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The Hegemony of Global Capitalism in the Regulation of Electricity: The Electricity Policies of the Selected Southeast Asian Nations

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ABSTRACT

This paper examines the effect of global capitalism on electricity policies in Southeast Asian countries: Singapore, the Philippines, Thailand, Malaysia and Indonesia. The purpose of this study is to get a picture of the electricity policy in a country. This research method compares the electricity regulation between countries in Southeast Asia. The results of this study are: the influence of global capitalism in electricity liberalization resulting in major changes in electricity power regulation in most Southeast Asian countries. Electricity infrastructure is mostly owned by the electricity capitalism of global capitalism. Which then makes the connection of the electrical energy system between countries for the sake of the electricity energy business. The hegemony of global capitalism plays a role through the liberalization and deregulation of electricity in Southeast Asian countries, the regulation of electricity in the Southeast Asia region is under absolute control by the power of capitalism of electricity.

Keywords: Global Capitalism, Southeast Asian Countries, Electricity

JEL Classifications: Q43, P12

1. INTRODUCTION

The 1970s and 1980s witnessed the end of the postwar economic boom, and the world economy began to enter recession, this recession was manifested in the form of stagflation in Western countries, and the debt crisis in many developing countries (Yang and Sharma, 2007). The Washington Consensus refers to the ideological belief that a combination of democratic governance, free markets, the dominant private sector and openness to trade are recipes for prosperity and economic growth. This ideology has been widely accepted by Western countries to restructure their national economy to revive economic development.

The process of globalization is characterized by the rapid development of capitalism, which is increasingly open and

globalizing the role of markets, investment, and the production process of transnational companies, Abdul Wadud et al. (2013), which was later strengthened by the ideology and world order of the new trade under a rule set by free trade organizations globally (Faur, 2003). Globalization today often occurs seen as a subtle version of capital imperialism (Igwe and Ogbonnaya, 2013). The liberal principle and democracy dominate modern political thought, which first requires that decisions on certain matters depend on individuals and not with society. The second establishes the power of decision making for the majority (Samet and Schmeidler, 2003).

Economic growth, prosperity and national security of a country is very dependent on the adequacy of its electricity supply, Ochugudu and Onodugo (2013). The rapid growth of the world population and

the demand for energy and power have created some challenges to policy makers (Ahmad and Babar, 2013). The main challenge facing developing countries is the need for constant and sufficient electricity production. The existence of a safe electricity supply is the basis of economic growth and the development of living standards of modern humans. The global liberalization process produces major changes in the electricity market, the electricity industry in most countries is regulated as a vertically integrated monopoly and is owned by the state changing ownership to global capitalism either partially or wholly. This struck both countries in Europe, Africa and Southeast Asia.

Trade liberalization has grown rapidly since post World War II, developing countries have disproportionately borne the burden of trade inequality (Gingerich, 2018). The most common procurement projects are used, namely BOOT (build, own, operate, transfer/development, ownership, operation and transfer), BOT (build, operate, transfer/development, operation, and transfer), and BOO (build, own, operate/development, ownership, and operation), Southeast Asian countries: Philippines, Indonesia, Thailand, Malaysia, used this part of the world in the early 1980s.

Based on the description of the background above, this study leads to two problems: How does the influence of global capitalism in general on the regulation of electricity in Asian countries? What is the policy concept that must be taken by Southeast Asian countries on the influence of global capitalism in the electricity sector?

2. CONCEPTS AND PRACTICES

This paper examines: “Hegemony of global capitalism in electricity regulation: Selected Southeast Asian State Electricity Policy Study.” The subject of the brief research in this paper is about the concepts of secular thought of Western civilization which rests on cultural traditions which are reinforced by philosophical speculations related to secular life that focus human beings as rational beings, which gives rise to liberalism, namely an economic system that is based on free markets, In general, there are three principles of liberalism. Namely freedom, individualism, rationalism. First Principle, Freedom: What is meant by this principle, is that each individual is free to do an act. The state does not have the right to regulate, the act is only limited by laws that are made by themselves. Liberals are just another form of secularism, an understanding that limits the role of the government in managing the market, and the restraint of supervision carried out by the government (Deliarnor, 1997). Capitalism is a method of production, it can be broadly explained that capitalism as: A way of the economy related to what production can be held in a company (Sukarno, 1965). The data or materials studied in this study are library data, and field data in the form of interviews with speakers who are competent with the problem being studied. In order to provide a precise interpretation of the global capitalism of the electricity sector the concept of capitalist thought is assessed according to its harmony with one another. Furthermore, basic thinking is determined to find the right concept to answer the problems examined in this paper or paper.

3. ELECTRICITY REGULATIONS IN SOUTHEAST ASIAN COUNTRIES

Economic liberalism supports private property ownership and opposes government regulations that limit rights to personal property. This notion leads to capitalism through the free market, even at the level of the legal theory of liberalism which strongly defends one’s freedom; thus, the protection of individual law is important to bring about the supremacy of law, legal positivism focuses on formalities based on real projects and departs from deduction with logic in a significant place to study the law. Law can be seen as an autonomous and pure institution, therefore, to have strong and applicable strengths and cannot and will not be disturbed by non-legal aspects such as politics, economics, social and even morality, Khudzaifah et al. (2017).

The opinion of liberalism says that a free market system and a system where no government interference is the best way to guarantee individual freedom (Keraf, 1996). The caller of liberalism that resonates most in the late 20th century is Francis Fukuyama who believes that liberalism is the end of history and cannot be defeated by another ideology because its ideology is ideal and in accordance with humans. Fukuyama’s prediction that was launched since almost 20 years is the story of the “eternal victory” of liberal (capitalist-neoliberal) democracy, which departs from the fact that the free economy’s political economy has been widely accepted by the majority of governments in the world (Amrullah, 1992). Privatization is easily derived from the word “private” which refers to the power of individuals or private power, this is the main root or core basis of capitalism, which places economic control or capital (capital) on the control of people. Many developing countries such as Southeast Asian countries have adopted privatization due to financial crises, investment constraints, conditions imposed by international financial organizations, Victor et al. (2015).

Electricity deregulation paved the way for the entry of independent electricity producers and the creation of wholesale electricity markets. Utility reforms in economic development policy are an important part of the Washington consensus, a set of economic policies that are often defined as neo-liberal, emphasizing market superiority to provide the most efficient distribution of resources. The International Financial Institution (IFI) based in Washington and the International Monetary Fund (IMF) formed the core of consensus with supporters of Western governments. The consensus promoted the principle of privatization, liberalization (Haselip, 2004). Deregulation in developed countries forces companies to look for investment opportunities in developing countries.

3.1. Singapore State Electricity

Economic liberalism in Singapore in the end also had a major impact on the country’s electricity system. Electricity needs in a country with a population of around 5 million are expected to increase to 2,000 megawatts. Singapore is preparing for full retail contestability (FRC) for its electricity market in the second half of 2018. This will enable both residential consumers and small business owners to choose from various electricity providers and price arrangements. Singapore mainly relies on natural gas to

produce electricity, Singapore gets gas supplies from Indonesia to meet its energy consumption. Gas supplies come from the Corridor Block field, Sumsel operated by Conoco Phillips and from Jabung, Jambi which is operated by Petro China through the Grissik-Singapore transmission pipeline. Thus, this requires the need to ensure that the supply of imported natural gas is guaranteed and obtain it at competitive prices. The historical trend of the country's energy market began in 1995 with the corporatization of several segments of the Public Utilities Board (PUB). As part of the government's move to liberalize the electricity market, the Energy Market Authority (EMA) was established in 2001 as a regulator. The framework and introduction of wholesale electricity markets run by the Company's Energy Market, based on spot offers every 30 min (Bello and Layiwola, 2017). The state separates its generation and electricity retail segment from the natural monopoly of electricity transmission at the level of ownership.

3.2. Electricity in the Philippines

The Philippine electric power industry was previously dominated by National Power Corporation (NPC) in the generation sector. All power plants are owned by NPC and Independent Power Producers (IPPs) are restricted from direct connections to the electricity distribution utility (Patalinghug, 2003). In 1969, the National Electricity Administration (NEA) was formed by Congress to replace EA as the implementing body for the country's total electrification policy. The state began to see the private sector participating in electricity since the early 90s. Public-Private Establishment A partnership framework (PPP) under the Build-Operate-Transfer (BOT) Act was enacted in the midst of the electricity crisis in the early 90s causing a number of IPPs to be formed to meet the demand for power in this country (Somani, 2013). 3 years after the publication of EO 215 on July 9, 1990, Republic of Law No. 6957.7 more popularly known as the Build-Operate-and-Transfer Act (HukumBOT), was enacted. Under the 2001 Electric Power Industry Act (RA, 9136), part of the NPC will be maintained as a National Transmission Company (TRANSCO) which is held as a government-owned monopoly in the transmission sector. Republic Act 9136 (Electric Power Industry Reform Act) was approved on June 8, 2001 by the Philippine Congress to ensure transparent and reasonable electricity prices in a regime of free and fair competition and full public accountability to achieve more operational and economic efficiency large and increase the competitiveness of Philippine products in the global market."

In 2001, the Electric Power Industry Reform Act (EPIRA) was approved by Congress to ensure the quality, reliability, security and affordability of electricity supply. To achieve this goal, EPIRA has mandated organizational restructuring and industrial finance, institutional and policy reforms, and tighter accountability for the generation, distribution and transmission utilities. The Power Purchase Agreement (PPA) -based regime may be The Philippine Energy Plan for 2012-2030, which is a thing of the past because the DOE is expected to be launched in December 2012, As planned, current installed capacity in the country of around 16,250 megawatts (MW) is expected to rise up to 25,800 MW (an increase of around 60% by 2030). The cost of stranded coal assets has been realized in Mindanao because of an oversupply of around

700 MW of coal and hydro; from 2014 to 2016, stranded costs were conservatively equivalent to Php 3 billion (US \$ 60 million). 10,423 MW (Ahmed, 2017).

This scenario maintains the reserve requirements of 25% and 70% of the baseload supply during the 24-year period. As the most common base load power plant is fossil fuel, this scenario is bound to maintain the country's heavy reliance on imported fossil fuels and keeping the country on the BAU track high in carbon. Based on peak demand of 13,272 MW in 2016, growing at an average annual growth rate of 5.7%, Philippine electricity reaches around 29,000 MW in 2030 and 50,000 MW by 2040, Verzola et al. (2017).

3.3. State Electricity in Thailand

Electricity was introduced in Thailand, in 1884, during the reign of King Chulalongkorn, by Field Marshal Chao Phraya Surasakdi Montri, after his diplomatic mission to Europe. He was first financed, with proceeds from the sale of his inheritance, for 14,400 baht, the purchase of two electric generators and accessories from the UK, Wattana et al. (2008). Thailand's Electricity Supply Industry (ESI) has undergone reform since the early 1990s. The first phase of reform resulted in the introduction of Independent Power Producers (IPPs) and Small Power Producers (SPPs) programs. The reform program was also influenced by the IMF, the Thai state requested financial assistance after the 1997 Thai financial crisis. The Thai government must liberalize and deregulate the electricity sector in order to increase sector efficiency. The initial step of electricity liberalization was with the introduction of private participation, Independent Power Producer (Wisuttisak, 2012). Office of Energy Planning and Policy (EPPO) (formerly the National Office of National Energy Policy (NEPO), permits EGAT to sign several Power Purchase Agreements (PPAs) with independent electricity producers (IPPs) with contract terms ranging from 1 to 25 years (NEPO, 2003). The plan to prepare EGAT, MEA, and PEA to become corporatization and registered on the Stock Exchange was approved by the State Corporate Policy Commission (SEPC) on August 20, 2002 (Sirasontorn, 2004).

In early 2005, the Thaksin government was re-elected and the privatization program of the state company was revived. EGAT was the first public company to become a corporation in April 2005, and is scheduled to be listed on the Stock Exchange in October 2005. A group of NGOs and trade unions petitioned the Supreme Court a few days before the scheduled list. On March 23, 2006, the Supreme Court ended the privatization of EGAT by revoking two Royal Decisions which led to corporatization in 2005. Thailand is a developing country that has growth in energy demand, especially electricity. The increasing trend can be attributed to the growth of the industrial, business and household sectors, urban expansion; from cities to urban and rural areas, increasing household income, increasing production structures that emphasize services, a growing population, advances in knowledge and technology including rapid economic and industrial expansion, Suksawang et al. (2018). Under government regulations, all electricity supplies sent through national networks, either by private electricity producers, other government institutions or producers in neighboring countries, must be sold to EGAT. The only exception is VSPP which can be sold directly to the

distribution utility, but sales are limited to 10 MW. The Electricity Generating Authority of Thailand (EGAT) is thus the main entity that sells wholesale energy to the distribution sector. For electricity supplies produced by private operators, both IPP and SPP have long-term power purchase agreements (PPA) with EGAT as single buyers, usually 20 or 25 years (Thailand Power Development Plan 2015-2036, 2015).

3.4. Electricity in Malaysia

The Australian Gold Mining Company Raub became the first power plant in Malaysia. The first Malaysian legislation to regulate electricity supply in the country was promulgated in 1949. Regulatory reform took place in Malaysia when the government started an ambitious privatization program from the mid-1980s (Lee, 2002).

Along with the 1997-1998 financial crisis, the regulatory process, high gas subsidies, expensive LNG and reduced gas production have created supply security problems for the electricity industry in Malaysia where around 45% of electricity is generated from natural gas in 2013. In 1994 Malaysia divested Power, electricity generation, transmission and distribution companies for peninsular Malaysia.

National Power Berhad National electricity company is the dominant electric utility in Malaysia, the company owns about 60% of all Peninsular Malaysia generator assets and about 55% of all Malaysian generators. TNB holds a monopoly on transmission and distribution in Peninsular Malaysia. Sarawak Electricity Supply Corporation and Sabah Electricity Sdn Bhd (TNB subsidiary) supply electricity to consumers (Power market, 2008). Until 1992, electricity generation, transmission and distribution in Peninsular Malaysia were mostly provided by TNB. With the implementation of the government's privatization policy in the late 1980s, TNB was listed on the local bourse on 29 February 1992. Although TNB was privatized (the government and its agency held around 60% equity) as vertically integrated electricity utilities, the government decided to introduce competition in the generating sector. The first five IPPs with the signed Power Purchase Agreement (AKP) (1993-1994) are as follows: Under the Subsidy Rationalization Program (SRP) launched in 2010, the government decided to increase electricity prices (Electricity Tariffs in Malaysia, 2015). The ratification of the 2016 Gas Supply Amendment Act on 9 September 2016 marks another milestone in the expected landscape of change from the energy industry. Tenaga Nasional Berhad (TNB) has made its first acquisition in the UK by taking 50% of the shares in the 365 MW solar portfolio. The £ 470m (\$ 605m) agreement also marks Bunaken's first investment in renewable generation capacity in Europe. This acquisition was carried out as part of the TNB's 5-year international expansion plan, which has one of its main objectives, a target to obtain up to 250 MW of renewable energy capacity by 2020.

The acquisition was carried out through Vortex Solar UK, a wholly-owned indirect subsidiary of the TNB joint venture, Vortex Solar Investment, which buys 100% of the shares in the portfolio.

TNB will have a combined installed capacity of 252 MW after the acquisition of power generation companies in India and Turkey

in 2016. Malaysia consists of three electricity systems, namely Peninsular Malaysia, Sabah and Sarawak. Electricity demand in Malaysia is concentrated in Peninsular Malaysia, which is 90% of overall demand in the country. Construction of cross-country electricity networks. First is West Kalimantan, the interconnection project, which is planned to begin operations in January 2015. Second is the Sumatra-peninsular interconnection project which is planned to commence operations in October 2017. As a first step in implementing the government's privatization policy, the National Electricity Council was authorized in 1990 as Tenaga Nasional Berhad (TNB) and then privatized and floated on the Kuala Lumpur Stock Exchange, with the Ministry of Finance holding around 70% of the shares. The Sabah Electricity Board was privatized in 1998 as Sabah Electricity Sdn. Bhd., With TNB as a major shareholder, while the Sarawak state government reduced 50% of its equity in SESCO to the private sector in the late 1990s.

3.5. Electricity in Indonesia

Indonesia's geography is very broad and shaped islands, the Republic of Indonesia consists of thousands of inhabited islands. The Indonesian government adopted a policy of issuing Law No. 1 of 1969 concerning Foreign Investment (PMA), this law has pushed foreign capital into Indonesia, through various multinational companies. In 1970, the Indonesian order adopted a policy to enact Law No. 6 of 1970 concerning Domestic Investment (PMDN). The Indonesian government liberalized electricity business in the field of generation, namely in the generation of East Java Paiton in the 1980s, The Paiton case in the 1980s, the price of electricity was controlled by the government in power without the approval of the House of Representatives and the value was very large and ensnared the finance of PT PLN Persero, (Utoro, 2006). The electricity sector in Indonesia is regulated in Law No. 15 of 1985 concerning Electricity made during the New Order. Along with the momentum of the Asian crisis in 1997, the International Monetary Fund (IMF) came up with its economic "recipe" as contained in the Letter of Intent (LOI), as stated in point 20 of the LOI, was the liberalization of the electricity sector by revoking the monopoly rights of the State Electricity Company (PLN). This is the beginning of the era of electricity liberalization in this country. The Indonesian government ratified Law No.20 of 2002 concerning Electricity, this is the first legal product to liquidate the monopoly rights of the National Electricity Company (PLN). The electricity management system which was previously monopolized by PLN with the participation of the private sector at the power level was overhauled in Law No. 20 of 2002. The private sector was given the opportunity not only as a power plant manager, but also as a provider of community electricity needs, Example: Cikarang Listrindo (located in the Jababeka Industrial area Bekasi-West Java) is a part of the private sector that does not only play in the trimming sector but also in the consumer sector that is controlled. This electricity liberalization was held back when the Constitutional Court (MK) canceled Law No.20 of 2002 in a judicial review submitted by several non-governmental organizations (NGOs) in 2004, but this did not last long. In 2009, the majority of the factions in the House of Representatives (DPR) agreed to ratify Law No. 30/2009 on electricity.

In law Number 30 of 2009, it appears that the government provides the widest possible opportunity for private or foreign

parties to take part in the development of electrical energy both upstream and downstream. Plans to increase national generating capacity by the Minister of Energy and Mineral Resources of the Republic of Indonesia Number 5899 K/20/Men/2016, regarding the ratification of the 2016 Electric Power Company (Persero) planned for S.D. 2020 is as follows:

4. CAPITALISM AND ELECTRICITY ENERGY POLICY

At this time electricity has become an important part of the modern life of a nation, because its existence is able to become the foundation of the progress of a nation's civilization, (Rismawati, 2011). Capitalistic modern civilization has encouraged humans to be greedy for the environment, modern humans are infected by hedonism which is never satisfied with material needs. The West's view of the view of life that denies revelation or religion from the foundation of thinking is made a legal basis for the state as well as being the basis of attitudes towards other countries or nations that also tend to ambitious towards other nations' natural resources and energy to be controlled, (Absori, 2006). The West's view of the view of life that denies revelation or religion from the foundation of thinking is made a legal basis for the state as well as being the basis of attitudes towards other countries or nations that also tend to ambitious towards other nations' natural resources and energy to be controlled (Paryono, 2017b). Electricity is a source of energy which is an important factor to drive the economy and development of a country. It also plays an important role as an economic indicator. Electricity consumption can reflect national economic development because it is an important foundation for a country's sustainable economic development. Thus, security in the electrical system is the main subject for everyone to consider because insufficient electricity supply for some periods of time or electricity disruptions and power outages are considered to be large expenditures for the economy and result in decision making from private investors. Increasing production capacity to produce electricity cannot be done in a short time because it takes 5-7 years to build electricity power systems, electricity transmission lines, electricity distribution networks, and power plants. So, investment needs estimation for demand for end use of electricity. Because future electricity demand increases in line with population and economic growth (Suksawang et al., 2018). Infrastructure development is a global debt mega project to ensure their power in all corners of the world, global financial institutions donor countries are competing to seize the infrastructure market. These institutions have exceeded the power of the state so that in practice and affect the legal products of a country in the field of electricity energy management (Paryono, 2018a). Electricity capitalism globally is played by a multinational or transnational corporation by carrying out its operations to all developing countries by influencing the country's electricity law products, which then invest electricity infrastructure investment into the country and then master it. Many Asian countries use the build operate transfer (BOT) approach to develop public infrastructure projects (Lee and Schaufelberger, 2014), including electricity infrastructure.

Liberalization the electricity sector is allegedly an insistence on foreign parties, as well as international institutions. By reason

of the efficiency of the institution, it encourages liberalization of the electricity energy sector to the government of a country. International financial institutions have put pressure on the economic transition to develop during the 1990s to privatize the electricity sector (Vlahinić-Dizdarević, 2011). Privatization has a statistically significant positive effect on the level of access to electricity. In the absence of federalism, privatization in the electricity sector has a greater impact on electrification than in the case with the federal government system. Federalism has a positive impact on access to electricity if electricity is produced and supplied mainly by state-owned company. Another interesting finding is the relationship between the level of subsidiarity and electrification: The higher the level of subsidiarity has a negative effect on electrification, Elkhan et al. (2018).

The stability of electricity supply in an area is understood as the state of the region that determines its ability to supply economic needs with electricity with acceptable quality and affordable prices in full volume, the ability to counteract the negative impacts of continuously developing internal and external threats, and the system's ability to self development and improvement, Gnatyuk et al. (2018). The vesting contract mechanism that is set equal to all market companies must be changed to a vesting mechanism that varies, depending on the total capacity of each generating company. A higher vesting level must be set for companies that have greater capacity and lower ones must be set for lower capacity limits. This methodology will reduce opportunities for large market companies such as Phu My to use market power. Second, in the long run, the mechanism for the difference in hood prices that is set differently for each generating unit must be changed to use one closed price for the entire market. This means that the current hybrid market design (a combination of cost-based models and price-based models) must be transformed into a pure price-based model (Khoa, 2018).

Europe, which adheres to legal positivism which denies thoughts that are grounded and oriented to transcendental metaphysics, the law is solely only seen as a pure object without coming into contact with politics, socio-culture, religious morality, the law only means written rules, a collection of books of law full of procedures (Paryono, 2017a) initiate electricity liberalization by utilizing international financial institutions. The World Bank and other development agencies encourage IPPs by conditioning their loans to private sector participation in state-controlled sectors, and some even play a more active role by providing direct technical assistance. Globalization of the energy market is not a new phenomenon. For centuries, countries have traded international energy. Facing the hegemony of global capitalism in electricity should the Southeast Asian countries have a strategy that can safeguard the energy sector for Southeast Asian countries themselves, because a country's energy sovereignty is important regarding electricity in modern times is a basic necessity and is a means of economic growth and social welfare tools.

In addition to electricity is a basic necessity, the electricity business is a business of basic needs that is definitely profitable and very profitable, if the electricity management is said to be a loss and accuses if the electric power operator in the state company will

be inefficient then this is something odd and more in blow by international donor agencies which is the length of time for global capitalism. To maintain the existence of a country in terms of the sovereignty of electricity, a concept taken, namely management and ownership of infrastructure by the private sector must be limited by the state, and the state must have the electricity infrastructure, may be owned by the private sector but the dominance of electricity supply and power must be owned by the state.

Capitalism, neoliberalism, and the Washington Consensus, heighten world inequality and poverty. The three main pillars that support this concept are fiscal austerity, privatization, and market liberalization, as well as a Letter of Intent proposed by the IMF (International Monetary Fund). The final pillar, which offers the concept of economic palliative, has become a guide in the planning and implementation of socio-economic policies. This agreement seems to be a sacred book of state policy to this day. These scriptures are liberalization, privatization and deregulation, which tend to pose a serious threat to the nations of the world, who are struggling to achieve prosperity, Elviandri et al. (2018).

The global electricity liberalization process has resulted in major changes in electricity regulation in most Southeast Asian countries, the electricity regulation model which was previously regulated as a vertically integrated monopoly and owned by the state has changed ownership or control of electricity infrastructure (electricity generators/suppliers) in controlled by global capitalism. The impact of liberalization liberalization in the electricity sector in Europe has an impact on developing countries namely Southeast Asia, in addition to the 1997 financial crisis in Southeast Asian countries, global capitalism through world banks pressured Southeast Asian countries to privatize electricity infrastructure by means of amend the electricity law in force in the country. The security of electricity supply in the short term is fulfilled while long-term interests will cause problems because with the transfer of ownership of the electricity energy from the state to the capitalists, the benefits of implementing electricity do not return to the state but to the capitalists so that the country will have difficulty building infrastructure electrical energy meets needs. It is a common thing if the projected investment in this case is the new authority of electricity infrastructure namely global capitalism will be reluctant if new investments in places are not as profitable as in the Philippines, the tendency is to invest in power plants in the city as well as in Indonesia private investment playing on the island of Java, which is indeed high consumer growth so significant profits.

Singapore mainly relies on natural gas to produce electricity, thus Singapore needs to ensure that the supply of imported natural gas is guaranteed and obtain it at competitive prices because the power plant in Singapore is highly dependent on gas supply. The power plant in Singapore received gas supplies from the island of Sumatra totaling around 750 MMBTU. It is different from the situation in Malaysia, where the country is located on two islands, making it easier to operate electricity, making it more efficient, and the Malaysian government through the Sarawak state electricity company that shares owned by Malaysia and the

private sector (Sesco) can expand by selling electrical energy to the country of Indonesia precisely on the island of Borneo, Like the collaboration between the Indonesian and Malaysian governments in the field of electricity, on the island of Borneo in the Republic of Indonesia, which has difficulty obtaining additional energy supplies due to the failure of the Indonesian power plant project. Syarikat SESCO Berhad, formerly known as the Sarawak Letrik Supply Center (SESCO) has been privatized on July 1, 2005. SESCO is responsible for electricity in Sarawak, SESCO is owned by the Sarawak Kingdom (51.6%) and Sarawak Enterprise Corporation Berhad (45%). Sub-regional interconnection and the development of cross-border electricity markets (such as Sarawak Malaysian sub-regional connectivity and the electricity network in the Indonesian island of Kalimantan, this is the role of global capitalism by playing the role of the state for the transfer of electricity between countries which share capital in the company The country's electricity and this is widely adopted by Southeast Asian countries, different from that applied by Indonesia. In Indonesia, the private sector plays on the generation with the BOT pattern or full ownership of the power plant which is in a strong electricity network system such as Java.

Electricity reform in Thailand, the electricity regulatory reform program was also influenced by the IMF, the country of Thailand requested financial assistance after the 1997 Thai financial crisis. The Thai government must liberalize and deregulate the electricity sector in order to increase sector efficiency. The initial step of electricity liberalization was with the introduction of private participation (Independent Power Producer). Electricity regulatory reform took place in Malaysia when the government embarked on an ambitious privatization program from the mid-1980s and caused high primary energy prices. Along with the 1997-1998 financial crisis, the regulatory process, high gas subsidies, expensive LNG and a decline in gas production have created supply security problems for the electricity industry in Malaysia.

The Indonesian government liberalized electricity exploitation in the field of generation, namely in the generation of East Java Paiton in the 1980s. The electricity sector in Indonesia is regulated in Law No. 15 of 1985 concerning Electricity made during the New Order. Law No.15 of 1985 provides access for the private sector to take part in the electricity sector, Cikarang Listrindo Tbk (POWR) was established on July 28, 1990 and began commercial operations in November 1993. Cikarang Listrindo obtained a license to supply electricity to the Public to five industrial zones in the Cikarang region for a period of 30 years on December 11, 2006 from the Minister of Energy and Resources Mineral Power (ESDM). On June 7, 2016, POWR obtained an effective statement from the Financial Services Authority (OJK) to conduct an Initial Public Offering of POWR (IPO) of 1,608,716,000 shares with a nominal value of Rp200 per share at an offering price of Rp1,500. per share. These shares were listed on the Indonesia Stock Exchange (IDX) on June 14, 2016. Cikarang Listrindo is also the first listed power plant issuer on the IDX. Although it is the first, but the company is quite large. Evidently in 2015 the company managed to earn revenues of USD 165 million and net income of USD 80 million. Where, in the past 23 years, the company started by only building a power plant for the needs of an industrial area in

Bekasi, which was only 60 MW. “We first started at 60 MW, so far it has been 1144 MW,” he said at the IDX Building, Jakarta, Tuesday (06/14/2016). PT Cikarang Listrindo Tbk (POWR) has just realized an initial public offering (IPO) today. In line with this, the company also divested shares. Finance Director of Cikarang Listrindo Christanto Pranata explained, this year the company obtained fresh funds of up to IDR 3.6 trillion. The fund comes from an IPO of Rp2.4 trillion by releasing 10% of its shares and divesting shares. With these funds, the company usually will aggressively expand. But Christianto admitted that his party would not use the funds. The funds will be saved to fund future projects. “To fund future expansion in the long term. In the case of Paiton in the 1980s, electricity prices were controlled by the government in power without the approval of the DPR and the value was very large and ensnared PT PLN Persero’s finances (Utoro, 2006).

The 1997 Asian crisis, the International Monetary Fund (IMF) came up with its “economic recipe” as contained in the Letter of Intent (LOI), as stated in point 20 of the LOI, is the liberalization of the electricity sector by revoking the monopoly rights of the National Electricity Company (PLN). The Indonesian government ratified Law No.20 of 2002 concerning electricity, this is the first legal product to liquidate the monopoly rights of the National Electricity Company (PLN). This electricity liberalization was held back when the Constitutional Court (MK) canceled Law No. 20 of 2002.

The policy where one of the commodities frequently asked by consumers related to the understanding of geographical consumers is that the electricity community in micro sense of electricity still dominates around 5 of the complaints, in Yogyakarta about 16% of the complaints mean electricity and the type of infrastructure many problems. The issue of electricity dissemination is actually not new and if I look at it from the very beginning the new law which was then canceled by the Constitutional Court (MK) whose contents were very liberal was very viral because it liberalized electricity from upstream to downstream. The Constitutional Court ordered a return to the old law. After becoming the new law including the last law, there is indeed a paradigm shift in which electricity which was used to infrastructure means that it must be controlled by state management shifts to electricity as a commodity (Abadi, 2018).

The Government of Indonesia (Joko Widodo) in 2014 began to build power plants reaching 35,000 mw by 2019, this 35,000 MW program by looking at Table 1 will show that the growth of private investment in Indonesia is very significant even by 2019 will be balanced between private and owned the Indonesian state as a whole but for the island of Java private ownership is more dominant, then after 2019 private ownership will be more dominant, based on the data on electricity infrastructure projects released by the Indonesian government: In Table 1. In Indonesia the grip of the ideology of capitalism is felt, pro-capitalist policies, namely the capitalists get the point of business of generating electricity at a very profitable place, he points of benefit, especially on the island of Java, because the Java electricity system is a strong and good system, even the capitalists can get access to a large unit of 660 MW playing in a 150 kV system (a system close to consumers), namely at the Kanci power plant Cirebon 660 MW,

Table 1: Plan for additional generating capacity

Variables	2018	2019	2020
PLN (MW)	4.858	3.737	760
IPP (MW)	7.579	17.646	5038
Total (MW)	12.437	21.383	5.798

Source: Decree of the Minister of Energy and Mineral Resources Republic of Indonesia Number 5899 K/20/Men/2016

entered the Java-Bali network system 150 kV not at 500 kV, in business while the points of consumer growth are low, regulation in Indonesia provides a mandate to the government (PLN) to meet the electricity needs of the area.

The electricity management model that was implemented in the early 20th century in 1982, several countries implemented economic models that were applied by developed countries, the American model was owned by the private sector but strictly regulated by the government of electricity companies, in the United Kingdom, Australia and So it looks like Indonesia, so that the German French Netherlands looks like Indonesia, the good level of profitability of the electricity company can be investment to build new plants later, so there is no need for the role of private electricity to invest. In Indonesia is somewhat different here, the electricity price is deliberately made relatively cheap, the impact is that the National Electricity Company (PLN) is unable to achieve (Nur, 2018). Energy problems are one of the priorities in the goal of sustainable development Energy is an important need for people after food, water and shelter. The use of energy in human life becomes very important along with increasing standards of quality of human life. Electric energy is very necessary for improving welfare which includes improving health, education, comfort, improving environmental quality. Electricity development aims to ensure the availability of electricity in sufficient quantities, good quality, and reasonable prices to improve welfare (Saepudin, 2018).

Electricity plays an important role in every aspect of life and encourages economic growth. This is different from financial assets and other commodities on the market because of its strange features. Non-storability, demand for elasticity, the need to maintain a constant balance between demand and supply by the system operator are among these features. Also, climate conditions and economic activities affect electricity consumption throughout the day. These features cause some special changes in electricity prices such as seasonal, high volatility, sharp price spikes and average transfer processes the electricity market supports open access and non-discrimination among market participants to enable competition, which follows incentives that are driven by market price. To achieve the expected results of economic reliability and efficiency, it is important to have the right prices that are consistent with the objectives and operations of the underlying system, Yilmaz et al. (2018). Analysis of short-term effects shows that electricity supply does not significantly affect economic growth. The Granger causality test shows that there is unidirectional causality that runs from the electricity supply to economic growth and from economic growth to employment. The results show that electricity supply is very important to increase economic growth in the long run (Bass, 2018).

The price of electricity has a stochastic nature that is different from standard financial products and even other commodities, especially

because they cannot be stored. Electricity prices contain strong seasons, very short spikes and behaviors that mean returning. Study models to describe and predict the dynamics of the quantity of electricity have been continued for years before the deregulation process began in other countries. The electricity market model requires energy prices to balance, spot and short-term transactions. Short-term load forecasting plays an important role in the operation and planning of electric power systems. The model of electricity price estimates obtained in turn will help develop bidding strategies and negotiation skills to maximize profits in a very volatile market (Özdurak and Ulusoy, 2018). This is the burden of developing countries whose electricity infrastructure assets which are dominated by investors or capitalists cause electricity infrastructure investment to run slowly because the benefits of organizing a lot of electricity back to the capitalists.

Electricity Industry Infrastructure is very important for development, because international competitiveness and economic growth are greatly influenced by the existence of electricity infrastructure (Paryono, 2018b). Energy is increasingly becoming a major force in the pursuit of sustainable development. The attributes of neutrality ascribed to energy by the neoclassical model are questionable because modern energy sources that continue to grow can directly help livelihoods, and indirectly through the promotion of economic growth. As the main source of energy, accessibility of electricity helps the process of meeting housing and domestic needs, positively contributes to capital and labor productivity, promotes the export potential of countries to create jobs and reduce poverty levels ultimately increasing socio-economic development, Adeyemi et al. (2016).

The electricity industry policy in Southeast Asian countries is currently heavily influenced by western civilization based on liberalism following the free market as a basis for regulation. The liberal positivism view of western civil law places spiritual as a separate part of a unity of modern legal development affecting the legal products of the electricity industry in Southeast Asian countries to be liberal, which only aims at the welfare of groups or capital owners. Southeast Asian countries in pursuing electricity infrastructure development often involve investors from Europe with long-term cooperation contracts, electricity purchase agreements using a scheme to build, own, operate, and transfer (build, own, operate and transfer/BOOT), so that the average electrical equipment in the form of a generator can switch to state ownership in the age of performance that is not good (average transfer of ownership after 30 years). In the operations carried out by investors for approximately 30 years, the investors have power in management and operation, if this is not limited to the percentage of ownership, it will endanger the sovereignty of countries in Southeast Asia. In this case, the dominance of global capitalism on electricity infrastructure in the Southeast Asian region will affect the policies of Southeast Asian countries towards electricity policies and their derivatives, namely economic policies in the Southeast Asian countries. The electricity policy that should be taken by Southeast Asian countries is a policy that pays attention to the interests of siding with the interests of the people and the sovereignty of the country, not taking policies that only benefit international capitalists or only facilitate investors who

only answer short-term problems. What must be taken is to pay attention to the long-term interests that harmonize the short-term and long-term interests of the interests of electricity, which answer the problem of economic growth carefully without mortgaging state sovereignty to the capitalists.

5. CONCLUSION

Electricity deregulation in developed countries forces companies to look for investment opportunities in developing countries. The availability of reliable and adequate energy sources is very important for sustainable industrial and socio-economic development in any country, including countries in Southeast Asia. Global capitalism through the World Bank and other development institutions encouraged IPPs by conditioning their loans to private sector participation in state-controlled sectors namely electricity, and some even played a more active role by providing technical assistance directly to Southeast Asian countries.

Liberalization globally produces major changes in the electricity market, the electricity industry in most countries is regulated as a vertically integrated monopoly and is owned by the state to change ownership to global capitalism either partially or wholly which this afflicts countries in Southeast Asia. By influencing the electricity regulation of a country, the capitalist then seeks to have electricity infrastructure at a point where the energy business is well established and by owning a share of a country's electricity exploitation which then initiates cooperation between countries in electricity buying and selling (a state government electricity regulation policy in make use of to make profits from the business of an electrical energy network connection between countries).

Electricity connections between countries better reflect capitalist business interests compared to the electricity consumption needs of a region of the country. The strength of global capitalism over electricity infrastructure in the Southeast Asian region will affect the policies of Southeast Asian countries towards electricity policies and their derivatives, namely economic policies in the Southeast Asian countries. The electricity policy that should be taken by Southeast Asian countries is a policy that pays attention to the interests of siding with the interests of the people and the sovereignty of the country, not taking policies that only benefit international capitalists or only facilitate investors who only answer short-term problems. What must be taken is to pay attention to the long-term interests that harmonize the short-term and long-term interests of the interests of electric energy, which answer the problem of economic growth carefully without mortgaging state sovereignty to the capitalists.

REFERENCES

- Abadi, T. (2018) Chairman Yayasan Lembaga Konsumen Indonesia (YLKI), Interview Dated 15-09-2018 at 17:00 Jakarta Indonesia.
- Absori, A. (2006) Declaration of sustainable development and its implications in Indonesia, faculty of law, Muhammadiyah University. *Journal of Law Science*, 9(1), 39-52.
- Adeyemi, A.O., Akinyemi, O., Ogundipe, O.M. (2016), Electricity consumption and economic development in Nigeria. *International*

- Journal of Energy Economics and Policy, 6(1), 134-143.
- Ahmad, A., Babar, M. (2013), Effect of Energy Market Globalization over Power Sector of GCC Region: A Short Review, Smart Grid and Renewable Energy. <http://www.scirp.org/journal/sgre>. [Last accessed on 2018 Sep 04].
- Ahmed, S.J. (2017), Carving out Coal in the Philippines: Stranded Coal Plant Assets and the Energy Transition. Philippines: IEEFA Energy Finance Analyst.
- Amrullah, M.H. (1992), Francis Fukuyama, the End of History and the Last Man (Indonesian Translation: Kemenangan Kapitalisme dan Demokrasi Liberal), Yogyakarta: Qalam Publisher.
- Bass, A. (2018), Does electricity supply matter for economic growth in Russia: A vector error correction approach. *International Journal of Energy Economics and Policy*, 8(5), 273-280.
- Bello., Layiwola, S. (2017), Electricity Market Liberalization and Institutional Arrangement: an Agent-based Model of Singapore and Nigeria, Centre for Petroleum, Energy Economics and Law (CPEEL). Ibadan, Nigeria: University of Ibadan, Nigeria, IAEE Singapore Paper. Available from: https://www.iaee.org/iaee2017/submissions/OnlineProceedings/IAEESingapore_Paper2017.
- Deliarnor. (1997), Development of Economic Thought. Jakarta: Raja Grafindo Perkasa. p179.
- Electricity Tariffs in Malaysia. (2015), Available from: <https://www.enerdata.net/publications/executive-briefing/electricity>. [Last accessed on 2018 Sep 08].
- Elkhan, R.S.Z., Löwenstein, W., Ferrari, M. (2018), Privatization and the role of sub-national governments in the Latin American power sector: A plea for less subsidiarity? *International Journal of Energy Economics and Policy*, 8(1), 95-103.
- Elviandri, E., Farkhani, F., Dimiyati, K., dan Absori, A. (2018), The formulation of welfare state: The perspective of Maqāṣid al-Sharī'ah. *Indonesian Journal of Islam and Muslim Societies*, 8(1), 117-146.
- Faur, DL. (2003), The politics of liberalisation: Privatisation and regulation-for competition in Europe's and Latin America's telecoms and electricity industries, university of Haifa, Israel and university of Oxford, UK. *European Journal of Political Research*, 42, 705-740.
- Gingerich, E. (2018), Generation and storage of renewable energy: Rising parity of emerging economies. *International Journal of Energy Economics and Policy*, 8(1), 17-26.
- Gnatyuk, V.I., Kretinin, G.V., Kivchun, O.R., Lutsenko, D.V. (2018), Potential of energy saving as a tool for increasing the stability of electrical supply of the Kaliningrad region. *International Journal of Energy Economics and Policy*, 8(1), 137-143.
- Haselip, J. (2004), The Globalisation of Utilities Liberalisation: Impacts Upon the Poor in Latin America. CSGR Working Paper No. 138, Centre for the Study of Globalisation and Regionalisation (CSGR). United Kingdom: University of Warwick, Coventry, CV4 7AL.
- Igwe, Ogbonnaya, D. (2013), Nigeria in the age of globalization. *Journal of Public Administration and Policy Research*, 5(5), 109-116.
- Keraf, K. (1996), Free justice market and role of government. In: Smith, A., editor. *Review of Political Economy Ethics*. United Kingdom: Taylor and Francis. p238.
- Khoa, T.D. (2018), Market efficiency and market power in Vietnam competitive generation market. *International Journal of Energy Economics and Policy*, 8(1), 181-189.
- Khudzafah, D., Absori, A., Kelik, W. (2017), Morality and law: Critics upon H.L.A Hart's moral paradigm epistemology basis based on prophetic paradigm. *Jurnal Dinamika Hukum*, 17(1), p24.
- Lee, C. (2002), The Institutional and Policy Framework for Regulation and Competition in Malaysia. Malaysia: University of Malaya. Available from: <https://www.um.edu.my>. Last accessed on 2018 Sep 05].
- Lee, N., Schaufelberger, J.E. (2014), Risk Management Strategies for Privatized Infrastructure Projects: Study of the Build Operate Transfer Approach in East Asia and the Pacific. Available from: <http://www.ascelibrary.org>. [Last accessed on 2018 Sep 01].
- NEPO. (2000), Electricity Supply Industry Reform and Thailand Power Pool, National Energy Policy Office, August 12, 2003. Available form: <http://www.eppo.go>. [Last accessed on 2018 Sep 01].
- Novak, W.J. (2010), Law and the social control of American capitalism. *Emory Law Journal*, 60, 379.
- Ochugudu, A.I., Onodugo, V.A. (2013), Power sector reform deliverables: How well and how good to customers. *International Journal of Management Technology*, 1(1), 1-14.
- Özdurak, C., Ulusoy, V. (2017), Impact of vertical integration on electricity prices in Turkey. *International Journal of Energy Economics and Policy*, 7(3), 256-267.
- Paryono P. (2017a), Transcendental Paradigm in Law Enforcement, in Prospect Law Transcendence and Implementation. Yogyakarta: Genta Publishing. p283.
- Paryono P. (2017b), Foundation of the law of western civilization: Effects on regulations and mastery of natural resources and energy. In: Absori, Prophetic Legal Thought, Variety of paradigms Towards Godly Law. p160.
- Paryono P. (2018a), Development of Electricity Energy Law in Indonesia, in Transcendental Law Development and Law Enforcement in Indonesia. Yogyakarta: Genta Publishing. p507.
- Paryono P. (2018b), The politics of the electricity industry law is based on transcendental values. *Law and Justice Journal*, 3(1), p31.
- Patalinghug, E.E. (2003), An Analysis of the Philippine Electric Power Industry, International Conference on the Challenges to Development: Innovation and Change in Regulation and Competition, 13-15 October 2003. Philippines: University of the Philippines. Available from: <https://www.pdf.semanticscholar.org/c438>. [Last accessed on 2018 Sep 04].
- Power Market TNB. (2008), Must Move Towards Liberalization. Available from: <https://www.malaysiakini.com>.
- Rismawati, S.D. (2011), Reconstruction of Institutions and Legal Institutions in the Electricity Sector Based on Social Capital, a Study of Strengthening Micro-hydro Management of Muncar Pekalongan Waterfall. Semarang: Dissertation of the Doctor of Law Science Program at Diponegoro University.
- Saepudin, T. (2018), Development of Electricity Program, Electrification Ratio with Human Development Index in West Java Province, Indonesia. *International Journal of Energy Economics and Policy*, 8(1), 227-230.
- Samet, D., Schmeidler, D. (2003), Between liberalism and democracy. *Journal of Economic Theory*, 110, 213-233.
- Sirasontorn, P. (2004), Privatization, Restructuring and Regulation: Electricity Supply Industry in Thailand, PhD Thesis. Australia: The Australian National University.
- Somani, S. (2014), Philippine Power Sector: Challenges and Opportunities, the Energy Report Philippines, Growth and Opportunities in the Philippine Electric Power Sector 2013-2014 Edition.
- Sukarna, A. (1981), Bandung Ideology, Alumni, p59.
- Sukarno, S. (1965), Under the Revolution Flag. Vol. 1. Jakarta: Panitia Penerbit DBR. p181.
- Suksawang, P., Suphachan, S., Kaewnuch, K. (2018), Electricity consumption forecasting in Thailand using hybrid model Sarima and Gaussian process with combine kernel function technique. *International Journal of Energy Economics and Policy*, 8(4), 98-109.
- Thailand Power Development Plan 2015-2036. (2015), PDP 2015, Energy Policy and Planning Office June 30, 2015. Available from: <https://www.egat.co.th/en>. [Last accessed on 2018 Sep 01].
- Utoro, S. (2006), The Process of Formulating the Privatization Policy for the Development of Indonesian Electricity in the 1980s Paiton I PLTU Private Electricity Case, UGM State Administration. Yogyakarta: Gajah Mada University.
- Verzola, R.S., Logarta, J.D., Maniego, P.H. (2017), Towards a Just

- Transition in the Philippine Electricity Sector Challenges and Opportunities. Available from: <https://www.library.fes.de/pdf-files/bueros/philippinen/14215.pdf>.
- Victor, O.E., Aziz, N.A., Jaffar, A.R. (2015), Privatization of electricity service delivery in developing nations: Issues and challenges. *International Journal of Built Environment and Sustainability*, 2(3), 202-210.
- Vlahinić-Dizdarević, N. (2011), The Effects of Privatization in Electricity Sector: The Case of Southeast European Countries. Available from: <https://www.researchgate>. [Last accessed on 2018 Sep 01].
- Wadud, A.A., Zaman, T., Rabbee, F., Rahman, R. (2013), Renewable energy: An ideal solution of energy crisis and economic development in Bangladesh. *Global Journal of Researches in Engineering Electrical and Electronics Engineering*, 13(15), p19.
- Wattana, S., Sharma, D., Vaiyavuth, R. (2008), Electricity industry reforms in Thailand: A historical review. *GMSARN International Journal*, 2(1), 41-52.
- Wisuttisak, P. (2012), Regulatory Framework of Thai Electricity Sector. Available from: <https://www.researchgate.net/publication>.
- Yang, M., Sharma, D. (2007), The Impacts of Electricity Industry Reforms on Electricity Prices, Centre for Energy Policy. Sydney, Australia: University of Technology. Broadway, NSW. Available from: https://www.eneken.ieej.or.jp/3rd_IAEE_Asia/pdf/paper/123p.pdf.
- Yilmaz, M.K., Kucukcolak, N.I., Kucukcolak, R.A. (2018), Market efficiency and risk premium in the Turkish wholesale electricity market. *International Journal of Energy Economics and Policy*, 8(5), 76-88.