

CHAPTER I

INTRODUCTION

1.1 Background

The political and economic hotspot of Asia, China has undergone massive economic prosperity known as the great Chinese economic miracle since the late 20th century. Transforming their closed economy, into a market-oriented economy acknowledging private sector while emphasizing state's role in the market.¹ The reform has eradicated extreme poverty and lifted 800 million out of poverty by averaging 9% economic growth annually since 1978. However, its economic growth has had implications on its energy security. Energy security can be simplified to uninterrupted access to energy. It's a problem that most countries face given the finite nature of the crucial commodity of fossil fuel-based energy like coal and oil. Energy security is a growing concern for China, amidst its growing energy consumption levels throughout the years. The urgency of this issue is exacerbated by the connection and correlation between energy consumption and the economy. For China this connection is especially significant for China, between energy and GDP to be 98% of growth in per capita energy requirements.²

¹ Le, Huong and Le, Huong, Economic Reforms, External Liberalization and Macroeconomic Performance in Vietnam (November 8, 2019). International Research Journal of Finance and Economics, 176, 2019, Available at SSRN: <https://ssrn.com/abstract=3483349>

² Wensley, S., Wilson, S., & Kuang, J. (2013). China's Energy Demand Growth and the Energy Policy Trilemma. In R. Garnaut, C. Fang, & L. Song (Eds.), *China: A New Model for Growth and Development: Vol. China Update 2013* (pp. 301–320). ANU Press. <http://www.jstor.org/stable/j.ctt46n2zv.21>

Fossil fuel like coal and oil has been important commodities supporting the economic development of China. They power up factories, fuel vehicles for logistics, warm and cool down homes for the population. China is inherently rich in natural resources; it has the largest coal reserves in the world. Consequently, it is the largest coal producer in the world, and will likely have enough coal to fuel its economic growth in the foreseeable future. However, the same cannot be said for its oil, as it is poorly endowed on a per capita basis, this result in increasing gap between oil production and consumption, and growing dependency on imported oil of up to 60%.³ While coal remains the popular commodity of choice for electricity generation for developing countries including China, it is not without its shortcomings. For China, despite the importance of coal, its coal industry can only be described as inefficient. Only 60% of coal production is from state owned mines, the rest are in the form of illegal mines with poor safety and environmental regulations, these unregulated mines have very poor yield due to technological and budget limitations, this resulted in China importing coal and being the second largest coal importer despite being the largest coal producer with large coal reserves.⁴ Increasing reliance on imported energy demands China to look for alternatives. The widening oil consumption and production gap has forced China to look for solutions including increasing energy imports. The SCS which is responsible for 21% of global maritime trade and 64% of China's trade including

³ DOWNS, E. S. (2006). ENERGY DEMAND AND SUPPLY IN CHINA. In *China's Quest for Energy Security* (1st ed., pp. 3–10). RAND Corporation. <http://www.jstor.org/stable/10.7249/mr1244af.9>

⁴ Betz, J. (2013). *The Reform of China's Energy Policies*. German Institute of Global and Area Studies (GIGA). <http://www.jstor.org/stable/resrep16489>

energy imports is coincidentally rich in natural resources like oil, is within China's geographical proximity.⁵ This has resulted in China's assertive claim in the SCS which overlaps with Vietnam's maritime territory.

The 21st century sees China placing great emphasis on the introduction of renewable energy alternatives into their energy mix, driven by the environmental implications, and increasing imports of fossil fuels and its security concerns.⁶ The introduction of renewable energy industry begins in the 21st century, where alternative to fossil fuel energy such as hydropower, wind, and solar power are advocated in China's eleventh Five Year Plan which serves as its national development guideline, this period sees a gradual pivot from an energy exploration and exploitation centric into a slow adoption of alternative energy sources being renewables to reduce fossil fuel energy intensity and emissions.⁷ One such policy introduced during the 11th Five Year Plan was the Renewable Energy Law meant to promote growth in the renewable energy sector, especially wind power. Done by reducing tariffs on components required for wind power turbines, reduced tax rates, research and development aid, the government also would reduce income tax rates of project developers, and mandates were given to grid companies, connecting wind farms to power grids, as well as purchase of wind generated power which is levied

⁵ GHIASY, R., SU, F., & SAALMAN, L. (2018). The Maritime Silk Road: Security implications. In *THE 21ST CENTURY MARITIME SILK ROAD: Security implications and ways forward for the European Union* (pp. 11–32). Stockholm International Peace Research Institute. <http://www.jstor.org/stable/resrep24530.6>

⁶ Zhang, Z. (2013). *Energy and Environmental Issues and Policy in China*. Fondazione Eni Enrico Mattei (FEEM). <http://www.jstor.org/stable/resrep00994>

⁷ Wensley, S., Wilson, S., & Kuang, J. (2013). China's Energy Demand Growth and the Energy Policy Trilemma. In R. Garnaut, C. Fang, & L. Song (Eds.), *China: A New Model for Growth and Development: Vol. China Update 2013* (pp. 301–320). ANU Press. <http://www.jstor.org/stable/j.ctt46n2zv.21>

on customers. These incentives are introduced to meet a 5 GW wind energy generation capacity by 2010, which was met in 2007, target was revised and increased to 10 GW and by 2010 13.6 GW exceeding their targets, by this time China has become the largest wind energy producer, consumer and the biggest wind energy industry substituting over 290 million tons of coal for energy generation and creating more than quarter of a million jobs. Its renewable energy industry also generated \$63 billion and create new employment opportunities for its people by employing 4 million workers.

The technological development paired with economic success generated by its renewable energy sector from the eleventh Five Year Plan and the Renewable Energy Law has only solidified the importance of incorporating it into China's domestic politics at a national level. Ever since renewable energy has been mentioned in the following Five Year Plan, for the period of 2011 to 2015 the twelfth Five Year Plan does not divert from the development of renewable energy industry. It mentions the four pillared energy structure which are secure, stable, economical, and clean environment, this was to be achieved by developing SEI, the development of this industry is also to reduce China's reliance on unsustainable industries which includes oil, coal, and manufacturing industries which are dubbed as old pillar industries and a foundation for China's economy, under the 'Made in China' policy. Providing aid in subsidies and preferential access to develop energy saving and environmental protection technologies in the form of new energy sector

and clean energy vehicles categorized under SEI.⁸ The twelfth Five Year Plan sees major targets relating to energy mix, efficiency, and emissions. These targets include energy savings of 670 million tons of coal during the period 2011-2015, reducing carbon emissions per unit GDP by 17%, and increasing non fossil energy in primary energy consumption to 11.4%.⁹

This period also see the government support the renewable energy vehicles (EV included), setting a target of 500 thousand vehicle production and sale, the government helping the industry by introducing benefits and subsidies up to \$9.7 thousand for customers,¹⁰ followed up with investments of \$7.8 billion are made under the 'Mission Innovation' initiative to support clean energy research and development, focusing on renewable energy, hydropower, power grids and EV. New sets of regulations supporting the EV industry are introduced, ranging from new and updated emission standards for vehicles, investment of nationwide charging infrastructure, government mandates that enforces automakers to incorporate EV into their lineup as 12% of their total sales are to be EV, and implementation of EV into public transportation like buses and taxi in notable cities like Shenzhen¹¹. The thirteen Five Year Plan (2016-2020), period also sees China increasing efforts in

⁸ Aggarwal, P., & Institute of Peace and Conflict Studies. (2017). China's Energy Policy: Energy Needs and Climate Change. In *Indian and Chinese Energy Policies: Addressing Energy Needs and Climate Change* (pp. 9–21). Institute of Peace and Conflict Studies. <http://www.jstor.org/stable/resrep09398.5>

⁹ Weng, X., Dong, Z., Wu, Q., & Qin, Y. (2015). *China's path to a green economy: Decoding China's green economy concepts and policies*. International Institute for Environment and Development. <http://www.jstor.org/stable/resrep29065>

¹⁰ Finamore, B. A. (2020). *China's Quest for Global Clean Energy Leadership*. Istituto Affari Internazionali (IAI). <http://www.jstor.org/stable/resrep23654>

¹¹ Finamore, B. A. (2020). *China's Quest for Global Clean Energy Leadership*. Istituto Affari Internazionali (IAI). <http://www.jstor.org/stable/resrep23654>

accelerating its energy shifts by issuing green financing and green bonds of up to \$210 billion on low carbon infrastructure, which include clean transportation (EV, highspeed rail), power grid, and smart grid. China also pledges to double its wind energy capacity during this period. ‘Ecological civilization’ or sustainable development being the core principle of the thirteenth Five Year Plan, placing a strong emphasis on SEI to complement the more traditional manufacturing. This period also see China solidify its status as the global leader in renewable energy investment and technology.¹² As of the tail end of the thirteenth Five Year Plan, China has invested more than \$758 billion in renewable energy, which more than double United States (US) commitments of \$356 billion and Japan’s \$202 billion. It has spent more than \$60 billion to promote its EV industry as of 2017 with subsidies for both customers and manufacturers. It also has the largest installed capacity for wind at 210 GW and solar at 200 GW. China’s wager in the renewable energy sector has led it to become the monopoly in the sector. All three largest solar panel manufacturers belong to China, and by 2018 China’s wind turbine manufacturer is responsible for 90% of global market, however this number is heavily dependent on its own domestic market.¹³

China’s energy security presents itself as a crucial national interest, with deep implications for its economic growth. The domestic issue faced of insufficient energy are being handled to the best of China’s ability by implementing renewable

¹² NG, S., MABEY, N., & GAVENTA, J. (2016). *PULLING AHEAD ON CLEAN TECHNOLOGY: CHINA’S 13TH FIVE YEAR PLAN CHALLENGES EUROPE’S LOW CARBON COMPETITIVENESS*. E3G. <http://www.jstor.org/stable/resrep17852>

¹³ Finamore, B. A. (2020). *China's Quest for Global Clean Energy Leadership*. Istituto Affari Internazionali (IAI). <http://www.jstor.org/stable/resrep23654>

energy alternatives into the energy mix, but this takes gradual time, and can't be achieved in a short period of time. The necessity of fossil fuel remains crucial as it is the majority of China's energy mix. Asia becomes important region to help China fulfill its demand, of fossil fuel and market to expand its renewable energy industry, two countries that fit such proposition would be Indonesia and Vietnam.

1.2 Research Questions

China's growing production-based economy which is fueled by fossil fuel-based energy while resulting in economic growth, has generated environmental degradation and climate change concerns. This research hopes to answer the following questions:

- 1.2.1 What are the geopolitical impacts of China's energy security towards Indonesia and Vietnam?

1.3 Research Objectives

Based on the question, the objectives of the research are the following:

- 1.1.1 To better understand geopolitical implications of China's energy security.
- 1.1.2 Understanding the relationship between economic and energy practices of China.

1.4 Research Significance

China is the second largest economy in the world, and the largest in Asia. The political and economic hotspot of the region, with close correlation between

economy and energy, its energy security policies to fulfil domestic energy requirements, has forced it to develop the largest renewable energy industry in less than two decades. However, with continuous increase in energy consumption, it is forced to look for solutions beyond its borders, from importing energy to expanding its emerging renewable energy industries to foreign markets, would help China address increasing energy demand, efforts like BRI, and increasing tensions in SCS are underlying implications of China's geopolitical ambitions regarding its energy security in the region.

1.5 Thesis Structure

This research consists of five chapters, being conducted with timely observation following the development of China's energy security up until July 2024.

The contents of chapter 1 include five subchapters, background of the topic of interests, into the research question, research objectives, research importance, and the thesis structure.

Chapter 2 contains literature review and theoretical frameworks and concepts. This chapter is important in understanding the framework and concepts that are going to be utilized in the research and further information that will help us in answering our research question in chapter 4.

Chapter 3 explains how the research is conducted, this chapter consists of research methodology, research approach, data collection method, and research method.

Chapter 4 is where information from chapter 2 will be processed and analyzed to answer the research question, the chapter consists of 3 subchapters, Domestic and International Challenges, Implications on Indonesia's National Interests, and Implications on Vietnam's National Interests.

Chapter 5 will be conclusion, this chapter summarizes the findings of the research concisely.

