, 2018, https://www.tandfonline.com/doi/abs/10.1080/00074918.2013.772938

[14] Payal Malik & Divakar Goswami, "Regulatory reforms and improved sector performance: A comparative analysis of Indonesia and India", LIRNE Asia Journal 2007, accessed on May 5, 2018 http://www.lirneasia.net/wp-content/uploads/2008/05/annex-4-indonesia-india-comparative-paper-malik-goswami.pdf

1.2 Problems Identification

Most of Asian countries have enjoyed such spectacular economic growth over the past three decades and have possessed the ability to make quick recovery after the Asian Crisis 1997. By that in mind, we can expect most of developing member countries in Asia have to attain middle-income status by 2020. If that being stated, that means their development challenges will be more complex. Ensuring the seamlessness to move from traditional to knowledge-based economy, first, developing country like Indonesia need to avoid become stuck in the middle-income trap. Second**,** Indonesia needs to engineer a shift from mainly agricultural outputs and inputs to manufacture and high-productivity supported by highly-skilled labor services at a time when resources are becoming strained. Establishing knowledge-based economy which focuses on digital economy is then seen the most sustainable way of ensuring strong, resilient, proper way to address rising middle-income, and promoting a long-term growth.[15]

Indonesian government has long pursued for the innovation-led economic growth including the design of policies and regulations to promote the development of research technology. Nonetheless, as a country which is projected to be the world's 7th largest economy by 2030, Indonesia's Knowledge Economy Index (KEI) is still ranked 107th out of 145 countries covered in the last 2012.[16] This World Bank index measures

[15] Asian Development Bank Research Team Report, ''Innovative Asia: Advancing the Knowledge-Based Economy: Country Case Studies for the People's Republic of China, India, Indonesia, and Kazakhstan", (Metro Manilla, Philippines: The World Bank, 2014), p. 2

[16] Federica Gentile,' Indonesia Focuses on Innovation as Key Economic Driver', ubibusiness.com, February 28th, 2014, accessed on October 10, 2017, http://www.ubibusiness.com/topics/regulations/indonesia-focuses-on-innovation-as-key-economic-driver-/#.WadMKshJbIU

four pillars within a country, (1) innovation & technological adoption system (ITA), (2) education and skills, (3) ICT, and (4) the economic incentive and institutional regime (EIR) which depicts the level of development of a country **towards a knowledge economy. Indonesia only scored 3.11 (on a 1 – 10 scale)** in this regards and its developing economy significantly still lag behind advanced nations or even other countries in Southeast Asia like Malaysia, Thailand, Singapore which all of them scored higher than Indonesia.[17] The reason behind Indonesia's low score on KEI is the notion that Indonesia's economic growth relies heavily on the exploitation and trade of its natural resources, ineffective bureaucracy and low performance on governance, and limited access to technology is still persistent in some sub-urban area.

Indonesia's performance is particularly deficient in ICT (2.52), followed by Education and Training (3.20), Innovation and Technological Adoption (3.24), and Economic Incentive and Institutional Regime (EIR) (3.37). Indonesia's low performance is actually the result of mixed factors from the institutional and bureaucracy regime and society level. Indonesian government invests only about 0.08% of its GDP to research and development sector, while China invests about 2%, Malaysia 0.6%, Singapore 2.1%, and India 0.9% of its GDP.[18] These data clearly shows a low contribution of the private sector to innovation. Meanwhile, research and development and applied technology has huge contribution towards the transitioning

[17] Ibid
[18] Asian Development Bank Research Team Report, ''Innovative Asia: Advancing the Knowledge-Based Economy: Country Case Studies for the People's Republic of China, India, Indonesia, and Kazakhstan", (Metro Manilla, Philippines: The World Bank, 2014), p. 5

process from resource-based economy to digitalization of economy which would bring Indonesia economic performance and competitiveness increasing. According to a report by McKinsey 2016, it is predicted that digital economy would contribute to the national economy to the tune of $150 billion annually by 2025.[19]

Indonesian's overall KEI index (3.11) indeed is slightly higher compared to India's KEI index. India scored 3.08 on its KEI, this due to mixed elements of measurements within KEI itself which does not only include innovation and ICT, but also education and skills, and the economic incentive and institutional regime (EIR). India indeed scored lower than Indonesia in the education and skills, but India scored higher in economic incentive & institutional regime (EIR; 3.57), and innovation and technological adoption (ITA; 4.5) compared to Indonesia.[20] The high level of software innovation adoption including new invention in science and ICT infrastructures, friendly regime on investment and ease of doing digital business are what makes competitiveness level of digital economy in India higher than Indonesia. Now India is aware of its position and boosting the index of ICT and innovation by the launch of a grand initiative 'Digital India' by Prime Minister Narendra Modi on Wednesday, July 1, 2015 at the Indira Gandhi Indoor Stadium in the national capital.

Now India and China have been two competing giants in the Asia's digital economy landscape, meanwhile Indonesia is still on its watch out zone and even behind

[19] McKinsey Report, 'Unlocking Indonesia's Digital Opportunity' September 2016, McKinsey, accessed on October 10, 2017, https://www.mckinsey.com/indonesia/our-insights/unlocking-indonesias-digital-opportunity, p. 5
[20] Ibid, p.64

Malaysia which is now has been already in Break Out zone. As a Watch Out country, Indonesia is still held back by relatively weak infrastructure and poor institutional quality.[21] In order to improve Indonesia's digital economy performance and competitiveness unit, it is essential to put an introspective mindset towards inside digital policy and market readiness, then foster innovation through technology development and investments in human resources.

1.2.1 Research Limitations

The terms '*digital economy*' itself according to many authors have quite discrepancy to break down, however each can be drawn into a red line similarity. According to Gardin, 'a digital economy is a convergence of communications, computing, and information.'[22] This new era of economy 'digital economy' terms have been coined with another terms such as **'knowledge-based economy'**, 'borderless economy', 'networked economy', 'the information-based economy', however this research uses and merely be focused on the terms 'digital economy' as part of knowledge-based economy which contains many sectors on it.

The World Bank itself has measured that knowledge-based economy be based on four pillars (mentioned in 1.2 section), however the explorative nature of this research delves more on the benchmarking digital economy, thus the emphasis that is put on the comparative study between India and Indonesia's policies are only on two

[21] Bhaskar Chakravorti, Ajay Bhalla, and Ravi Shankar Chaturvedi, '60 Countries' Digital Competitiveness, Indexed,' hbr.org, accessed on October 11, 2017, https://hbr.org/2017/07/60-countries-digital-competitiveness-indexed

[22] Harbhajan S. Kehal and Varinder P. Singh, Digital Economy: Impacts, Influences, and Challenges, (Hershey, USA: Idea Group Publishing, 2005), p. 3

pillars. The first pillar, Economic Incentive and Institutional Regime (EIR) and third pillar efficient innovation and technological adoption system within state to create new technology- two level of pillars. The economic incentive and institutional regime gives the landscape about comparison on how India and Indonesia utilize its regulatory quality and rule of law (policy-angle; which is supported by the government) to benefit and suggest policies and reforms for the knowledge economy sectors. On the third pillars (innovation - industrial angle) delves on how the two countries implement the digital economy policy through collaboration with the private sector or in the other words to conduct the public-private partnership models to give a birth on new technology that supports for digital economy conduct. There are six focus areas to form conducive environment in digital economy particularly on the two pillars of KEI as seen in the table below:

Knowledge-Economy Index Focus Areas

KEI PILLARS	Six Focus Activities
Economic Incentives and Regimes	National Digital Strategy and Cyber Security Management
	Infrastructure
	Digital Skills
Innovation & Technological Adoption	Start-up
	E-Commerce
	Research and Development

Source: Knowledge-Economy Index Focus Areas Compiled from Many Sources

As the focus on the research is benchmarking study with causal-process tracing, therefore there must be a higher level of unit that is benchmarked to provide lesson to the lower level of unit within comparison. India's side of EIR and ITA focus activities

are best elaborated by the country initiatives on innovation and ICT such as the **Digital India**. Meanwhile on Indonesia's side of comparison unit, the government has just launched the policy **'Go Digital Vision 2020'** to support the digital economy.[23]

1.2.2 Research Questions

1. Based on the impact of digital economy assessed through Knowledge-Economy Index developed by World Bank, how does India utilize digital revolution to create the national digital ecosystem that benefits India's economic development?

2. Why Indonesian government under Jokowi's administration can make Digital India as an inspiration thus Indonesia can further implement digital policies that transform its economic development?

1.3 Research Purposes and Usages

The research purposes and usages are defined in three contexts in accordance to the research questions above. The first context is to dismantle the digital revolution impacts towards developing countries that the government's involvement in creating national digital strategy is imminent. As the digital revolution creates political and economic impacts in parallel with the challenges, it is necessary to understand it the changes within the direction of policy in certain state within certain periods.

The second context is to give the big picture of an occurrence when a developing country (in this regards, India) can aptly utilize the digital revolution to transform its state of economic development. Hence, understanding the digital phenomenon means to enlighten and broaden the International Relations study, with

[23] Damianus Andreas, "Pemerintah Luncurkan Roadmap Industri 4.0", tirto.id, accessed on April 21, 2018, https://tirto.id/pemerintah-luncurkan-roadmap-industri-40-cHb2

specification in the contemporary issues in International Political Economy realms that digital revolution affects state behavior domestically and in turns paving the way for its government to shape its national digital ecosystem.

The third context, this research ultimately aims to conduct benchmarking study through causal-process tracing policy analysis between India and Indonesia in terms of their digital economy policies. India and Indonesia are infrequently hyphenated, meanwhile both of the countries actually share a lot of similarity in terms of governmental administrative, populations, and wide geography, moreover the ICT infrastructures. The research is expected to provide the explorative nature in the impact of digital economy towards developing countries India digital economy case studies and successes as the benchmark as to implement relevant policy in Indonesia's digital economy.

1.4 Literature Review

There are several books used to observe the research and answer the research questions related to the impact of digital economy towards India and Indonesia in the digital economy policy and implementation. The first book is 'Digital Economy: Impacts, Influences and Challenges' written by Harbhajan S. Kehal and Varinder P. Singh.[24] The two writers originated from India outlined the digital economy from socio-economic angle not the technical perspective of digital economy. The book focuses on aspects of global production, a socio-economic angle, identify the impacts and

[24] Harbhajan S. Kehal and Varinder P. Singh, Digital Economy: Impacts, Influences, and Challenges, (Hershey, USA: Idea Group Publishing, 2005), p. 7

challenges of global electronic commerce for policy makers law makers, diplomat, business persons, and educators.

The second book is titled 'India's Silicon Plateau Development of Information and Communication Technology in Bangalore' written by R C Mascarenhas.[25] The book helps the research to delve in the study of the development in India's success of information and communication technology (ICT). The author elaborates the political, historical and institutional factors, acknowledging the role of the central and state governments in developing futuristic mindset within Indian and how they were progressive in formulating policy that can boost their technology skills.

The third literature comes from the report written by Asian Development Bank Researchers. The report titled 'Innovative Asia: Advancing the Knowledge-Based Economy: Country Case Studies for the People's Republic of China, India, Indonesia, and Kazakhstan', presents the condition of economic situations in the Asia and the Pacific with Knowledge Economy Index from World Bank.[26] It offers new models of growth and development to maintain the robust rates of growth experienced in recent times and structural policy reforms in knowledge-economy that are required to ensure economic productivity growth in digital economy and facing Industry 4.0.

[25] R C Mascarenhas, 'India's Silicon Plateau Development of Information and Communication Technology in Bangalore', p. 7 (Orient BlackSwan: New Delhi, 2010)
[26] Asian Development Bank Research Team Report, ''Innovative Asia: Advancing the Knowledge-Based Economy: Country Case Studies for the People's Republic of China, India, Indonesia, and Kazakhstan", (Metro Manilla, Philippines: The World Bank, 2014), p. 15

1.5 Theoretical Framework

Organizing an economical research in the realms of International Relations will be impossible if only translates one certain paradigm or concept to be implemented to the findings. Therefore, there will be one derivative International Relations theory, (1) Neoliberalism as the prime concept of this research, and three supporting concepts. The second concept to describe the benchmarking policy process utilizes (2) benchmarking analysis using causal-process tracing from case study, as the research is focused on the benchmarking study factors compared between India digital economy policies and Indonesia digital economy policies. The benchmarking policy analysis is the third concept and to further elaborate the procedures of conducting digital economy across all sectors within a state. As the digital economy nature is fluid, the last concept to embed is (3) public-private partnership and foreign direct investment concept where the government has to work together with private institution in many forms to boost the implementation of digital economy.

During the half of 21st century, the concept of neoliberalism has become 'an overshadowing' thought in some political, academic debates, and in the economic mindset. Several social science authors have stipulated that neoliberalism is the dominant ideology shaping our world today, and that we currently live in the bubble of neoliberalism. Different to the older school of thought 'liberalism' which claims that individual liberty is the most important value. Liberalism which was firstly coincided by John Locke, saw great potential for human progress in modern civil society and

capitalist economy.[27] He believed that the good human nature and capitalist economy could flourish and bring the individual liberty. The liberalism thought basically takes the emphasis on the positive views on human nature. Distinct to the liberalism approach, neoliberalism offers a renewed thought of liberalism, it focuses more on the economical approach within a state.

Following the World War II, the Chicago School of Economics came into being. The school was the incubator to form a newer liberalism approach which in 1938 was introduced as 'neoliberalism' at Colloque Walter Lippmann by Alexander Rustow.[28] At that time, the term "neoliberalism" was proposed in front of many French intellectuals and ultimately chosen to be used to describe a certain set of economic beliefs to counter the majority belief during World War II. In essence, neoliberalism is an economic theory and an ideological conviction that supports the process of maximizing the economic freedom for individuals. This belief also puts on emphasis that state intervention or over protectionist measure can cause a market failure most of the time, thus reducing amount state intervention to the bare minimum is essential.[29]

Another views to neoliberalism which is found to be more recent, is taken from David Harvey. He concedes that neoliberalism is the first instance a theory of political economic practices that proposes human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework

[27] Robert Jackson & Georg Sorensen, *Introduction to International Relations: Theories and Approaches*, (Oxford University Press: United Kingdom, 2013), p. 100
[28] Dag Einar Thorsen and Amund Lie, 'What is Neoliberalism?', Department of Political Science University of Oslo, p. 3
[29] Ibid

characterized by strong private property rights, free markets and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices.[30]

As the century goes, the thought on economics itself has been so flourishing in a fluid manner, contributing to the new era of economy. According to some neoliberalist, 'neoliberal' itself often intertwined with the globalization phase and state capitalism. The globalization is varied by definition, but in this regards globalization itself forming the age of digitalization where information transmits across borders without knowing a single national border. Globalization is entering a new phase defined by soaring flows of data and information. To further specify globalization in this research, the concept of neoliberalism will correlate to the digital economy realms and its many forms of manifestation. This new age is gradually forcing us to rethink the way we perceive the traditional definitions of economy.

Such a shift in economic and social relationships are happening holds promise and peril. The concept of digital economy that will be used in this research is 'the new economy where structural shift from the industrial economy toward an economy characterized by information, intangibles and services and a parallel change toward new work organizations and institutional forms.'[31] The digital economy concept was first introduced by Don Tapscott in 1998. The new realities of economy have forced the government to renew the state institutional form to not let alone business actors as

[30] David Harvey, *A Brief History of Neoliberalism*, (Oxford University Press: United Kingdom, 2005), p.5
[31] Harbhajan S. Kehal and Varinder P. Singh, *Digital Economy: Impacts, Influences, and Challenges*, (Hershey, USA: Idea Group Publishing, 2005), p. 3

the state economic growth engine conduct the business respectively from the state institutions. This is understandable as another also acknowledges that the digital economy is the networking of humans through technology who can now combine their knowledge and creativity in order to create new social norms on wealth creation and social development.[32]

Conducting a benchmarking study between two countries has always been requiring complex and rigorous methods. The next approach embed on this research is the comparative policy analysis as there are two countries whose digital economy policies are analyzed thoroughly. The qualitative comparative policy analysis (QCPA) with a focus on causal-tracing process in case studies model is an essential study that addresses the best practices of policy making in cross-national learning to further be implemented in B country who takes the A country as the proper benchmark of policy-making measurement.[33] According to Geva-May, the comparative policy analysis is explorative research and it is the advancement of comparative evaluation of a policy within a state.[34] The use of CPA methods can be utilized in the study of policy processes in countries with different 'policy environments or contexts'.[35]

Comparative policy analysis through causal-process tracing using case studies is a common method a researcher does when trying to benchmark the policy

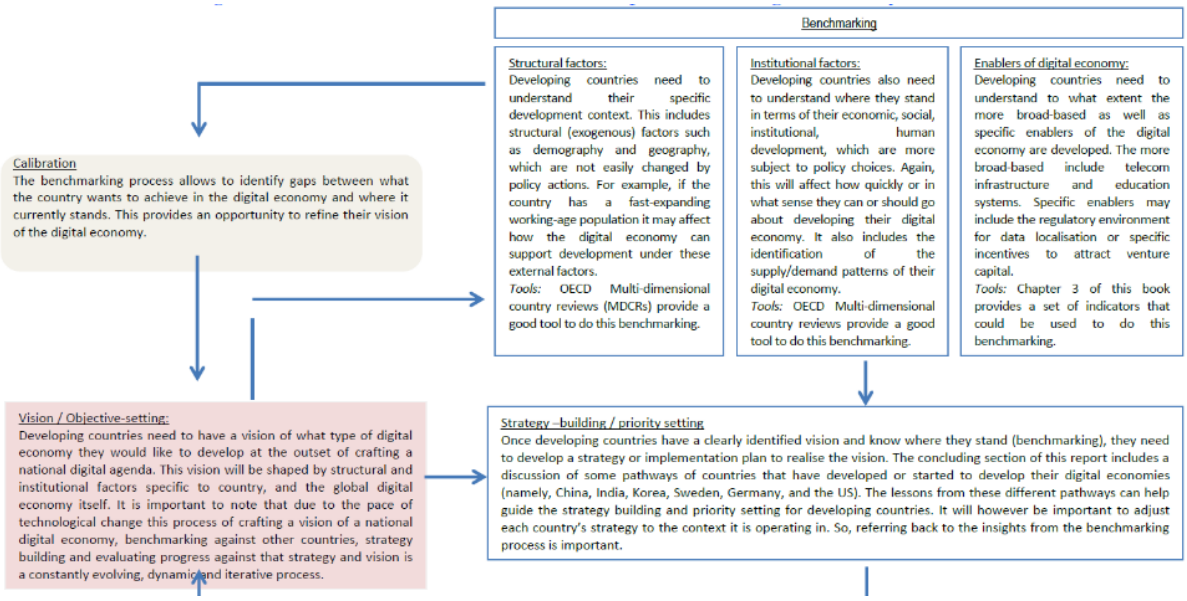
[32] Don Tapscott, *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*, (Barron: USA, 2014), p.6
[33] Concepts and Methods of Comparative Policy Analysis: "Context Matters", Outcome of 11th International Comparative Policy Analysis Forum and JCPA Workshop 27, May 2014, accessed on October 12, 2017 https://comparativepolicy.org/wp-content/uploads/pdfs/11thICPAForumJCPAWorkshopMoscow.pdf
[34] Ibid
[35] Ibid

environment or policy context between two or more countries. The method put stresses on different actors whose capabilities and capacities in certain context can bring a leverage towards policy processes as well as on the efficiency of policy, institutional mechanism, including the implementations of the policy in cross-sectoral within a state.[36] Each state may represent contrasting policy process scheme, different tactics that any effort to analyze them in comparative terms can be self-defeating but to some extent can be directed at generally the same concerns in the realms of state's interests. The different in policies from each country might be resulted from basic cultural or more specific administrative and political differences between the countries, and moreover the relative of policies influences are not always apparent.[37]

The research emphasizes the benchmarking process from Indonesia to India through the case studies, institutional, and key enablers for digital economy as to implement the learning and inspiration to Indonesia.[38] Below is the framework to build national strategy of digital economy or in this regards, the benchmarking process to understand where a country sit in the digital economy realms.

[36] Concepts and Methods of Comparative Policy Analysis: "Context Matters", Outcome of 11th International Comparative Policy Analysis Forum and JCPA Workshop 27, May 2014, accessed on October 12, 2017 https://comparativepolicy.org/wp-content/uploads/pdfs/11thICPAForumJCPAWorkshopMoscow.pdf
[37] Arthur Cyr and Peter de Leon, 'Comparative Policy Analysis', June 1995, accessed on October 12, 2017, https://www.rand.org/content/dam/rand/pubs/papers/2008/P5458.pdf
[38] Carl Dahlman, Sam Mealy and Martin Wermelinger, "Harnessing Digital Economy for Developing Countries", OECD Research Report-2016, accessed on May 5, 2018, https://www.oecd-ilibrary.org/deliver/4adffb24-en.pdf?itemId=%2Fcontent%2Fpaper%2F4adffb24-en&mimeType=pdf, p. 10

Exhibit 1.1 Benchmarking Policy to Establish State's National Digital Vision[39]



Source: Carl Dahlman, Sam Mealy and Martin Wermelinger, "Harnessing Digital Economy for Developing Countries", OECD Research Report-2016

One of the common research traditions in the policy studies to benchmark is comparative policy analysis which traces the processes of policy making, of problem emergence and definition, of policy formulation, of policy implementation and also evaluation. Comparative analysis encourages moving beyond the particularities of each case and identifying patterns and regularity across cases, settings and time periods. Comparative designs force the researcher not to stop the analysis at particularistic explanations drawn from a single context, but to test whether the answers to research questions hold true for a larger number of cases and contexts. There are many methods in the comparative policy analysis, the method which is utilized in this paper is the

[39] Carl Dahlman, Sam Mealy and Martin Wermelinger, "Harnessing Digital Economy for Developing Countries", OECD Research Report-2016, accessed on May 5, 2018, https://www.oecd-ilibrary.org/deliver/4adffb24-en.pdf?itemId=%2Fcontent%2Fpaper%2F4adffb24-en&mimeType=pdf, p. 12

comparative policy analysis (CPA) with a focus on causal-process tracing model (CPT) with case studies presented from each country.[40]

This section connects the two pillars indicators from KEI to each case study presented from both India and Indonesia. The causal-process tracing (CPT) provides the past key drivers and effects of digital economy towards India and Indonesia. While comparative policy analysis produces the patterns that is related to the path dependency of each state. Path dependency is the combined multiple events both countries (India and Indonesia) took previously. Much of their thought has revolved around the notion of path dependency. Early events in a process are more decisive than later events. In context of digital economy, path dependency accepts that past decisions about technology and digital transformation will shape the future ones, thus establishing a trajectory development. Under this benchmarking study and CPT methods, this research also points out the existing theories used in the paper (Neoliberalism and Public-Private Partnership) can actually turn out to be more complementary than competing, further proofing the hypothetical research questions.

The second concept presented within this research is the public-private partnership phenomenon. As the interconnected network of the new era 'digital economy' requires many involving hands in the delivery, the concept of public-private partnership will suit best to complement 'the digital economy concept'. Public-private partnership as defined by many factors is a belief in the overall advantages of partnership approach; the move towards enabling local government to fund certain

[40] Joachim Blatter and Markus Haverland, "Case Studies and (Causal-) Process Tracing" in Comparative Policy Studies: Conceptual and Methodological, (Canada: Palgrave MacMillan, 2014), p. 59

public services that are implemented by private or not-for-profit bodies rather than by the public sector.[41] The mechanism of public-private partnership occurs under the circumstance where one local actor often does not have all the competencies or resources to deal with the interconnected issues raised in many policy areas. It is then should include the genuine participation of the local community to be able in delivering certain public services.

In the economic context, the public-private partnership is one of the methods to promote the economic development within a state that can bring significant benefits to the local communities and the social inclusion.[42] Obviously, in order to fully understand the behavior and policies of organizations involved in economic development, it is necessary to review and consider the nature of the actors' relationships with governmental network and partnerships between other actors, including the flows of resources, power, and information within these networks. In economic partnership, one actor outside of the public sectors can be given a funding by public sectors under the agreed framework towards a specified economic-development objective. The cooperation such as internationalization of local SMEs between local actors and government can further develop a broad local vision for the area or local economy that are necessary to support domestic individual projects.

The public-private partnership can also be put in the context of foreign direct investment concept. There are three international economic interdependences that has

[41] Stephen Osborne, *Public-Private Partnership: Theory and Practice in International Perspective*, (Routledge-Taylor and Francis Group: London, 2000), p.9
[42] Stephen Osborne, *Public-Private Partnership: Theory and Practice in International Perspective*, (Routledge-Taylor and Francis Group: London, 2000), p.9

occurred so far in the realms of international relations. First is the international trade in goods and services (export and import) which is the most traditional channel. Second is the type of link is provided by international trade in financial assets, such as equity and bonds, and cross-border credit relations.[43] Finally, the third interdependence is the internationalization of production through foreign direct investment through venture capital. The third concept of interdependence uses on this research to validate the concept of foreign-backed investment in certain company that can promote both public and private interests to market a product internationally. To put FDI in the context of digital economy, it is then correlated to the existence of e-commerce, SMEs and startups, the foreign direct investment are investments made by a resident of one economy (source economy) with the objective of establishing a lasting interest in a company located in another economy (host).[44] With 'corporate-coherence' interests, it means that both the existence of a long-term relationship and a significant degree of influence by the direct investor on the management of the foreign firm. In statistics, ownership of at least ten percent of the ordinary shares or voting stock is the criterion for the existence of a foreign direct investment relationship.[45]

1.6 Research Methods and Data Collection

This research uses the qualitative method with the focus on case studies from each state to profoundly elaborate the problems and further analyze the problems. The type of method case study within this research means developing an in-depth analysis

[43] W. Jos Jansen, "Foreign Direct Investment and International Business Cycle Theory", accessed on May 31, 2018, https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp401.pdf?531d13febd0ec7a0bbff9ca87271071a
[44] Ibid
[45] Ibid

of a single case or multiple cases.[46] The qualitative method is conducted based on primarily exploratory research to uncover trends in thought, opinions, and motivations.[47] The qualitative method is also found to focus on problems of case selection in non-statistical research.[48] Throughout the process of elaborating and analyzing the problems, the research depends on the situational context or when that particular phenomenon which is used as the case study occurred in certain time.[49] As the qualitative method aims to analyze each case study through comparative study in non-statistical manner, hence the research is best to be acknowledged as qualitative research with exploratory method which aims to deeply understand the breadth of an occurrence or cases.[50] The research design correlates exploratory policy analysis with the presented case studies from each state as the prime method to present the best findings in the end of the research.

The data collection procedures within this research will be organized and conducted through literature review process using the primary and secondary data. The primary data in this regards is defined as the official document from government, agreement between two countries (India and Indonesia), press release, and other official documents published by the relevant factors that are observed during the research. Meanwhile the secondary data is taken from sources that are not first hand in processing the information. Those include, books, articles from social sciences journals,

[46] Umar Suryadi Bakry, "Metode Penelitian Hubungan Internasional" (Pustaka Pelajar, Indonesia: 2017) p.113
[47] John W. Creswell, Qualitative Inquiry and Research Design: Choosing Among Five Tradition. (London: SAGE Publications, 1998), hlm. 37-38
[48] Ibid
[49] Umar Suryadi Bakry, "Metode Penelitian Hubungan Internasional" (Pustaka Pelajar, Indonesia: 2017) p.110.
[50] Ibid, p. 99

newspapers, news, and other mass media that gives high relevancy towards the problems which are observed during the research.

1.7. Systematic Discussion

The main elaborations on this research will be divided into five chapters, which consecutively has each focus of analysis. As this research method is qualitative, therefore each presents a case study that relates to explorative policy analysis and digital economy of India and Indonesia. The five chapters will be described as the following bellows:

The first chapter contains an introduction which profoundly elaborates Background of the Problems, Problems Identification, Research Question of the Research, Research Purposes and Usages, Literature Review, Framework of Thinking, Data Collections Procedures and Research Methodology, and the Systematic Discussion.

The second chapter embodies the impacts and influences of digital economy towards a nation-state through the two Knowledge Economy Index pillars which are Economic Incentives and Institutional Regime and Innovation and Technological Adoption. Putting the digital economy in the global issue context that IR scholar must learn in order to adapt, the second chapter will elaborate the socio-economic angle of digital economy towards the state and its citizens. Incorporating the a) neoliberalist theory, and b) public-private partnership theory, it starts to dismantle the digital revolution which then affects and transforms the world of business, governance, society in the developing countries.

The third chapter provides the result of in-depth analysis and observation of the benchmarking progress using the explorative policy analysis between India and Indonesia on digital economy focusing on political and economic aspects. After showcasing digitalization by India through case studies, it provides an overall opening gate to enhance Indonesia digital economy through policy learning process that is sourced from India.

The fourth chapter presents the concluding results and findings of overall contemporary case study benchmarking analysis between India and Indonesia. It correlates on how India can achieve its success on digital economy and how Indonesia government can benchmark from India's digital economy to implement best-practice policy-making possibly learnt (best practice perspective) from the policy which has been coincided by Indian government.