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Preface

In this second semester of 2021, we proudly present the second edition of the second volume of Journal of International Studies on Energy Affairs (JISEA). This journal is more focusing on energy issues within the lenses of International Relations Perspectives, from theoretical aspects to empirical studies with the validation of current emerging phenomena. JISEA was envisioned and founded to accommodate the growing discussions of energy issues in the context of social studies, especially International Relations as energy had become a vital commodity that affects the states' policymaking and implementation. JISEA aims to represent the result of thinking of the International Relations Scholars community, therefore it can span the gap between academic and policy approaches. JISEA is committed to a broad range of intellectual perspectives. Articles promote new analytical approaches, iconoclastic interpretations, and previously overlooked perspectives. Its pages encourage novel contributions and outlooks, not particular methodologies, or policy goals.

This volume consists of 6 articles which discuss about energy issues and the current situation in dealing with global pandemics.

The first article, "Behind the Cancellation of Green Refinery Cooperation between Pertamina and Eni: An Analysis of Domestic and Regional Aspects" by Muhammad Fauzi Abdul Rahman and friends, emphasizes analytical background of ENI-Pertamina cooperation cancellation regarding crude palm oil. The main reason of this issue is the domestic situation in Italy which cannot be separated from EU's policies.

The second article is from Faris Febrianto titled "ISIS Energy Sector as Material Capabilities in Establishing Islamic State Based on Robert W. Cox Approach". The article discusses about how this non-governmental actor is targeting the energy sources to fund their activities in establishing a new concept of Islamic state. Approach from Robert W. Cox is used as the basis argument to conclude that the energy source is important as a material capability.

The third article titled "The Political Economy of Energy Alteration in Indonesia: The Role of Coal and Mineral in New and Renewable Energy Alteration" written by Hartanto. The main argument of this article is the materials such as coal and nickel shall be considered as potential source of new and renewable energy in Indonesia. Despite of several challenges, good policies in the technical and financial aspects can solve the problem.

The Fourth article is from Atalia Eureka Putri Taju and Kholifatus Saadah with title "Talking about Ideal Civil-Military Relationship: Comparation Cases between Military in Indonesia and India in Dealing with Covid-19 Pandemic.". During this struggling era, the

engagement between civil and military shall play significant role in minimizing the effect of pandemic. Indonesia and India showed good results in handling this matter.

The fifth article belongs to Verdinand Robertua and Raden Ariobimo, titled "Eco-Business Diplomacy: A Case Study of SMART and the European Union on Palm Oil Issue". It discusses about a business actor such as PT. Smart Tbk might have a role in implementing the eco-business diplomacy. This kind of diplomacy is a combination between environmental diplomacy and business diplomacy. A good relation between this actor and its partners in EU grows as this actor acted.

The last article is "Analysis of Determining Factors for Indonesian Coal Exports to 11 Regional Comprehensive Economic Partnership (RCEP) Countries" by Sahda Ardelia Nisa and Eka Puspitawati. It analyzes how Indonesian coal can be expected as a good export commodity for the 11 members of RCEP. The study shows quantitative data which results in a positive significant meaning of Indonesian coal.

We would like to express our gratitude to all the authors for their contributions to this journal. We also thank all scholars who were kind to provide valuable information and opinion on the review process. All the articles have been sorted through editorial staff who worked hard for JISEA's first edition of the second volume. We are hoping that the collections of articles will be a valuable insight for all of the readers. We will continuously invite all prospective authors to publish their papers on the upcoming issues.

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Behind the Cancellation of Green Refinery Cooperation Between Pertamina and Eni: An Analysis of Domestic and Regional Aspects

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Abstract
Pertamina and Eni faced double strike problems. The Italian government did not grant the license for building Indonesian crude palm oil (CPO) based green finery to Eni-Pertamina as most Indonesian CPO producers do not possess RSPO certificates and the EU restricts the use of CPO. The policies resulted in opportunities loss for Pertamina and Eni in 2019. This qualitative paper examined the logical reasons behind the Italian government decision by two levels of analysis, domestic and regional locus. The finding shows that domestically, political circumstances among parties and figures, other than CPO commodities farmers, played a significant role in the cancellation. The historical instability in Italy domestic political situation also brought it closer to revocation. On another level, the ups and downs of Italy-the EU relations before and during Conte I and Conte II government were a regional reason behind it.

Key Words: Eni-Pertamina, green refinery, Indonesian CPO, Italian government disapproval

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INTRODUCTION

This research examines the specific objectives of the Italian legislative framework and interprets the current dynamics of change in the Italian government towards the process of formulating policy instruments related to the biofuels sector. In this case, this research employs two-level game theory to assess the Italian government disapproval of Eni and PT. Pertamina (Persero) plan to build a CPO green refinery in Plaju in 2020.

Solomon and Krisna stated, in a time of crisis, the Italian government faces a rising challenge as decision-makers have the problem of setting appropriate policy instruments to deal with economic down-turn on one side and economic decarbonisation on another (Solomon & Krishna, 2011). In this concern, the Italian government focuses on formulating policy instruments to boost the economy by reducing the unemployment rate, increasing foreign investment, and protecting the environment. This focus is also driven by the EU's mandatory policies to reduce the life cycle of greenhouse gas emissions per unit of energy by six percent by 2020 and ensure ten percent of transportation fuels coming from renewable sources.

To drive the pace of attaining the success of the Italian legislative framework, particularly in the biofuel fuel sector, the government has undergone a process of systemic change over the past decade. Italy focuses on policy reforms per the EU framework, mainly by creating new incentives to boost biofuel production and open up foreign investment opportunities. But in fact, Italy still has structural barriers coming from the domestic sector. Investment in the green refinery, such as subsidies and feed-in tariffs, may decrease public support in the current Italian economic crisis. Due to their high degree of substitution, the pro-public policy of potential fossil-fuel price reductions during financial problems will bring down biofuel prices, thereby hampering the viability of investment in bio-refineries.

The ups and downs of Italy energy production capacity can be seen in the last five years. They affect the structure of energy imports aimed at balancing domestic demand and production. The recent Italian economic crisis has also harmed the energy sector, hindering it from creating a sustainable energy regime transitional process. Italy aims to rebuild its industrial estate and create factories for producing renewable energy sources. Investments will be the key to accomplish this goal, as they will create more job opportunities and help the Italian national economy in the current crisis.

Eni S.p.A., an Italian multinational oil and gas company, and PT Pertamina (Persero), Indonesian state-owned oil and natural gas corporation, agreed to build

crude palm oil (CPO) based green refineries in Milan in 2019. However, the Italian government disapproved of this collaboration. The reason they published was that Eni did not have RSPO certification. When Eni and Pertamina intended to relocate the green refinery in Plaju (South Sumatra, Indonesia), the Italian government, once again, imposed its power on Eni to cancel the green refinery building. The Italian government disapproval is the central focus of this paper. We analyzed domestic politics, economy, biofuel industries, the Italy-EU relationship, the pro-public Italian government, long-enduring economic slowdown, and infant biofuel industry.

The cooperation between Eni and PT Pertamina (Persero) is a new type of renewable energy business, in which the technology adopted includes the transesterification of vegetable oils and fats. This collaboration would disrupt the production process of other vegetable oil from the local Italian farmers. Indonesian CPO has a lower production cost (EU Big Market for Indonesian Palm Oil, but Big Challenges Remain, 2017). Therefore, economically the vegetable oil from Italian farmers could not compete in terms of cost of production. It is easy to understand that the Italian government prefers to protect their domestic farmers' interests rather than import CPO from Indonesia in constructing a green refinery.

The internal structure of Italian politics also significantly impacted the failure of the cooperation between Eni and PT. Pertamina (Persero). It dramatically affects the Italian government's efforts to revive economic growth imposed by bond markets and the EU institutions. The Italian government continues to prioritize job opening for its people amid a crisis, particularly domestic farmers. Plus, the collaboration between Eni and Pertamina will only create diversifications in upstream but merge them into the same downstream business.

The hypothesis is compatible with the findings in this research. This research has pointed out the significant impact of the historical aspect of Italian politicsI on the cancellation of the agreement between Eni-Pertamina. At the higher level, structural aspects in Italian politics presumed to play a significant role in the government's inconsistency towards the existing cooperation agenda. The rapid changes in Italian politics resulted in a change of course in its foreign policy. The difference was not only caused by competition and inconsistencies in the ideology of the Italian domestic parties but also due to structural changes in the EU, which had an impact on Italian domestic policy.

This research is necessary to understand what happened behind the cancellation of the Eni-Pertamina agreement on the refinery more comprehensively. Although lack of documents was reported as the main cause of the nullification, the research

should dig deeper into the case from two aspects. In terms of theory and knowledge, this paper examines how the two levels of analysis, in this case, domestic and regional, has a significant position on the business cooperation among two countries from different regions. Each international company must assess its partner not only at domestic but also at its regional level. In addition, the geopolitical and political economy of the destination country must also be analyzed and considered before the bilateral agreement. In the practical field, Indonesia, as the biggest CPO exporter in the world (Murti, 2017), must consider the risk of investment from cooperation with foreign companies. In particular, the geopolitical situation of the destination country and its region. Therefore, this research might benefit the public or private international company or state policymakers to direct the business internationally.

Current Italian Government Profile

Domestic politics in Italy in 2019 consisted of two populist parties – the League and the Five-star Movement (from 1 June 2018 to 5 September 2019) – that promised radical social and economic reform. This coalition government is called Conte II, which overcame the Democratic Party power that had dominated Italian governing coalitions since 2013. Conte II faced a classical structural problem: macro-economic constraints and debt policing powers (Moschella & Rhodes, 2020)

Since 1945, Italy has had 65 governments, and the average government term is only fifteen months. The number makes the government outlook is very short-term. They always fail to make hold a long-term project as there is not continuing government support. Starting 6 September 2019, the Conte II has gained power that consisted of the Movimento Cinque Stelle (Five-star Movement, M5s) and the Partito Democratico (Democratic Party, PD), a party that had previously opposed the coalition with the M5s (Moschella & Rhodes, 2020).

The Conte II is facing substantial opposition. The League is still the largest party in Italy. As M5 and the opposing party are pro-populist parties, the Italian government would only support pro-populist programs and against others. The pro-populist often contradicts pro-business programs.

The rapid turnover of the governing coalitions in 2019 made Italy remain in political instability, making the Italian government find it hard to apply structural reforms that may harm some people. For example, providing fuel subsidies may hurt biofuel industries. On the other hand, biofuel subsidies may mean more taxes or government debt. The Italian government has a more immediate policy challenge –: the European authorities' demand for government debt reduction. It is almost impossible for any Italian government to improve its economy if its outlook is short-

term. Both executive and legislative branches have to work together to support sustainable reforms.

Current Italian Economic Policy

The Italian economy is still facing a severe economic problem. It becomes a significant concern in the European Union and other countries in serious trouble like Greece. After those in 2008, 2011, and 2014, at the beginning of 2019, Italy plunged into recession once more. The decline also followed a resilient confrontation with the European Commission, which dismissed Italy's plan for the 2018 budget as a significant violation of European spending rules. Italian structural economic problems consist of high national debt resulting from high interest rates, low real growth, and low inflation. The issue is a legacy of past decades of government spending and low growth that makes the country highly vulnerable to large-scale disturbances (the post-2008 financial crisis) as well as slighter macroeconomic perturbations, notably market-driven interest rates (Moschella & Rhodes, 2020).

In January, the Conte I government eventually carried out two of its promises: a citizens' income of welfare payments for the unemployed and a pension reform, including an early retirement scheme (Stamati in Moschella & Rhodes, 2020). However, those policies increase government debt and or either raise taxes that hurt the business sector. At the same time, the new Conte II government has to avoid tax increases and confrontation with the EU Commission. Moschella and Rhodes (2020) argued that the Conte II government had to respond quickly to the significant employment crisis triggered by the prospect of the potential shutdown of the pollution maker, Ilva steelwork plant. The government also has to face broader problems balancing environmental protection with fostering economic growth and remaining attractive to foreign investors. The future of around 8,000 people employed in the Ilva factory and the country's credibility as a foreign investment location was at stake.

The demand for CPO from Italy mainly aims at meeting the needs of the biofuel industry, whose portion reaches 65 percent. The remaining 35 percent fulfills the food industry's basic needs. The average import value of CPO in Italy is worth 1.2 billion USD in the last five years, with a profile increasing from year to year (Paradila, 2019). The number of Italian imports of world CPO HS 1511 products reached US$ 1549.86 million in 2014 (ISTAT, 2016). Overall, Italian imports of CPO products showed positive growth during the 2010 - 2014 period at 16.67 percent. The import value of CPO products in 2014 experienced a sharp increase of around 17.21 percent compared to the data in 2013. Despite the Italian domestic economic growth, the Italian CPO imports decreased to US$ 1.2 billion in 2015 (Paradila,

2019). This decline was due to the growing development of other commodities in the vegetable oil and fats sector that became competitors in Italy, thus providing a wider variety of different options for consumption. The other factors were negative issues and black campaigns regarding CPO products, especially Indonesian CPO.

In line with the decline in global imports, so did the import profile of Italian CPO products from Indonesia, which experienced a significant decrease in 2014-2015 by 28.6 percent. The total value of Italian imports of CPO products from Indonesia was US$ 834.50 million in 2015. The number shows that Indonesia has a very high chance of exporting CPO to Italy (Paradila, 2019).

Italian Biofuel Industry

Regionally, the EU Commission has identified bio-based industries as of great socio-economic significance and has highlighted biofuels as a critical sector in achieving the EU's 2020 sustainability goals. Therefore, politicians were called on to define the essential policy instruments that could drive the development of the biofuel sector (Pries et al., 2016). Also, the EU Commission released a policy plan for the 2020-2030 period (COM(2014) 15 final) that incorporates current climate and energy policy priorities for 2020. The new policy introduces a large-scale EU strategy to reduce global greenhouse gas emissions by 40 percent in 2030 compared to 1990.

Two tailored policies have boosted the production of biofuels in the EU: (i) the "Fuel Quality Directive" – FQD (2009/30/EC), which establishes requirements for biofuels in terms of sustainability. Specifically, the lifecycle of greenhouse gas emissions per unit of energy was to be lowered by six percent by 2020 relative to the amount of 2010; and (ii) the 'Renewables Directive' – RES (2009/28/EC) was intended to raise the average level of energy derived from renewable resources for public transport by 2020. In particular, each Member State must ensure that at least ten percent of its transport fuels come from renewable sources.

Following the recommendations made by the EU Commission, Italy actively involves in developing a more competitive biofuel market, triggering investments determined to creating job opportunities and, hence, local development. The Italian legislative structure has gone through a structural phase of reform to promote growth in the biofuel field over the last decade. In particular, the initiatives adopted aimed at giving effect to the impulses resulting from the EU system and, at the same time, creating effective forms of incentives to promote the production of biofuels. As for the first chapter, the crucial statutory act currently in effect is D.lgs 28/2011 (the so-called Decreto Rinnovabili), which implements Directive 2009/28/EC

setting a mandatory quota of petrol- and diesel-mixed biofuels at four percent in 2012 and five percent in 2014 to meet the ten percent mark by 2020.

Moreover, as regards incentive mechanisms for the production of biofuels, since 1998, Italy has promoted the possibility of obtaining, in whole or in part, a form of tax exemption from the excise duties commonly applicable to all petroleum products. It is worth mentioning that any excise exemption on the Italian biofuel market has been eradicated since 2011. After implementing policies supporting the renewable energies market a few years ago, Italy has shown a steadily growing increase in energy dependency. The high proportion of imported oil, which accounts for 97.1 percent of total domestic consumption, results in immense energy dependency. That rate is considerably higher than the EU average, creating a strong sensitivity to the dynamics of the vital supply markets' political and economic growth.

Italy is among the EU's most important producers of biofuels and consumers. Due to the heterogeneity and divergence of available data, however, the systemic and efficient structure of the domestic sector is difficult to read because of the complexity and the variability of data available from business organizations and national bodies. Against this background, the number of active producers (primary transformation) is 21, one of which is a second-generation biofuel business (the world-first commercial-scale cellulosic ethanol plant) (Assocostieri in Falcone et al., 2018). That number includes the most recent data (2015) collected from the Assocostieri Association of the Italian Biofuel Sector and informal and anecdotal observations.

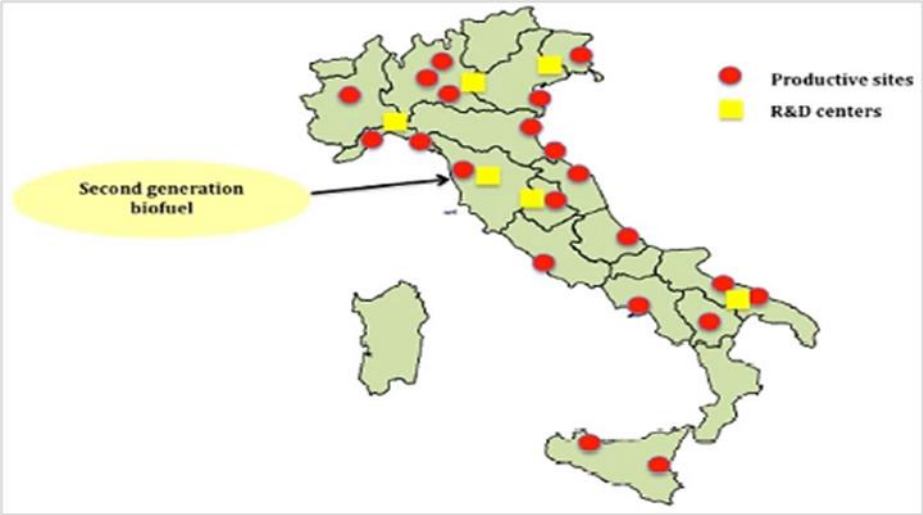

Figure 1. Italian Biofuel Plants
Source: Falcone et al. (2018)

The Italian biofuel industry is progressing slowly to meet the EU's required 10 percent biofuel use in transport fuels. The graph below (Fig. 2) shows the essential industry-related indicators (i.e., production capacity, actual demand, domestic consumption, and imports) for the 2008–2014 period (Falcone et al., 2018).

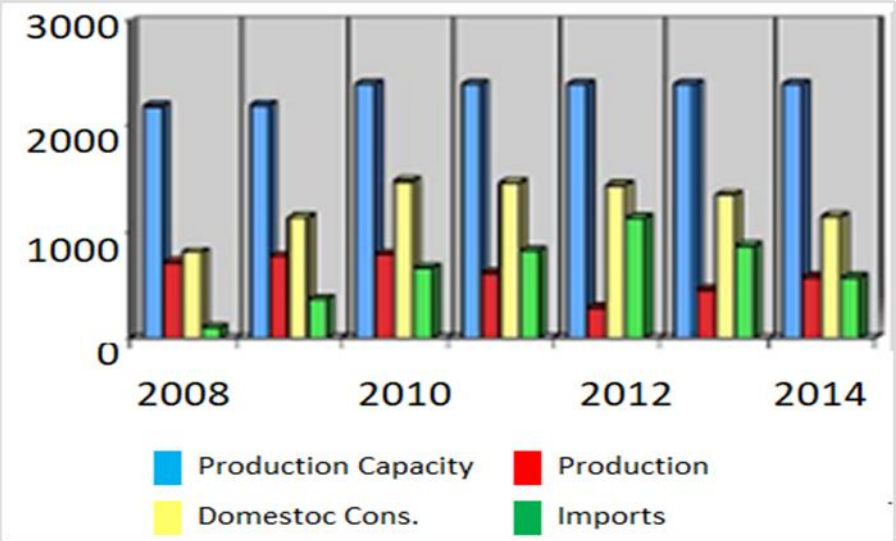

Figure 2. The key indicators of the Italian biofuel sector (thousand tons)
Source: Assocostieri (2015) in Falcone et al (2018)

The data available (Falcone et al., 2018) relating to the period of 2008–2014 enable us to delineate a complete image of the sector. An immediate stagnation of production capacity can highlight the sector's difficulties over the last five years of the economic crisis. Besides, the domestic production of biofuels reported substantial improvements in the same period, showing an average volume of 760,000 t between 2008 and 2010. From 2011 to 2012, we can see a sudden collapse (about 70 percent) of total production due to the complete elimination of tax incentives. As a result, it required an increase in imports of biofuels to offset the lower domestic production to comply with the EU Directive. However, the domestic production of biofuels increased in 2013 and 2014, while its consumption decreased marginally as import volumes decreased. Finally, the average utilization rate of the production capacity fell considerably due to the elimination of the tax relief (2012). While a slight improvement appeared in subsequent years, there was a high degree of underuse of plants relative to the other EU Member States. The situation might be due to the calculation method used by the legislator to allocate subsidized biodiesel quotas that led operators to over-size Italian plants based on the installed capacity.

Italian structural economy and political policies aimed to foster the economy by (1) reducing the unemployment rate, (2) increasing foreign investments while (3) protecting the environment. Eni and Pertamina partnership in the green refinery in Milan fell against mainly on the first aim. A joint venture on CPO refinery to become biofuel would open some job opportunities on the refinery site and its supporting businesses. However, the refinery planned to absorb CPO solely from Indonesia as its raw materials.

Research conducted by Falcone et al. (2018) revealed that the recent economic crisis has adversely affected the Italian biofuel sector by reducing the aspirations and expertise of the actors involved, thereby jeopardizing the transition to a sustainable energy regime. Policy instruments had a varying effect on the sector under investigation. Fiscal policies were slightly successful, especially in promoting the medium-long-term development of the biofuel niche, whereas they were instrumental in the short run. Instrument mixes should be well balanced by looking at those policy instruments that support niche-development mechanisms to prevent the transition of biofuel energy in the medium term. Cooperation between businesses, public agencies and research institutions, and public procurement are especially effective in complementing fiscal policies by synergistic effects on networking niche mechanisms and expectations convergence.

METHODS

The method used in this paper bases on two-level game theory. This theory provides a model on how an executive branch of a nation should accommodate the concerns of intrastate actors (i.e., parliament, interest groups, etcetera) and international actors (i.e., a neighbouring state, regionalism, dominant power, etcetera). Henisz and Zelner noted that it is advantageous to conceive the politics of many international agreements as a two-level game (Henisz & Zelner, 2006).

This paper investigated domestic and international actors that may influence Italian government policy concerning the palm oil-related joint venture with an Italian entity. The current Italian political situation is analyzed to understand the in-depth reason behind the Pertamina-Eni deal cancellation. Heldt and Mello proposed that domestic political institutions include power-sharing mechanisms between the executive and the legislature, the role of interest groups and their capacity to influence government representatives, and the number of veto players (da Conceição-Heldt & Mello, 2017).

Conceição-Heldt and Mello (2017) divide the domestic point into three approaches. First, the society-centred approach. It explains the “battles” among business groups,

labour groups, and other interest groups. It also can be divided into protectionist groups and free-trade groups. The one who wins the game would shape the global political economy policy of the nation.

Second, the state-centred approach. The interaction among the executive, the legislature, and societal interest groups could decide a trade agreement of a nation. The election and unity of governmental actors also influence the situation: the more veto players are, the less probability of trade agreement to exist. In the trade and economic policy, there are more veto players compared to security policy.

The third important category is domestic public opinion. Liberalist regards people wills as something important that democratic governments should consider (Russett and Oneal in da Conceição-Heldt & Mello, 2017). Most of the nations foreign policies follow public support, especially if it is related to war. However, in a few cases, the public voice is ignored.

After the focusing on domestic variables, the regional condition where Italy is an important part also has been viewed to bring a sense of Italian foreign policy. The EU, a unique political and economic union in the continent, has made such a particular bureaucracy for its members. In a sense, it protects the members from outsiders. On the other part, the law that the EU produces could confuse its members on dealing with other parties from non-regional nations. Therefore, understanding the dynamics of the relations between the EU and Italy has been studied.

Focusing on the two-level, domestic and international level, is crucial in understanding the conduct of a nation, as the domestic political situation is needed to analyze foreign policy and vice versa, as Gourevitch studied the “second image reversed”, which is the impact of international pressures on domestic politics and their consequences for foreign policy (Gourevitch, 1978).

Government leaders or executives are the main negotiator on the two realms, called “sandwiched” (Nau, 2019). They need to deal with other countries and other international parties to obtain their national interests at the international level. Still, they need domestic approval, such as public, parliament, and other domestic actors support to achieve ratification.

Putnam wrote that there are three factors to cause a high chance for the outcomes to be materialized. They are preferences and possible coalitions, political institutions at the domestic level, and chief negotiators’ bargaining strategies at the international level (Putnam, 1988).

We also conducted a few interviews with experts to provide their insights on the topic of this paper. We processed, analyzed, and examined the information acquired from them to better view the failure of the dealing between ENI-Pertamina.

DISCUSSION AND FINDINGS

The data shows that circa 2015, in Italy, there were at least 21 biofuel producers, seven biofuel distributors, and six biofuel suppliers. The biofuel sector was affected by the economic crisis (Falcone et al., 2018). Cropland in Italy covers 33 percent of its national territory (Sallustio et al., 2018). Eni-Pertamina joint venture in green refinery manufacturing based on (Indonesian) CPO could negatively affect Italian biofuel plants because their green refineries produce lower-cost biofuel from the lower-cost raw material. In Italy, biofuel plantation, particularly biogas, boosts farmers economies and is suitable sustainable agricultural production (Bortoluzzi et al., 2014). In its southern part, Italy has a prominent biogas potential and lands that are ideal for producing biomethane (Murano et al., 2021), especially the existence of a biofuel refinery in Milan that belongs to IM Biofuel Italy Srl. Therefore, the threat to the domestic biofuel cycle could cost a socioeconomic issue.

This situation will distract the stability that the Conte government is trying to build. While the populist parties have a dominating power in executive and legislative, Conte will consider the negative effect of using overseas vegetable oils like CPO on the Italian domestic political situation. Moreover, the pro-populist coalition promised a return to a better domestic economy despite the macroeconomic constraints. If the government cannot bring it into reality, it needs to be aware of the trade unions. In Italy, trade unions are the key players in their domestic politics, economy and they have the ability for social mobilization as they are ubiquitous in Italian society (Regalia & Regini, 2018). These were the main reasons behind the Italian government's opposition to the Eni-Pertamina joint venture green refinery in Milan.

While for the green refinery in Plaju, Indonesia will require direct investment from Eni, which may shift its financial resources abroad, while Italia still needs more investment. In 2016, Eni launched Progetto Italia, which aims to redevelop its industrial areas and new renewable sources of production plants. The Italian government would expect all Italian companies to invest in the country to create more jobs and help the national economy from its current crisis. However, those logical reasons for the Italian government's hesitancy to support CPO in Italy or Italian overseas investments were not considered by Eni when Eni agreed to collaborate with Pertamina. This negligence is unacceptable as both companies

have deep-pocket resources to have comprehensive social feasibility studies before jumping into joint ventures.

Biofuel production is a new kind of upstream business settings for both Eni and Pertamina. The core technology of the production is the transesterification from vegetable oils or fats. The source materials are no longer from oil wells but plantations. The kind of plantations themselves carries political value as the location of oil wells. Selecting palm oil may hurt other sources of vegetable oils such as sunflowers, rapeseed, jatropha, et cetera. Italian farmers may produce those as the most widely employed in Europe (Ulgiati et al., 2008). The splitter direction to biofuel industries is more to the necessity of Eni and Pertamina as both companies have heavily invested their resources in liquid fuel. By having another biofuel business, they diversify their business upstream but merge them downstream.

Biofuel is a renewable energy that may lead to a sustainable core business of Eni and Pertamina. The International Energy Agency wants biofuels to meet more than a quarter of world demand for transportation fuels by 2050 to reduce dependency on petroleum (Le Feuvre, 2020). However, the production and consumption of biofuels are not on track to meet the IEA sustainable development scenario. From 2020 to 2030, global biofuel output has to increase by ten percent each year to reach the IEA goal. But, only three percent of growth annually is expected. This situation may be affected by the low oil price and the emergence of battery electric vehicles (BEV) since 2010 that lower the demand for internal combustion engine vehicles (ICEV).

In the political dimension, even though the Indonesian media report tried to simplify the cause of cancellation of the deal between Eni-Pertamina on the green-refinery project, the situation was more complex and inherent. Italian foreign policy changes continually. There are many reasons behind the inconsistencies. As the leader of Italy, Conte needed to satisfy all parties on the “table”. The first party is the domestic actors whose interests must be fulfilled. They will ask Conte to resign from the presidency if he fails to do so. The second party is the international actors with each own agenda. Italy must conduct in the international arena by considering the others interests, else way, they may excommunicate Italy.

On the regional dimension, one indicator of the relation between Italy and the EU was the situation in August 2017., Only 36 percent of Italians trusted the EU, while populist and nationalist parties blamed the supranational organization on the financial crisis and migration in the Italian domestic (Fabbrini, 2019). At that time, Italy was considered anti-EU when Matteo Salvini from Lega had power in European elections.

The situation changed when the M5S and the PD made a coalition in September 2019 (Poli, 2021), and pro-European people have governed Italy ever since. The shifting on political stance made Italy gain the EU trust back to them. One of their actions is to follow the EU's RED. This policy is intends to protect the domestic production of rapeseed oil and sunflower seed (Gaol, 2018). Poli (2021) added that one of Italy's strategies to rebuild the relationship with the EU and other members is to support their programs, one of which is the European Green Deal.

Therefore, it is not surprising when Italy, through ENI, suddenly cancelled the cooperation agreement with Pertamina, Indonesia, as the EU approved the RED II. This directive considered the emission from the land-use change on biofuel production and classified Indonesian palm oil plantation as a high-risk environment. For the EU, it means that palm oil-based biofuel is not new renewable energy. However, their response was different for rapeseed. Biofuel feedstock in the EU is dominated by rapeseed, with 55 percent of the total production, even though the rapeseed cultivation system negatively affects the environment (Viccaro et al., 2019).

CONCLUSIONS

Our work has led us to outline four points. First, the history of political turmoil in Italian domestic is a significant point. The practice of the rapid shift in the Italian government leads to the quick change of its foreign policy. Conte first period lasted merely less than two years, in one of them was the turning point in the agreement between Eni and Pertamina. Local farmers in Italy also have a strong influence on political and economic stability. So, continuing the deal with Pertamina mayaffect the farmers and trade unions.

Second, the findings of this study suggest that the Conte first and second periods governing coalition parties are opportunistic. The parties tend to gain an immediate advantage rather than to be persistent on their principles. It reflects on the paradoxical ideology differences among his first coalition, the Lega and the M5s. As long as they could secure a position in the governing coalition, they do not regard the ideological and developmental direction differences as a problem. They renounce their own parties identities. The inherent differences among the governing parties elevated disunity. Moreover, in the Conte II government, the supporters of the coalition parties fight each other related to the establishment and anti-establishment. Therefore, the political parties inconsistency with their ideology indirectly prompted the commitment nullification between Eni-Pertamina.

Third, the existence of the EU and the representation system on this organisation have several effects at the regional level. The differences in a party's power at the domestic and regional levels could shift the balance of power among parties. A party, at the same time, could have different domination at the local and regional levels. The difference causes a significant opportunity for policy discontinuity. In other words, it is a structural root because the EU's structure allows an inconsistent national decision.

Lastly, the inharmony between Italy and the EU also played a similar role in its inconsistency. During his first period, on one side, Conte tried to establish good cooperation with the EU, whereas his two deputies eclipsed him (Moschella & Rhodes, 2020). In addition, his main supporting party was anti-EU, which brought about their defiance to the EU policy on energy. It was also different from Conte II when Giuseppe Conte became more popular in national political frame, with a 51 percent approval rating. His role as the bridge for Italy-EU and the more stable position in the domestic domain freed him to follow the EU policy without agitation.

In conclusion, the historical aspect of Italian politics played a significant role in the cancellation of the agreement between Eni-Pertamina that culminated in Italy-EU relations. EU was trying to protect their interests when publishing that exporting CPO is unacceptable for an environmental issue. These structural elements took a substantial part in the inconsistency at the greater level: an agreement annulment.

REFERENCES

Bortoluzzi, G., Gatti, M., Sogni, A., & Consonni, S. (2014). Biomethane production from agricultural resources in the Italian scenario: Techno-Economic analysis of water wash. Chemical Engineering Transactions, 37, 259–264. https://doi.org/10.3303/CET1437044

da Conceição-Heldt, E., & Mello, P. A. (2017). Two-Level Games in Foreign Policy Analysis. In Oxford Research Encyclopedia of Politics. https://doi.org/10.1093/acrefore/9780190228637.013.496

EU Big Market for Indonesian Palm Oil, but Big Challenges Remain. (2017). Indonesia Investments. https://www.indonesia-investments.com/id/news/todays-headlines/eu-big-market-for-indonesian-palm-oil-but-big-challenges-remain/item7548

Fabbrini, S. (2019). Italy and the EU: A Relationship with Uncertain Outcomes. In M. Kaeding, J. Pollak, & P. Schmidt (Eds.), The Future of Europe: Views from the Capitals (p. 61). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-93046-6

Falcone, P. M., Lopolito, A., & Sica, E. (2018). The networking dynamics of the Italian biofuel industry in time of crisis: Finding an effective instrument mix

for fostering a sustainable energy transition. Energy Policy, 112(February 2017), 334–348. https://doi.org/10.1016/j.enpol.2017.10.036

Gaol, D. F. (2018). Faktor Penghambat Diplomasi Cpo Indonesia Di Pasar Eropa. Indonesian Journal of International Relations, 2(2), 38–50. https://doi.org/10.32787/ijir.v2i2.47

Gourevitch, P. (1978). The second image reversed: The international sources of domestic politics. International Organization, 32, 881–912. https://doi.org/10.4324/9781315251950-12

Henisz, W. J., & Zelner, B. A. (2006). Interest groups, veto points, and electricity infrastructure deployment. International Organization, 60(1), 263–286. https://doi.org/10.1017/S0020818306060085

Le Feuvre, P. (2020). Transport Biofuels. https://www.iea.org/reports/transport-biofuels

Moschella, M., & Rhodes, M. (2020). Introduction. Contemporary Italian Politics, 12(2), 112–125. https://doi.org/10.1080/23248823.2020.1743472

Murano, R., Maisano, N., Selvaggi, R., Pappalardo, G., & Pecorino, B. (2021). Critical issues and opportunities for producing biomethane in Italy. Energies, 14(9), 1–14. https://doi.org/10.3390/en14092431

Murti, W. (2017). The influence of crude oil price in biodiesel and its implication on the production of palm oil: The case of Indonesia. European Research Studies Journal, 20(2A), 568–580. https://doi.org/10.35808/ersj/659

Nau, H. R. (2019). Perspectives on International Relations: Power, Institutions, and Ideas. In Angewandte Chemie International Edition, 6(11), 951–952. (Sixth edit). SAGE Publications.

Paradila, Y. N. (2019). Kerja Sama Ekspor Crude Palm Oil (CPO) Indonesia ke Negara Italia Tahun 2011-2015. JOM Fisip, 6(I), 2–12.

Poli, E. (2021). Italy: Has Salvini Saved the Country from Himself? Not Yet. In M. Kaeding, J. Pollak, & P. Schmidt (Eds.), Euroscepticism and the Future of Europe: Views from the Capitals (p. 73). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-41272-2

Pries, F., Talebi, A., Schillo, R. S., & Lemay, M. A. (2016). Risks affecting the biofuels industry: A US and Canadian company perspective. Energy Policy, 97, 93–101. https://doi.org/10.1016/j.enpol.2016.07.006

Putnam, R. D. (1988). Diplomacy and Domestic Politics: The Logic of Two-Level Games. International Organization, 42(3), 427–460.

Regalia, I., & Regini, M. (2018). Trade Unions and Employment Relations in Italy during the Economic Crisis. South European Society and Politics, 23(1), 63–79. https://doi.org/10.1080/13608746.2018.1430608

Sallustio, L., Pettenella, D., Merlini, P., Romano, R., Salvati, L., Marchetti, M., & Corona, P. (2018). Assessing the economic marginality of agricultural lands in Italy to support land use planning. Land Use Policy, 76(August 2017), 526–534. https://doi.org/10.1016/j.landusepol.2018.02.033

Solomon, B. D., & Krishna, K. (2011). The coming sustainable energy transition: History, strategies, and outlook. Energy Policy, 39(11), 7422–7431. https://doi.org/10.1016/j.enpol.2011.09.009

Ulgiati, S., Russi, D., & Raugei, M. (2008). Biofuel Production in Italy and Europe: Benefits and Costs, in the Light of the Present European Union Biofuel Policy.

In D. Pimentel (Ed.), Biofuels, Solar and Wind as Renewable Energy Systems (p. 465). Springer.

Viccaro, M., Cozzi, M., Rocchi, B., & Romano, S. (2019). Conservation agriculture to promote inland biofuel production in Italy: An economic assessment of rapeseed straight vegetable oil as a self-supply agricultural biofuel. Journal of Cleaner Production, 217, 153–161. https://doi.org/10.1016/j.jclepro.2019.01.251

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ISIS Energy Sector As Material Capabilities In Establishing Islamic State Based On Robert W. Cox Approach

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Abstract

ISIS is a terrorist group that controls parts of Iraq and Syria which targets the energy sector in various attacks to control an energy source. Meanwhile, ISIS uses the energy sector to encourage its financial sector to be able to establish and maintain the Islamic State. In this article, the author uses a qualitative method that relies on internet-based research as a data collection technique and uses a Robert W. Cox approach for data analysis. This article aims to analyze the energy sector controlled by ISIS as material capabilities in realizing the Islamic State based on the approach of Robert W. Cox. The author finds that ISIS has control over oil refineries and natural gas fields in its territory so that it makes a large contribution to ISIS finances. The energy sector has also resulted in ISIS being able to establish the Islamic State and supply its military forces to defend it. Through the approach of Robert W. Cox, it can be concluded that the energy sector is a material capability owned by ISIS to build power and the Islamic State.

Key Words: ISIS, Energy Sector, Material Capabilities, Robert W Cox

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INTRODUCTION

Since the end of World War II, the issue of security has become an issue that is often discussed in International Relations and has increasingly gained its stage when entering the era of the Cold War. However, entering the end of the Cold War or to be precise in the 1980s, issues in International Relations became increasingly diverse due to the growing number of non-conventional issues. Environmental issues, public welfare, and health are examples of issues that have developed in International Relations since the end of the Cold War and have been discussed since then. This in the end changed the direction of discussion in International Relations which was initially dominated by security issues to become non-conventional issues. In addition, the security sector has also experienced developments in issues that can be seen from the events that occurred during the 1980s to the 2000s. Terrorism is one of the non-conventional issues that is being discussed in International Relations to date, considering that this issue has an impact on other fields of public welfare.

Basically, the issue of terrorism itself has developed since 1980 which can be reflected in the Mujahideen group in Afghanistan in the events of the Soviet-Afghan War throughout the 1980s. In this case, the Mujahideen group in Afghanistan resulted in the formation of new militant groups that adopted an ideology similar to the Mujahideen groups in various countries. Referring to the definition of the US Department of State and Defense, terrorism is an act of violence that threatens non-combatant targets and is motivated by political motives from a group. In its development, terrorist groups are increasingly targeting non-combatant targets such as civilians who are very vulnerable to terrorist attacks. The 9/11 attacks in 2001 were one of the terrorist attacks carried out by the Al-Qaeda group and resulted in the death toll of up to 2977 people died and 25,000 people were injured. These events indicate that terrorist attacks can cause enormous casualties in a country and can be carried out by only one group. Therefore, terrorism is one of the non-conventional issues that becomes a further concern to be discussed in the realm of International Relations considering the impact it has had is very large.

The Islamic State of Iraq and Syria (ISIS) is a terrorist group originating from the Middle East that has occupation in parts of Iraq and Syria. ISIS is an affiliate of Al-Qaeda in 2004 which was originally a branch of Al-Qaeda in Iraq and began with the establishment of Jamaat al-Tawhid wa-l-Jihad (JTWJ) in 1999 by Abu Mus‟ab Al-Zarqawi. ISIS has the goal of establishing a caliphate or state based on Islamic sharia laws. However, ISIS has committed various violations in realizing this and has caused many fatalities for ISIS' actions using violence. In addition, ISIS declared the establishment of the Islamic State on June 29, 2014 with Abu Bakr al-

Baghdadi claiming to be the caliph of the country. In this case, ISIS declares the establishment of the Islamic State over the areas it has controlled and is part of the ISIS caliphate. Through the Islamic State, ISIS has also stated that it has the highest political, military, and religious authority over the region and invites all Muslims in the world to support the Islamic State (Rizal, 2017).

Meanwhile, energy has become one of ISIS' targets in several of its actions such as attacking energy infrastructure, smuggling oil, and controlling oil refineries in Iraq and Syria. This can be seen from the actions of ISIS which smuggled oil from Turkey and controlled several oil refineries such as al-Tanak, al-Omar, and al-Taqba since 2015. Through smuggling and control over oil refineries, ISIS can produce its own oil by total production reaches 16,000 to 20,000 barrels. Basically, ISIS oil production will be used to finance the construction of its caliphate, namely the Islamic State (Tichý, 2019). Therefore, this study will discuss how ISIS uses petroleum as a support for the establishment of Islamic States through the approach of Robert W. Cox. The research question posed by the author in this study is based on the introduction described earlier, namely "How does ISIS use the energy sector as material capabilities based on Robert W. Cox's approach to establishing an Islamic state?".

The first article is an article written by Giacomo Luciani in 2011 with the title “Armed conflicts and security of oil and gas supplies”. The article written by Luciani discusses the impact of civil war, war between countries, and terrorism on global oil and gas supplies. In this case, Luciani uses qualitative research methods to analyze data obtained from institutions and MNCs such as the IEA and BP. Luciani focuses on systematically analyzing the impact of armed conflict in several oil and gas producing countries. The article written by Luciani emphasizes that the impact of armed conflict does not have a serious impact on global oil and gas supplies. However, Luciani revealed that armed conflict actually has an impact on a country's economy. Luciani's research is the basis for the author in understanding how the energy sector is used by terrorist groups economically.

Furthermore, there is a journal article entitled “ISIS Political Economy: Financing a Terror State” and written by Dimitrios Stergiou in 2016. The article written by Stergiou discusses how ISIS manages its economy in order to achieve its goal of building an Islamic state or caliphate. In this study, Stergiou used an analytical qualitative approach and obtained data from interviews with residents. Stergiou aims to investigate ISIS funding sources and the process of managing these funds in the financial aspect of ISIS. Stergiou's research results reveal that ISIS obtains these funds from terrorist attacks and other criminal acts. In addition, research conducted by Stergiou also found that ISIS has its own system for managing its

finances. In this case, the author confirms that there is no similarity between the research discussion and the discussion in Stergiou's research.

Third, there is a journal article written by Jamie Hansen-Lewis and Jacob N. Shapiro in 2015 entitled "Understanding the Daesh Economy". Hansen-Lewis and Shapiro in their journal articles discuss the analysis of ISIS economic opportunities in the long term with economic principles. In this case, both authors used qualitative research methods in their research and obtained data from official documents, interviews, and journal articles. Hansen-Lewis and Shapiro aim to show that economic principles apply equally under ISIS leadership. The results of Hansen-Lewis and Shapiro's research illustrate that ISIS does not have good economic opportunities in the long term. Even though it has applied economic principles, ISIS still has an area of power that is very vulnerable to conflict so that it is not economically stable. Through this journal article, the author gets an overview of the sources of ISIS income and emphasizes that there is no similarity in the discussion with this study.

The next literature review is a journal article entitled "The Unanticipated Threat of ISIS: Rise, Growth, and Stability" written by Wes Cooper. In his journal article, Wes Cooper examines how ISIS uses the financial aspect to support its organization and explains the development of ISIS. Journal articles written by Wes Cooper use qualitative research methods and rely on official documents and articles as data sources. Wes Cooper focuses on describing the development of ISIS by leveraging community and financial support. The result of Wes Cooper's research is that ISIS has succeeded in growing due to the disenfranchisement of rights in Iraq and Syria which has led to public support for ISIS. In addition, ISIS also began to finance the activities of its organization by obtaining funds from several ways such as selling petroleum, selling stolen goods, and extortion. Wes Cooper's research provides an understanding for the author of how ISIS can support its organization through the sale of petroleum.

The last literature review is an article written by George Kiourktsoglou and Alec Coutroubis in 2015 entitled "Isis export gateway to global crude oil markets". George Kiourktsoglou and Alec Coutroubis discuss the energy trade established by ISIS in their article. The two authors of the article used an explanatory qualitative method and used interviews, official documents, and journal articles as data sources. In their article, George Kiourktsoglou and Alec Coutroubis aim to identify the illicit trade carried out by ISIS. The results of the study show that ISIS has a strong petroleum supply chain to the global petroleum market. ISIS uses sea routes such as the Ceyhan Port in Turkey to carry out illicit trade with the global petroleum market. This research provides an overview for the author of ISIS's energy business

in making a profit and makes it clear that there is no similarity in the discussion with this study.

Antonio Gramsci was one of the philosophers from Italy during World War II whose thoughts on hegemony inspired Robert W. Cox. Through Gramsci's thinking, Robert W. Cox sees how a country seeks to protect its hegemony in the international order. By combining the thoughts of Classical Marxism, Robert W. Cox finally found a new approach to hegemony in a modern way. Robert W. Cox thinks that the world today no longer uses hard power as the main power owned by a country. At the time of World War II, the international order was marked by hegemonic countries that prioritized hard power as power. According to Robert W. Cox, at this time a country tends to use other ways to maintain its hegemony.

In this case, Robert W. Cox considered that a country seeks to maintain its hegemony in the international order through power that can be formed from several factors. The factors to form power for a country are having a strong ideology, having qualified material capabilities, and having an institution. These three factors can shape the power of a country and produce hegemony in the international order. In addition, these three factors must also be interconnected with each other in order to form the hegemony needed by a country. Therefore, Robert W. Cox formed a framework to describe these three factors in his new approach to modern hegemony.

METHODS

In this study, the authors limit the discussion of the research so that the research conducted does not have a broad and undirected discussion. The author decides to limit the discussion of the research to the material capabilities aspect of ISIS in Robert W. Cox's approach. As stated in the research question not to look at other aspects of Robert W. Cox's approach. The author will also only focus on discussing the energy sector as an aspect of ISIS' material capabilities through the approach of Robert W. Cox. The objectives to be achieved in this study are to identify the energy sector used by ISIS to support its activities and objectives based on material capabilities in the Robert W. Cox approach. Meanwhile, there are research benefits to be obtained in this study, namely to find out how ISIS can use the energy sector to support its activities and goals based on material capabilities in Robert W. Cox's approach.

Through the approach of Robert W. Cox, ISIS has had both factors to form power in the international order as a step to create an Islamic state. First, ISIS has a thought that originated from the Islamic extremist movement, namely the Muslim Brotherhood in the 1920s with its anti-Western. In addition, ISIS also has a similar

understanding to Marxism, namely dividing the two major groups in the world into fidels and infidels. Fidels are a group of Muslims who believe and pledge allegiance to ISIS while infidels are a group of people who do not believe or disbelieve. These two groups are the basis for ISIS to justify each of its actions and claim that ISIS has the right to destroy infidels (Tiara and Handayani, 2016). Although very radical, these thoughts are an ideology built by ISIS in order to realize its goals.

Second, material capabilities are the next supporting factor for ISIS to form power in realizing its ideals, namely establishing a caliphate. In this case, ISIS builds strength through various means such as imposing taxes (jizya) in its territory and selling oil to the government. Petroleum is one of the material capabilities possessed by ISIS by controlling several oil refineries within its territory. One example is the government of Bashar Al-Assad which is involved in buying petroleum products from ISIS (Speckhard and Yayla, 2016). The last factor is having an institution that can connect and run the two previous factors. Even though they already have mass media, namely the Dabiq propaganda magazine, until now ISIS has not had a clear institution in forming power.

DISCUSSION AND FINDINGS

Since 2013, ISIS has been increasingly aggressive in expanding its territory in Iraq and Syria by controlling most of the area by its fighters. In 2014, ISIS declared the establishment of an Islamic state or caliphate which was in line with the group's goals. With a fairly large territory, ISIS must have strong financial sources to finance all the activities of its Islamic state. According to the US Department of Treasury, ISIS earned at least $20 million USD in ransom from extortion. In addition, ISIS is also predicted to earn up to $1 million USD per day from the sale of oil, which is ISIS' biggest income. The large amount of ISIS income has resulted in the group becoming 'independent' and able to develop an Islamic state (Cooper, n.d.). As explained in the approach of Robert W. Cox, the amount of ISIS income from the energy sector can be a material capability it has.

Since ISIS established an Islamic state, ISIS has gained control over several oil fields or refineries that previously belonged to the Syrian and Iraqi governments. In this case, ISIS has control over eight petroleum refineries namely al-Tanak, al-Omar, al-Tabqa, al-Kharata, al-Shoula, Deiro, al-Taim, and al-Rashid. Al-Tanak is the largest petroleum refinery controlled by ISIS and is capable of producing around 11,000-12,000 barrels of oil per day. Through its control of petroleum refineries, ISIS is able to produce 30,000 to 40,000 barrels of oil per day at a price of around $20-$40 USD per barrel. In addition, ISIS also smuggles petroleum into neighboring countries in various ways to get more profit. Some of these ways can be done by ISIS

by using boats, pipes, walking, and riding horses or donkeys. To smuggle petroleum, ISIS tends to use jerry cans as storage containers so that it is easier for smugglers to carry (Solomon, Kwong, and Bernard, 2015).

Energy has become an important component in various terrorist attacks carried out by ISIS which are ISIS' interests in the energy sector. ISIS has three main focuses in its energy interests, namely increasing control of oil refineries in Iraq and Syria, increasing oil and gas production, and seizing new oil refineries. The three main focuses also have the goal of securing ISIS finances and weakening the economies of western countries. It can be concluded that natural resources are the main financial key for ISIS to maintain its power and Islamic state. In fact, the Shura or the organization's board has considered oil and natural gas as the main instruments in maintaining and expanding the Islamic state. Therefore, the energy sector is still directly controlled by the highest command even though al-Baghdadi has divided authority to his subordinates (Tichý, 2019).

The main goal of ISIS in regulating its energy sector is to maximize the full potential of energy reserves within its territory. To take advantage of the existing potential, ISIS seeks to build its own energy industry so that it gains stable profits in the long term. This vision emerged when ISIS began to occupy large areas in Iraq and Syria which had an impact on access to oil refineries and natural gas fields. As a result, ISIS controls oil and natural gas production by 60% in Syria and 10% in Iraq since 2014. In addition to oil, natural gas is also ISIS' main focus in the energy sector, which has a similar goal, namely to increase ISIS income. The terrorist group has control of several natural gas fields in Syria and Iraq which have reserves totaling 1,360 m3 cubic feet of natural gas per day. Through control over natural gas fields, ISIS was able to increase revenues from natural gas sales by up to $489–$979 million USD per year (Tichý, 2019).

From the energy sector, ISIS is able to create its own market to sell its oil and natural gas production in order to develop its Islamic state de jure. Turkey, Jordan, Iran, Iraqi Kurdistan, and even the Syrian government are foreign customers of ISIS' oil being smuggled across the border. One of ISIS' foreign customers, Iraq Kurdistan, paid half the international price for oil and $1500 USD for its tankers. In this case, ISIS benefits from three ways, which include selling the oil it produces, assigning costs to intermediaries, and imposing taxes at every checkpoint controlled by ISIS. In addition, ISIS has also created its own domestic market in order to have a reliable source of finance. Through the domestic market, ISIS has another goal to create dependence on the people in its territory by providing cheap oil prices. In addition, ISIS also uses income from the energy sector to build ISIS military forces (Stergiou, 2016).

Through the approach of Robert W. Cox, ISIS has a very large material capacity from its income in the energy sector so that it can be used to create an Islamic state. This can also be reflected in the consideration of the organization's board which states that oil and natural gas are the main instruments to maintain an Islamic state. Not only that, ISIS is able to create its own market, both domestic and global, which is another source of income. With revenues of up to $1 million USD per day, ISIS has the material capabilities to support the costs of building an Islamic state. In addition, ISIS sees how energy is the main key to building its military forces and seeks to utilize its energy reserves for its defense sector. The energy sector has made a very important contribution for ISIS to build its power and establish an Islamic state.

CONCLUSIONS

Terrorism is an unconventional issue in international relations that has developed since the 2000s and has varied until now. ISIS is a terrorist group that uses various means to achieve the goal of realizing an Islamic state. The energy sector is one of ISIS' targets in its terror attacks which aim to gain control over a natural gas field or an oil refinery. Through the approach of Robert W. Cox, it can be said that the energy sector has become a material capability that can boost ISIS finances so that they are able to build an Islamic state. As has been explained, ISIS also uses the energy sector to provide a fleet of military troops so that they are able to build strength to defend the Islamic state. Therefore, ISIS is a terrorist group that has great material capabilities from the results of its oil and natural gas industry.

REFERENCES

Cooper, W. The Unanticipated Threat of ISIS: Rise, Growth, and Stability. *Towson University Journal of International Affairs*, 47-58.

Hansen-Lewis, J., & Shapiro, J. N. (2015). Understanding the Daesh economy. *Perspectives on Terrorism*, *9*(4), 142-155.

Luciani, G. (2011). Armed conflicts and security of oil and gas supplies. *CEPS Working Documents*. Retrieved from https://www.jstor.org/stable/pdf/26297422.pdf

Rijal, N. K. (2017). Eksistensi dan Perkembangan ISIS: Dari Irak Hingga Indonesia. *Jurnal Ilmiah Hubungan Internasional*, *13*(1), 45-60. Retrieved from https://journal.unpar.ac.id/index.php/JurnalIlmiahHubunganInternasional/article/view/2670

Shelton, H. (1998). Joint tactics, techniques and procedures for antiterrorism. *Joint Pub*, 3-07. Retrieved from https://fas.org/irp/doddir/dod/jp3_07_2.pdf

Solomon, E., Kwong, R., Bernard, S. (2015). Inside Isis Inc: The journey of a barrel of oil. *Financial Times*. Retrieved from https://ig.ft.com/sites/2015/isis-oil/

Speckhard, A., & Yayla, A. S. (2016). ISIS revenues include sales of oil to the al-Assad regime. *ICSVE Brief Reports*.

Stergiou, D. (2016). ISIS political economy: financing a terror state. *Journal of money laundering control*. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/JMLC-06-2015-0021/full/html

Tiara, N., & Handayani, W. P. (2016). MENGENAL ISIS LEBIH DEKAT: MENYOAL IDEOLOGI GERAKAN ISIS: MENYOAL IDEOLOGI GERAKAN ISIS. *Jisiera: The Journal of Islamic Studies and International Relations*, *1*(2), 157-172. Retrieved from http://journal.insiera.org/index.php/jisiera/article/view/13/17

Tichý, L. (2019). Energy infrastructure as a target of terrorist attacks from the Islamic state in Iraq and Syria. *International Journal of Critical Infrastructure Protection*, *25*, 1-13. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S1874548217302093

Tichý, L. (2019). The Islamic State oil and gas strategy in North Africa. *Energy Strategy Reviews*, *24*, 254-260. Retrieved from https://www.sciencedirect.com/science/article/pii/S2211467X19300288

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The Political Economy of Energy Alteration in Indonesia: The Role of Coal and Mineral in New and Renewable Energy Alteration

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Abstract
The world's energy sources have seen various transformations, with the majority first relying on biomass such as firewood to satisfy their energy demands, before transitioning to fossils such as coal, oil, and natural gas as a result of the industrial revolution. Indonesia faces issues in satisfying its domestic energy demand. Dependence on fossil energy sources presents its own challenges. The purpose of this paper is to address three questions: first, to reiterate the importance of developing more comprehensive energy transition strategies in Indonesia. This is accomplished by comparing data on the availability of energy sources to data on Indonesia's expanding energy demands. Second, how to establish an energy transfer policy that takes into consideration Indonesia's conditions and potentials, as well as the problems that must be solved. Third, how to position the mining and coal sector as a key component of the energy transformation process, especially given the long-term character of the transformation process, while reaching energy sufficiency is a problem that demands immediate attention. Using qualitative methods with case studies, It showed that a number of prerequisites need to be met to make coal and nickel a transitional element, namely: infrastructure, resources, economic aspects, and national energy policies. To increase the contribution of New and Renewable Energy in the National Energy Mix, there are still a number of problems and challenges, both from the policy and regulatory aspects to support the development of NRE, the aspect of providing accurate data, the financial aspect for developing NRE for private investors, and the aspect of providing technology and infrastructure to support private investment in the NRE sector.
Key Words: Political Economy, Energy Alteration, Coal, Nickel, Indonesia.

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INTRODUCTION

In recent years, the notion of "sustainable development" has grown in popularity. Unlike past development conceptions, this one has begun to be addressed with a greater emphasis on environmental considerations (Rozali, R., Mostavan, A., & Albright, S., 1993: p. 173). In contrast, one of the most critical components in attaining sustainable development is energy (Khan, H., Khan, I., & Binh, T. T., 2020: p. 859). The world's energy sources have seen various transformations, with the majority first relying on biomass such as firewood to satisfy their energy demands, before transitioning to fossils such as coal, oil, and natural gas as a result of the industrial revolution in the 1900s (Pertamina, 2020). Industrial activities and utilization of natural resources that occur continuously will cause negative externalities to the environment in the form of pollution and environmental damage. Externalities occur when a person carries out an activity that has an impact on others, both in the form of benefits and external costs that do not require an obligation to receive or pay for it. One of the negative externalities for the environment due to economic growth is climate change which has become a world issue (Astuti, 2015: p. 50).

According to preliminary assessments, Indonesia, like other rising market nations, faces issues in satisfying its domestic energy demand (Winanti, et. al: 2019). Indonesia's energy demands are fast growing as growth and industrialization proceed, and this trend is expected to continue. According to the most recent data from Sritrisniawati, et. al (2022), the percentage of Indonesia's energy consumption increased by an average of 3% per year from around 99 Mtoe in 1990 to 237 Mtoe in 2019. Indonesia's primary energy consumption per capita grew by 1.5 percent each year, from 0.71 Tonnes Oil Equivalent (toe)/capita in year 2010 to 0.76 toe/capita in year 2015. So far, fossil energy sources such as oil, natural gas, and coal have fulfilled 91.45 percent of the rise in energy consumption demands (National Energy Council, 2019: p. 7).

Indonesia, on the other hand, has pledged to reduce greenhouse gas emissions by 26-41 percent (26 percent by self-funding and 41 percent with aid from foreign/donor nations). It was established during the presidency of President Susilo Bambang Yudhoyono by Presidential Regulation No. 6 of 2011 addressing the National Action Plan for Reducing Greenhouse Gas Emissions. Then, President Joko Widodo reaffirmed his goal to decrease emissions by 29-41 percent by 2030. The commitment to 2030 was confirmed with the passage of Law No. 16 of 2016 on the Ratification of the Paris Agreement to the United Nations Framework Convention on Climate Change (Paris Agreement on the United Nations

Framework on Climate Change). Indonesia is the world's sixth largest emitter nationally (Andersen et al, 2016: p. 31).

Dependence on fossil energy sources presents its own challenges. First, considering that the availability of petroleum is no longer reliable, the fulfillment of the energy demand for oil is met through imports, thereby contributing to Indonesia's trade balance deficit. Second, Indonesia is rich in renewable energy resources such as geothermal, biodiesel, diesel, wind, and hydro. However, the potential of renewable energy resources has not been optimized to meet national energy needs. Third, the fulfillment of national energy needs must be placed in the context of the energy alteration process or the transition from fossil energy to renewable energy.

In order to achieve sustainable development, we must address the issues of economic growth and reliance on fossil fuels. The purpose of this paper is to address three questions: first, to reiterate the importance of developing more comprehensive energy transition strategies in Indonesia. This is accomplished by comparing data on the availability of energy sources to data on Indonesia's expanding energy demands. Second, how to establish an energy transfer policy that takes into consideration Indonesia's conditions and potentials, as well as the problems that must be solved. Third, how to position the mining and coal sector as a key component of the energy transformation process, especially given the long-term character of the transformation process, while reaching energy sufficiency is a problem that demands immediate attention.

METHOD

The author built a research design using qualitative methods with case studies. Qualitative writing methods present a form of data collection and analysis that focuses on emphasizing and understanding meaning. The data collected comes from official documents and other supporting documents. The author in this method makes interpretations of what he sees, hears, and understands (Edmonds and Kennedy, 2017: p. 141), based on research questions, conceptual framework and research design. The author then examined the collected data to identify patterns and themes. Through this qualitative study, readers are expected to gain valuable insights into this case.

THEORETICAL FRAMEWORK

Energy Alteration

There is no firm or universal definition of what is meant by an energy alteration. One of the most basic definitions of energy alteration is "... a shift in an energy system, generally to a specific fuel source, technology, or primary mover.." (Sovacool, 2016: p. 203). However, the energy alteration can also be interpreted in a broader sense, which "...includes technological shifts as well as the resulting "constellation of energy inputs and outputs involving suppliers, distributors, and end users, as well as institutions of regulation, conversion, and trade.... or structural changes in the way energy services are delivered" (Sovacool, 2016: p. 203). The word energy alteration is also frequently used to refer to energy transformation or energy revolution, both technologically and socially, which focuses on increasing access to energy. The term alteration energy is also often associated with energy transformation or energy revolution, both technologically and socially, which focuses on expanding access to energy that is sometimes scarce. (Sovacool, 2016: p. 203).

The literature review on energy alteration can be divided into two main perspectives, namely energy alteration as a 'socio-technical alteration' (Kern & Markard, 2016) and energy alteration in the perspective of 'energy democracy' (Burke and Stephens, 2017; 2018). As a 'socio-technical alteration', energy alteration does not only require broader technological innovation (Kern & Markard, 2016) but also considers the socio-economic impact of the alteration process. This perspective, also known as the 'Socio-Technical Energy Alteration' (STEA) model, appears to criticize the energy alteration model which tends to ignore social factors and socio-political dynamics and the involvement of these aspects in the alteration process (Li, Francis. GN, Trutnevyte, E. and Strachan, N. (2015).

Furthermore, this model argues that energy alteration is not only about how to improve technological capabilities and capacities but also requires a more comprehensive understanding of changes in the economic, political, institutional and cultural aspects of the alteration process (Berkhout, F., Marcotullio, P. ., and Hanaoka, T. (2012). In other words, this model also emphasizes the importance of adopting a wider system in the energy alteration process which includes not only technological aspects but also social and institutional elements (Li, Francis. GN, Trutnevyte, E. and Strachan, N., 2015) Based on this STEA model, there are at least three main elements that can support the success of the energy transition, namely: policy interventions based on scientific evidence, conceptualization of the behaviour of individuals and dominant actors in policy making, and assessment on

the normative goals to be achieved by me through the adoption of new technologies and the dynamics that accompany them (Li, Francis. G. N., Trutnevyte, E. and Strachan, N., 2015: p. 7).

A number of scholars have created the model to supplement the current STEA Model by incorporating larger societal movements in the energy transition process. To be effective, the energy transformation process necessitates what is known as 'energy democracy.' Born from social movements in developed countries fighting for issues related to climate change and the environment, 'energy democracy' is a new concept that attempts to integrate policies related to social justice and economic equality in the transition to renewable energy (Burke and Stephens, 2017: p.35). According to Burke and Stephens (2017: p. 37), in the context of 'energy democracy,' the transition to 100 percent renewable energy is also an effort to combat the dominance of fossil energy sources.

According to Burke and Stephens (2017: p. 37), the transition to 100 percent renewable energy is also an endeavour to combat the dominance of fossil energy sources and to reclaim control of the energy sector by the wider community and the public. Energy sector restructuring may also be seen as an endeavour to encourage a more democratic process, justice, and social inclusion, as well as a more sustainable environment. In essence, democratic energy highlights the critical role of communities and social movements in achieving community-based sustainable energy (Burke and Stephens, 2018). Proponents of 'energy democracy' claim that without a broader societal reorganization of power relations that is now taking place, the energy transition would merely prolong an unjust system, reinforce dominating players, and continue to marginalize those who have been marginalized in society. Managing the Energy Sector (Burke and Stephen, 2018: pp. 79-80). As a result, the energy transition to new and renewable energy is viewed as a political process and struggle with two key goals: achieving renewable energy while enhancing democracy.

This study adopts a view of energy transition that differs from the two traditions; nonetheless, numerous changes must be made in light of Indonesia's socio-political dynamics. As a result, in order to comprehend Indonesia's energy transition, this study will also employ an international political economy (IPE) approach. As previously said, the energy transition is a process driven by the interplay of political and economic elements that cannot be divorced from the context of global events.

International Political Economy Approach on Energy Alterations

According to Van de Graaf et. al (eds), (2016), the International Political Economy (EPI) approach will be useful in understanding the energy alteration process in Indonesia for at least the following three main reasons:

1) In understanding energy alteration, the EPI approach emphasizes the importance of political aspects and the role of dominant actors in the energy industry. These actors are not only multinational companies and various international organizations (established by both state and non-state) but also the so-called epistemic communities engaged in environmental issues. These actors control key resources and therefore have the ability to advance their interests at national and international levels.
2) The EPI approach underscores the interests of domestic actors which are not only diverse but also competing with each other. Therefore, in formulating its national policy on energy alteration, the government of a country is influenced by considerations and calculations of various interests of dominant domestic actors. The interests of these actors influence the decisions taken, for example related to targets and priorities in the alteration process, the development of appropriate technology, as well as the institutional design that is formed.
3) In the EPI approach, energy alteration is also concerned with the question of who benefits and loses in the process or what is known as the "distributional consequences of transitions". In this context, to a certain degree, energy alteration in the EPI approach is close to the idea of "energy democracy" which also emphasizes the importance of energy alteration as a change in configuration and energy management that is more equitable or "just transition".

Using the EPI approach, energy alteration is defined in the Indonesian context as the transition of energy from fossil sources, including associated technologies, to cleaner, renewable, and more sustainable energy. The primary goal of this change is to ensure national energy security, which involves ensuring the availability, ease of access, and affordability of energy sources for the general public. With this interpretation, it is clear that the transition from fossil energy to new and renewable energy is a long-term political process. Several conditions are required for this process. First, political will, which is represented in a country's skill and resilience in devising and executing policies, as well as the presence of institutions to supervise the change process. Second, the ability of the state related to mastery of

technology, financial capacity and its ability to develop innovation. Third, it's not only the availability and capacity of the country's non-renewable energy sources, but also its ability to manage and process sources into usable energy. Fourth, which is no less important, energy alteration requires social acceptance or strong support from the wider community.

In the energy alteration process, several strategies are needed that are adapted to the conditions of each country. The most ideal strategy is that the energy alteration process is carried out by making a direct transition from fossil energy sources to new and renewable energy sources. This strategy not only requires a strong political will from the government and a large amount of social support and acceptance from the community. However, this strategy is only possible if all the previously mentioned requirements are met. Considering the existing conditions, it is almost impossible for this kind of process to be carried out. Even if a country has all the requirements it has, there are obstacles related to the characteristics of (New and Renewable energy) NRE that make the alteration process difficult. For example, NRE production is still very volatile depending on natural conditions, while electricity demand tends to be stable and even continues to increase, thus requiring a more stable energy supply guarantee.

Furthermore, the majority of NRE manufacturing is currently small-scale and can only service local demands. To expand the use of NRE, it is required to develop it in large-scale manufacturing, which, of course, necessitates infrastructure, not only in the production process but also in distribution so that it can be utilized broadly. Furthermore, the features of some NRE sources that must be used promptly necessitate the need of equipment that can transform or at least store them. Another issue confronting NRE manufacturing is societal acceptability. In certain regions, they are still rejected by the community, whether for concerns of security, myths, or the rise of land conflicts.

As a result, before entirely transitioning to NRE, a more viable option to execute is to optimize the most accessible and ecologically benign fossil energy sources as part of the energy mix. The plan in this context is aimed to secure sufficient supply to full-fill energy demands before NRE can be employed as a vast, economical, large-scale, and inexpensive energy source. In terms of availability, given that Indonesia can no longer rely on the supply of petroleum energy sources, coal and nickel for batteries from our abundant deposit has the potential to become energy alteration.

RESULTS AND DISCUSSIONS

The Role of Coal in New and Renewable Energy Alteration

Indonesia is one of the top coal producers with an export amount of 80 percent of total coal output and the level of domestic coal consumption in power plants (PLTU) is about 95 million tons in 2020. Coal's potential in Indonesia is still quite big, thus it is still reasonable to rely on it as a driving factor in the economy. However, in the future, the coal industry must innovate in order to comply with the Paris Agreement, which calls for a reduction in greenhouse gas emissions. The challenge is to grow the downstream coal sector, which includes coal gasification, coal liquefaction, and coal quality improvement. The government also through Omnibus law will provide non-fiscal incentives for coal development such as granting mining permits, and fiscal with royalties of up to 0 percent to boost the economy of coal downstreaming, with these efforts the coal market share is still bright in the next 20 years (Yasin, C. M., Yunianto, B., Sugiarti, S., & Hudaya, G. K., 2021: p. 2).

No.	Downstream Products	Challenge	Policy Proposals
1	Gasification of DME and Methanol	- Big investment - The price of DME must be able to compete with subsidized LPG	- Providing subsidies for DME, if intended for household needs
2	Semi Coke/ Carbon Raiser	- The market is limited to users in the smelter technology RKEF (Rotary Kiln Electronic Furnace)	- There is a government policy that smelters use domestic semi-coke
3	Urea and Ammonia	- Big investment	- Government intervention is required for the off-taker (assigning BUMN)
4	UCG	- Negative environmental image - Domestic technology has not been proven	- Share risks between BUMN and the private sector - Government guarantees are required regarding the continuation of UCG investment
5	Upgrading	- Upgrading technology has not been commercially proven - It is necessary to integrate upgrading technology with PLTU or other technologies to make it commercially viable	- The government encourages PLTU to use upgrading technology
6	Coal to Fuel	- The market is already oversupply - compete with biofuel development	
7	Hydrogen	- The market is not formed yet - There is no infrastructure	- Encouragement/incentives for the use of hydrogen fuel
8	Advanced Materials	- Not yet commercial, still in research and development stage.	- Needs research collaboration - Funding support (government and private)

Figure 1. Coal Downstream Development Priority Policy
(Handoko et. al, 2020)

However, from the figure above, the author agrees that if the government immediately leads the process towards renewable energy alteration so that the interests of all parties, including coal business actors, can be accommodated properly. Of course, to prepare for energy alteration, Indonesia also needs to map the affected industries, regions and communities so that they do not cause a significant economic contraction. I would like to recommend the government to adopt three strategies to reduce the impact of energy alteration. First, conduct a moratorium on the construction of electric steam power plant to reduce the potential for abandoned assets and also to increase the space for the renewable energy mix. Second, electric steam power plants that are still operating and economical need to retrofit, namely to make development more relevant, and more flexible for renewable energy. Third, evaluate the efficiency and preparedness of the electrical system, as well as renewable energy replacement technologies, while planning the acceleration of electric steam power plant shutdown (coal-phase out). For the coal industry, of course, business diversification to a more sustainable and sunrise industry is needed to maintain and improve the company's competitiveness in the medium and long term.

The Role of Minerals (Nickel) in New and Renewable Energy Alteration

Nickel is now a hot topic of conversation around the world. Being an important component in the production of electric vehicle batteries, nickel is a driver of change in energy use. It is estimated that there were 3,269,671 electric vehicles in the global electric vehicle market in 2019 and the number will reach 26,951,318 units by 2030. The higher demand for electric vehicles will automatically make the electric vehicle industry one of the most popular. Therefore, nickel as an important component will be the target of countries in the world (Indonesian Investment Coordinating Board, 2022).

Indonesia will participate in welcoming the electric vehicle trend by promoting energy-efficient cars and accelerating the production of electric vehicle batteries. Presidential Regulation Number 55 of 2019 concerning the Acceleration of the Battery Electric Vehicle Program (Battery Electric Vehicle) for Road Transportation supports the acceleration of production. Based on data compiled by Investor Daily, the Ministry of Industry's website mentions the target number of electric cars in Indonesia. The number of electric cars is targeted to reach 400,000 units by 2025, then increase to 5.7 million units by 2035 (Mailinda Eka Yuniza & I Wayan Bhayu Eka Pratama & Rahmah Candrika Ramadhaniati, 2021: p. 435).

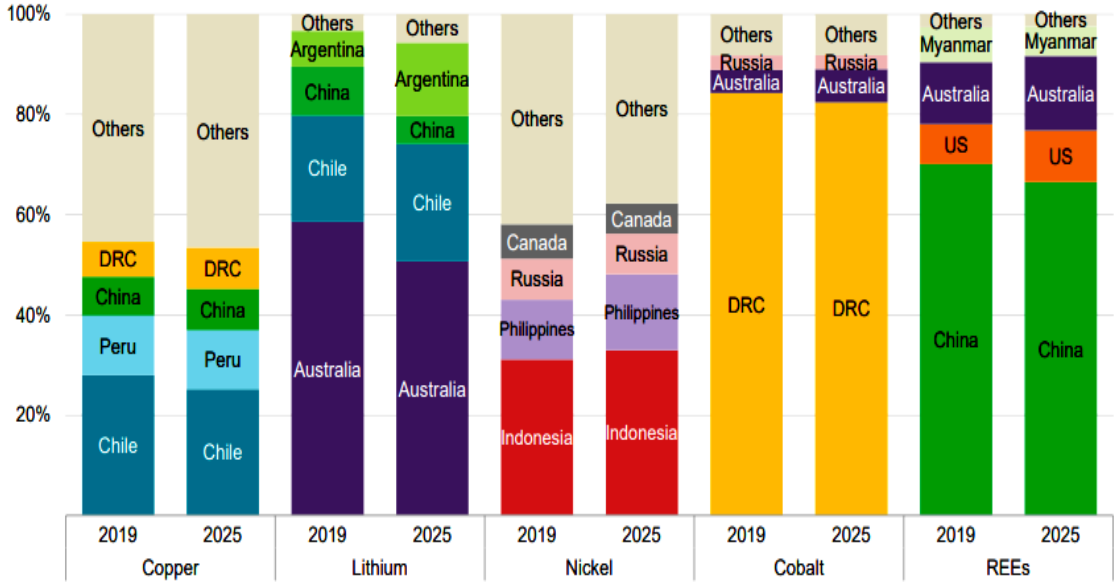

Figure 2. Major Producing Countries of Selected Minerals, 2019 and 2025 (International Energy Agency, 2021: p. 145)

From the figure above, Indonesia has tremendous local resource potential to be at the forefront of the development of the rechargeable battery industry with the strength of local resources. Almost all the main materials for the development of the rechargeable battery industry, except lithium, to support electric cars and new and renewable energy (EBT) are in our country. Synergy between the Ministry of Energy and Mineral Resources (MEMR), and the Ministry of Industry is a necessary thing to do. These two ministries have the power to determine policy directions as well as direct access to the regulation of natural resources and the industrialization of local natural resources for the benefit of the state. Whether we realize it or not, the successful development of the rechargeable battery industry with the power of local resources will have a significant chain effect. Some of these chain effects include the growing growth of interrelated industries, the creation of added value for minerals, as well as cutting imports of fuel oil so that the trillions of rupiah of saved state funds can be used for more urgent matters (World Economic Forum, 2019: p. 16).

In addition, the creation of new jobs, and several other effects related to the independence and sovereignty of the nation. It is time for the Ministry of Energy and Mineral Resources to create a more holistic management of the exploitation and processing of nickel resources. Downstream nickel resources are not solely focused on processing with pyrometallurgical technology which produces ferronickel and NPI (nickel pig iron) as well as nickel matte. Ferronickel and NPI are basic materials for the stainless steel industry, while nickel matte is further

processed for other derivative products. This technology tends to only process saprolite nickel ore which has a smaller portion than limonite (Tian, H., Pan, J., Zhu, D., Yang, C., Guo, Z., & Xue, Y., 2020: p. 2579).

Another type of technology, namely hydrometallurgical technology, can be used to process limonite and produce relevant products to support the battery industry. In contrast to pyrometallurgical technology, hydrometallurgical technology can produce cobalt as a by-product of higher value in addition to nickel in various variants as the main product. Ministry of Energy and Mineral Resources needs to create a new governance in the form of limiting the downstreaming of saprolite as well as encouraging the downstreaming of limonite (International Energy Agency, 2021: p. 145).

In fact, almost all smelters in Indonesia produce ferronickel, NPI and nickel matte from saprolite. There is not a single limonite downstream that is running commercially. Saprolite nickel ore is exploited in massive quantities (71.2 million WMT/year in 2021), while limonite nickel ore is only used as cover for ex-mining areas. Whereas the cobalt element which is also needed for raw material for rechargeable batteries is mostly found in limonite (International Energy Agency, 2021: p. 146).

Pyrometallurgical technology has limitations in extracting cobalt in ores. Meanwhile, hydrometallurgical technology has the advantage of extracting almost all precious metals in ores, especially nickel and cobalt. The hydrometallurgical technology has also resulted in adjustable product variants in the form of sulfate or hydroxide compounds of nickel and cobalt. These two types of compounds are indispensable as raw materials for the rechargeable battery industry. The application of hydrometallurgical technology has a direct correlation with the development of the rechargeable battery industry. Another thing that is more strategic is the conservation of nickel ore reserves. However, the massive exploitation of the saprolite nickel ore will one day come to a close. Moreover, nickel ore is a natural resource that cannot be renewed (Tian, H., Pan, J., Zhu, D., Yang, C., Guo, Z., & Xue, Y., 2020: p. 2578).

The policy of relaxing nickel ore exports from the Ministry of Energy and Mineral Resources for several companies building smelters must be limited and ended until January 2021 only. After that the export of nickel ore in any form must be stopped. The Ministry of Energy and Mineral Resources should review a policy in the form of incentives for companies that will develop and process limonite ore with hydrometallurgical technology to be submitted to the relevant ministries and agencies. This does not mean that the application of pyrometallurgical technology is not important, but the population and capacity of smelters that use this

technology are already very massive. It is considered more than enough and it is time to limit it because it is almost close to saturation point (Gunawan, A., & Nadir, N., 2022: p. 409).

In addition, pyrometallurgical technology does not have a direct correlation with the development of the rechargeable battery industry which has more strategic value. This rechargeable battery industry will support the nation's independence for the development of electric cars, electronics industry, EBT as well as encourage energy sovereignty in the future. The synergy between the Ministry of Energy and Mineral Resources and the Ministry of Industry and other relevant ministries needs to be improved. The exploration, exploitation and processing of nickel ore into semi-finished products is the domain of the Ministry of Energy and Mineral Resources. Meanwhile, further processing into other downstream products, including for the rechargeable battery industry, is the domain of the Ministry of Industry (National Energy Council, 2019: p. 16).

This includes the used battery recycling industry, because if the battery life cycle has been exceeded, the battery will become a serious waste. Such concerns can be dismissed because the battery can be recycled. As stated in the automotive industry roadmap compiled by the Ministry of Industry, the electric car industry is planned to be realized in 2022. But beforehand, other related industries must be prepared earlier. These industries include the battery industry, PCU (Power Control Unit), electric motors and other similar industries (Mahalana, Aditya, Zifei Yang, and Francisco Posada, 2021: p. 3).

Document	Relevance to EVs
General Plan for Energy (2017)	Uptake targets of 2,200 EVs and hybrid cars (no specification regarding type of hybrid) and 2.1 million electric two-wheeler by 2025.[1]
Presidential Regulation (PR) 55/2019 on Battery Electric Vehicles (BEVs)	Launched in 2019 with the goal of accelerating the uptake of BEVs, but with no quantified target.[2,3]
Ministry of Industry (MoI) automotive production target	• Low Carbon Emission Vehicle (LCEV), which includes hybrid vehicles, PHEV, BEV, and FCEV to cover 20% of annual vehicle production by 2025 and 30% in 2035. • Electric two-wheelers production target of 7,700,000 units in 2025.[4]
National Energy Grand Strategy, Ministry of Energy and Mineral Resources (MEMR)[5]	The timeline of this strategy is 2020–2040. It includes plans to reduce oil imports and promote electric vehicle development. EV uptake targets in the strategy are as follow: • 2,195,000 of EVs by 2030 (cumulative number)[6] • 13,002,000 of electric two-wheelers by 2030 (cumulative number)

Notes:
[1] Presidential Regulation, Republic of Indonesia No. 22/2017 on General Energy Plan, 2017, https://www.esdm.go.id/assets/media/content/content-rencana-umum-energi-nasional-ruen.pdf. The General Energy Plan is currently under review and new or revised targets may be included.
[2] Presidential Regulation Republic of Indonesia No. 55/2019 on Battery Electric Vehicle, 2019, 2021, https://peraturan.bpk.go.id/Home/Details/116973/perpres-no-55-tahun-2019.
[3] Although the presidential Regulations does not provide quantified targets, it covers the acceleration policy guidance for the uptake of Batter Electric Vehicle that includes two- and three-wheelers, and four-wheelers. For Indonesia, the share of two-wheelers is significantly higher compared to four-wheelers.
[4] The Ministry of Industry, Presentation on Promoting Electric Vehicles in Indonesia, presented in Strategy Development Workshop, 29 September 2020.
[5] The Ministry of Energy and Mineral Resources, Press Release National Energy Grand Strategy to Ensure Energy Availability, October 2020, https://www.esdm.go.id/en/media-center/news-archives/national-energy-grand-strategy-to-ensure-energy-availability.
[6] Presentation by Mr. Hariyanto, Director of Energy Conservation, MEMR, at the virtual workshop "Economic Benefits of Emission Control," organized by Komite Penghapusan Bensin Bertimbel (KPBB), 2 February 2021.

Figure 3. National Electric Vehicle Targets Relevant to Two- and Four-Wheelers (Mahalana, Aditya, Zifei Yang, and Francisco Posada, 2021: p. 3)

From the figure above, especially for the battery industry, it is closely related to the policies of the Ministry of Energy and Mineral Resources, especially in terms of governance for the use of local natural resources. The battery industry also has a direct correlation with one of the flagship programs of the Ministry of Energy and Mineral Resources in terms of the planned portion of 23% NRE in the national energy mix by 2025. The roadmap at the same time provides its own challenges for investors to get involved. The involvement can be from various related fields according to their respective strategic plans. However, in terms of the process path, the battery and battery material industry presents its own challenges that must be answered. The involvement of investors can start from the development of the hydrometallurgical industry to process limonite nickel ore into a mixture of nickel and cobalt compounds. Then proceed with the refining of these compounds to produce pure nickel and cobalt compounds (usually in the form of sulfate and hydroxide compounds) (Mahalana, Aditya, Zifei Yang, and Francisco Posada, 2021: p. 7).

It does not stop there, the involvement of investors can be continued with the battery material industry with the raw materials for the two core compounds plus several other compounds, including lithium compounds, so that battery material (cathode active material) is produced. This material will be the most important material to be packaged with other materials so as to eventually produce a rechargeable battery with the capacity and specifications as needed. The involvement of investors is a necessity so that the roadmap can be realized. For more than 50 years the management of nickel resources has only focused on the export of nickel ore and semi-finished products. There is no continuation of added value creation. It is time for all stakeholders to think creatively and move forward. It is also time for all components of the nation to work together to maintain the dignity of the nation's sovereignty in the fields of empowering natural resources, technology, energy and creating added value. Otherwise, this nation will forever only be the object of the market. They will only be spectators, not actors.

CONCLUSIONS

In general, a number of prerequisites need to be met to make coal and nickel a transitional element, namely: infrastructure, resources, economic aspects, and national energy policies. To increase the contribution of New and Renewable Energy in the National Energy Mix, there are still a number of problems and challenges, both from the policy and regulatory aspects to support the development of NRE, the aspect of providing accurate data, the financial aspect for developing NRE for private investors, and the aspect of providing technology and infrastructure to support private investment in the NRE sector.

1) Aspects of policy and regulation, cross-sectoral policy coordination has not optimally supported the achievement of the target for the contribution of New and Renewable Energy in the National Energy Mix, including those related to the determination of the selling price of renewable energy, licensing issues, and the division of authority between the centre and the regions;
2) Aspects of NRE data accuracy, NRE potential data which is generally a reference source for investors is not yet fully up-to-date and accurate so that it is not optimal to support efforts to increase private investment in the NRE sector;
3) Incentives and funding aspects, the existing incentive schemes have not been effective in increasing investment in the NRE sector, and the existing funding instruments are not yet effective enough to overcome the difficulties of investors in obtaining access to funding to develop NRE;
4) Aspects of research and development, the government's commitment in providing budgetary and non-budgetary support for increasing research and development of investment in the NRE sector still needs to be improved.

To overcome these problems, there are several suggestions for improvement as follows:

1) There is a need for proactive and intensive coordination both cross-sectorally with Ministries/Agencies, and a division of authority between the Centre and the Regions regarding the preparation of a strong legal umbrella and policy framework for the development of New and Renewable Energy while still paying attention to the fairness of energy development between regions;
2) Reviewing and coordinating the updating of NRE potential data by relevant stakeholders to produce accurate and reliable data, as well as presenting comprehensive initial potential data and limitations to investors through an online platform;
3) The government needs to develop new incentive schemes that encourage increased investment and development of NRE infrastructure, such as the provision of interest subsidies, exemption from a *value-added tax* (VAT) on construction services, ease of licensing, and so on;
4) Strengthen monitoring and monitoring and evaluation of various NRE development programs which are clarified through implementation rules so that their implementation can run effectively and the results of the monitoring and evaluation can be used as suggestions for continuous improvement

REFERENCES

Anderson, Z. R., Kusters, K., McCarthy, J., & Obidzinski, K. (2016). Green growth rhetoric versus reality: Insights from Indonesia. *Global Environmental Change*, 38, 30-40.

Astuti, T. (2015). The Role of Manufacturing Industrial Activity in The Environmental Pollution in South Sulawesi. *Journal of Economics and Behavioral Studies*, 7(2 (J)), 116-123.

Berkhout, F., Marcotullio, P., & Hanaoka, T. (2012). Understanding Energy Transition. *Sustain Science* 7, 109 - 111.

Burke, M. J., & Stephens, J. C. (2018). Political Power and Renewable Energy Futures: A critical review. *Energy Research & Social Science*, 35, 78-93.

Burke, M. J., & Stephens, J. C. (2017). Energy Democracy: Goals and Policy Instruments for Sociotechnical Transitions. *Energy Research & Social Science*, 33, 35 – 48.

Edmonds, W. A., & Kennedy, T. D. (2017). *An applied guide to research designs: Quantitative, qualitative, and mixed methods*. California: Sage Publications.

Gunawan, A., & Nadir, N. (2022). An Analysis of Export Restriction Policies for Indonesian Nickel: Strengthening Indonesia's Opportunities from the European Union's Lawsuit Regarding Export Restrictions for Nickel. *Legal Brief*, *11*(2), 408-418.

Handoko S, Huda M, Suseno T, Lucia A, Kurniawan M, Widiastuti P, Hasudungan H W V, Umar D F, Suganal, Monika I, Hudaya G K, Phiciato, Ryanda S, Yunianto B, Herlina L, Setiawan D I, Herizal, Yoediartini D, Muhammad, Fuad, Anugrah R I, Sismartono D, Akbar W A, Rosmayanti L, Ghifari F, Aziz, Lubad M, Andriani Y, Sihombing A L, Irawan C, Sirait J K, Usman and Kusnawan. (2020). *Mengolah Lebih Batubara Untuk Indonesia Maju*. Jakarta: Badan Penelitian dan Pengembangan, Kementerian Energi dan Sumber Daya Mineral.

Indonesian Investment Coordinating Board. (2022) *Nickel for Live*, at https://www.bkpm.go.id/en/publication/detail/news/nickel-for-life.

International Energy Agency. (2021). The Role of Critical Minerals in Clean Energy Transitions. *World Energy Outlook Special Report*. Paris, France: International Energy Agency

Kern, F. & Markard, J. (2016). Analysing Energy Transitions: Combining Insights from Transition Studies and International Political Economy in Van de Graaf, T., Sovacool, B. K., Ghosh, A., Kern, F., and Klare, M. T., (eds). *The Palgrave Handbook of the International Political Economy of Energy*. London: Palgrave Macmillan (pp. 291 – 318).

Khan, H., Khan, I., & Binh, T. T. (2020). The Heterogeneity of Renewable Energy Consumption, Carbon Emission and Financial Development in the Globe: a Panel Quantile Regression Approach. *Energy Reports*, *6*, 859-867.

Li, Francis. G. N., Trutnevyte, E. and Strachan, N. (2015). A review of Socio-technical Energy Alteration (STEA) Models. *Technological Forecasting and Social Change*, 100, 290 - 305.

Mahalana, Aditya, Zifei Yang, and Francisco Posada. (2021). Indonesia Transport Electrification Strategy. *Working Paper* International Council on Clean Transportation *No. 2021-36*, 1-21.

Mailinda Eka Yuniza & I Wayan Bhayu Eka Pratama & Rahmah Candrika Ramadhaniati. (2021). "Indonesia's Incentive Policies on Electric Vehicles: The Questionable Effort from the Government," *International Journal of Energy Economics and Policy*, vol. 11(5), pages 434-440.

National Energy Council (2019). *Indonesia Energy Outlook 2019*. Jakarta: Sekretaris Jenderal Dewan Energi Nasional

Pertamina Energy Institute. (2020). *Pertamina Energy Outlook 2020*. Jakarta: Pertamina Energy Institute.

Rozali, R., Mostavan, A., & Albright, S. (1993). Sustainable Development in Indonesia: a Renewable Energy Perspective. *Renewable Energy*, *3* (2-3), 173-174.

Sovacool, B. K. (2016). How Long Will It Take? Conceptualizing The Temporal Dynamics of Energy Transition. *Energy Research & Social Science*, 13, 202 – 215.

Sritrisniawati, S. E., Agmulia, A. A., & Gravitiani, E. (2022). Empirical Study on Energy Consumption, Carbon Footprint, and Economic Growth in

Indonesia. *IOP Conference Series: Earth and Environmental Science* (Vol. 986, No. 1, p. 012047). IOP Publishing.

Tian, H., Pan, J., Zhu, D., Yang, C., Guo, Z., & Xue, Y. (2020). Improved beneficiation of nickel and iron from a low-grade saprolite laterite by addition of limonitic laterite ore and CaCO3. *Journal of Materials Research and Technology*, *9*(2), 2578-2589.

Van de Graaf, T., Sovacool, B. K., Ghosh, A., Kern, F., and Klare, M. T., (eds). (2016). *The Palgrave Handbook of the International Political Economy of Energy*. London: Palgrave Macmillan.

Winanti, P.S. et.al (2019). Diplomasi Energi Indonesia. *Monograf*. Yogyakarta: Fakultas Ilmu Sosial dan Ilmu Politik Universitas Gadjah Mada.

World Economic Forum (2019). A Vision for a Sustainable Battery Value Chain in 2030: Unlocking the Full Potential to Power Sustainable Development and Climate Change Mitigation. *Insight Report*. Geneva, Switzerland: World Economic Forum.

Yasin, C. M., Yunianto, B., Sugiarti, S., & Hudaya, G. K. (2021). Implementation of Indonesia Coal Downstream Policy in The Trend of Fossil Energy Transition. In *IOP Conference Series: Earth and Environmental Science* (Vol. 882, No. 1, p. 012083). IOP Publishing.

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Talking about Ideal Civil-Military Relationship: Comparation Cases between Military in Indonesia and India in Dealing with Covid-19 Pandemic

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Abstract
The relationship between civil and military has many dimensions, and this relationship may be ideal. This article uses Huntington and Feaver's preferences to explain the ideal civil-military relationship in India and Indonesia through case studies of handling the COVID-19 pandemic. The choice of the two countries was due to Indonesia and India showing the dynamics of the relationship between civilians and the military from being quite harsh to be ideal. The ideal civil-military relationship can be described as a military subject to civilian control. However, this does not mean that the civilian government has total power over the military; Instead, the control in question illustrates that the military is a professional institution and is ready to protect its citizens. Civilians no longer see the military as being in the position of who will guard the guardian, but how to control your guardian so that there is no escalation of conflict or coups between the military and civilians. Through these ideal civil and military relations, the military-assisted handling of the pandemic has yielded satisfactory results for both countries.

Key Words: civil-military relationship, handling pandemic, Indonesia, India.

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INTRODUCTION

The military has many roles in the study of international relations, such as a driving factor in the formulation and implementation of foreign policy, diplomacy, and world peace (Luerdi, 2021). The relationship between civil and military is also one of the studies in the International Relations discipline, especially in this modern era. Military acts as a national defense force to protect states from various security threats. In carrying out its duties and responsibilities, the military refers to the policies and decisions of the state or civilians. Its primary role is to maintain state sovereignty and territorial integrity. In addition, the military in national security has a role in security operations of a combat or non-combat operation (Irfansyah, 2019). Meanwhile, the military in the international system has more complex roles among the state. States with "mature" democratic systems like the United States have more complex dynamics in the relationship between the military and civilians than simply using the military as a means of national defense (Feaver 1999, 216).

In this article, the authors will discuss the military's role with civilians directly involved in response to the Covid-19 pandemic. This article takes a case study of Indonesia and India. Indonesia and India are the two countries discussed because they are located in the same region, the Asian continent. According to the World Health Organization, Indonesia and India are the epicenters of spreading the Covid-19 virus on the Asian continent. The spike in Covid-19 infection cases in Indonesia and India reached 2.98 million and 31.25 million cases until mid-2021 (CNBC, 2021).

The Covid-19 pandemic in Indonesia and India has shifted the government's priorities in national activities and the dynamics of the two governments. The government has been focusing and mobilizing energy and costs to address public health issues during critical times like 2020. Governments in each country must take strategic measures, such as enacting large-scale social restriction policies and regional isolation (Ristyawati, 2020). The existing policies are expected to become anticipatory, preventative, and repressive measures in overcoming the impact of the Covid-19 outbreak.

The Indonesian government has implemented policies about health issues as stated in Law Number 6 of 2018 about Health Quarantine. This policy is supported by forming a Task Force for the Acceleration of Handling Covid-19 collaboration with several stakeholders such as the Ministry of Defense and the Indonesian National Army (TNI). The TNI, as a military and state security force, participates in handling Covid-19 cases, which means that the military not only takes part in physical

warfare activities but also participates in Military Operations Other than War or OMSP (Sukatri et al., 2021).

Indonesia and India have engaged the military to respond to the Covid-19 outbreak. However, this current condition also goes into the context of civil-military relations, which is the military participates in managing and 'intervening' in civilian affairs with a roadmap determined for the state's national interest. In this condition, the military does not fully formulate policies or implementation but partially assists civilians, especially health workers overwhelmed in handling patients. There are many pros and cons arguments against this condition. We cannot leave the feeling of fear of the dual function or *dwifungsi* of ABRI as in the past or full military intervention in civilians, which reduces the work performance of each party, and many more. In this article, the authors will discuss civil-military relations, not only about the taking over of a civilian government by the military but also military-civilian relations, which are not marked by violence such as a coup d'etat.

METHOD

This article uses qualitative analysis in the discussion. The authors will analyze the qualitative data obtained and become supporting data in explaining the phenomena raised in this article. The author's design explanation is to explain the relationship between civilians and the military. Through this interpretation, the author obtains the dependent and independent variables that explain the civil-military relationship used in this article. Furthermore, this explanation will be strengthened by explaining the military's role in handling the pandemic in the pre-Covid-19 pandemic era to support the explanation of the military's role in handling the pandemic itself. By considering the descriptive model in article writing, the preparation of the article begins with an explanation of the relationship between civilians and the military, an explanation about the role of the military in the pandemic era, and then an explanation of how the military in India and Indonesia play a fairly active role in handling the pandemic.

Civil and Military Relationship

The state almost always begins with the formation of the group's needs. Plato's idea is that a state cannot emerge if its groups do not need to form a state (Hall 1981). In its development, Plato explains that everyone has their function; Producer, Helper, and Ruler. By not emphasizing Plato's thinking, we can say that it has groups or parts that each functions in its dynamics. Hall (1981) explains in his book that Plato had a tendency not to suggest democracy as an idealistic form of government, but that does not mean that democratic forms of government are not applied today.

Because of the evidence, the aristocratic state that Plato considered was the ideal form of state has thrown by the French Revolution, which wanted a democratic state form. Democratic states are built based on the people, by the people, and for the people, a basic idea to build based on groups.

As a democratic state, it is certainly not expected that people will develop and protect themselves to the point of tyranny, a form of state that is not ideal, according to Plato. It is necessary to be part of the community itself that has a protective function, especially those in the policymakers. The military is present in society as a functioning part, including democracy. The relationship between civilian and military is quite interesting; on the one hand, the military was formed to protect its constituents. On the other hand, the military must retain the power of coercion to provide protection (Feaver 1999, 214). Problems can arise when the military's core values are not aligned with liberal democratic ideas (Burk 2002, 2). This idea is considered when explaining the relationship between civilians and the military in the dynamics of national life. Samuel Huntington's thought is one of the popular thoughts in the study of International Relations, which discusses civil and military relations. Through his writings, Huntington asserts that professional military groups must grasp the demands of warfare and their oversight and be prepared to fight in the event of orders from superiors (Burk 2002, 13).

Traditionally, the relationship between civilians and the military is very typical with the show of power from the military to civilians. Therefore, many explanations of civilian-military relations are described by coups as a form of describing how the military applies its power to civilians (Feaver 1999, 217). However, we can describe civilian-military relations not only through a coup. Feaver (1999) explains that the coup is one of the dependent variables in explaining civilian-military relations. Adapted from Desch's (1999) article, Feaver explains at least five kinds of dependent variables when explaining the relationship between civilians and the military, namely: coups, military influence, civil and military friction, military compliance, also delegation and supervision. It is also important to pay attention to how the independent variables work in this phenomenon to determine how the civil-military relationship is in a particular case or state. For example, the phenomenon of military involvement in civilian activities, such as the handling of Covid-19, has an independent variable that affects one of the dependent variables used as the basis of analysis in this article.

The independent variable that can be seen in the military's involvement in handling Covid-19 in Indonesia and India is the military's influence which is still large among the civilians, even though civilians are still holding the reins of government. It is

undeniable that both Indonesia and India are countries that practice democracy in their system of government. However, the military's position is irreplaceable and the military is seen as a professional institution that is expert in its field. Both India and Indonesia have military strength that can not be doubted at the international level. This condition drives the fourth dependent variable, military compliance, as described by Feaver in his writings, which can explain why the military has a prominent role in handling Covid-19 in those two countries. Compliance with the military can explain the phenomenon of military-civilian relations at the level of a democratic state, when civilian needs must still be considered. When military officials can have a good position in policymaking, then civilian interests can be controlled through a military interest mechanism following the needs of the state. It should also be understood that the ideal military position is when the military remains under civilian control (Kardi 2014, 235).

Researchers of traditional civil-military relations illustrate that the relationship between the two entities is thick with the nuances of professionalism from the military that is related to the control by the civilian government (Ringgi 2014, 307). Nevertheless, Huntington has not seen many countries that are not like the United States in of country background. Thus, there is a gap in explaining the relation between civil and military for democracies that have their origins in monarchies or countries such as the former Soviet Union. This fact is the basis for the explanation of the intended independent variable. Because civil and military relations are described professionally, plus military capabilities are "more capable in the field" compared to civilians, the relationship between these two can be more harmonious than the narrative provided by Huntington throughout his book (Kardi 2014, 241). Despite putting aside the "harmonious" relationship, military professionalism can be relied on in handling the pandemic. Like what happened in West Africa when Ebola broke out, the military's role can be relied on to deal with the outbreak. Scott et al. (2014) mention that as a professional, the military tends to continue to learn and participate in the dynamics that occur in society.

RESULT AND DISCUSSION

Indonesian Military

Indonesia has a long history of developing military forces. The military's track record has been filled with much political turmoil since independence day, as a result of this, the military considers itself as the only force that capable of ensuring order and stability of the state (Lee, 2000). The military was fully involved in politics in the Old Order and New Order eras. The incident was known as the dual function or *dwifungsi* of ABRI, in which the military was involved in the role of defense and security as well as in the state's political affairs.

Throughout the Orde Lama era, when the Indonesian government began, the military had played a role in the nation's struggle. However, the military moves with politics, so leadership is duality. The Indonesian National Army (TNI), which was formed automatically, took on defending independence after a long journey of the struggle for independence, the proclamation of independence to guarding the government running at that time (Leni, 2013). In the Orde Baru era, the military also enlivened the state's political order. The military is involved in various activities, such as being part of the House of Representatives (DPR), participating in executive institutions for those who are still actively serving in the military and those who are retired, participating in modernization functions through ABRI entering villages or *masuk desa* and other activities. As a result, the military holds great power in politics and government as a power elite (Leni, 2013).

In its actions in politics, the government began to use the military to carry out terror for security reasons, for example, in the shooting of criminals in the 1980s by a mysterious shooter known as *petrus*. This action allegedly involved the Yogyakarta Military District Commander, Lieutenant Colonel Muhammad Hasbi. The military also has a track record of violence due to being involved in silencing the New Order opposition movement, which students and the press mostly fill. The protest by the opposition related to the economic policy implemented by the Order Baru government, namely foreign investment. The government, which rejected protests, asked the military and police to reduce the conflict, resulting in many casualties and property losses (Tirto.id, 2020).

After that, during Reformasi era, the military moved under the civilian control of the Indonesian government as a democratic state. As a result, civilian officials will decide all government decisions, including national security, starting from determining strategy, operations to be carried out, defense tactics, and so on.

Indian Military

The Indian military has experienced many conflicts with the government and civilians. Like what happened in the Kashmir conflict. In 1996, India was in the year of parliamentary elections. Militant groups fighting for independence in the disputed territory have vowed to boycott the election. Indian security forces play a role in fighting militant groups, tightening guards, and executing militant leaders. Members of the military forces in this incident caused fear and concern due to the cases of gross violations of human rights, torture, executions, and so forth (Human Rights Watch, 1996).

The military and armed militant groups exist in two different camps, causing prolonged conflict, and the victims are civilians. General elections at that time increased the occurrence of conflict. Even the military as the party proven to have committed violations – of human rights – in carrying out their duties were not prosecuted or executed in court. The Indian government as the authorities also did not do much to address the cases of violations by the army and security forces. The heaviest penalties are generally limited to dismissal or suspension from duty. The Indian military often tries to close the continuation of cases by offering bribes to threatening victims and their families (Human Rights Watch, 1996).

In different periods, the role of the Indian military has also been in a position of conflict. India's 61st anniversary of independence and democracy in August 2008 was celebrated with the 50th anniversary of the Armed Forces Special Powers Act (AFSPA). This law gives the broad military powers to shoot, kill, make arrests or searches without a warrant, and so on, causing unrest in the society. Military work under this law lasted for decades, with the emergence of crimes without accountability. India continues to be pounded by the issue of human rights violations by applicable laws, and even this case has attracted international attention. The military's role in Indian society was not well developed but instead spawned many violent incidents with no way out. In the end, the civilians as victims did not get security and justice from the military and the government (Human Rights Watch, 2008).

Military records in both countries have drawn many pros and cons arguments until today. People are in a state of fear due to past trauma but are also beginning to open themselves up to the military's role in the present. The militaries in Indonesia and India currently focus on national security and defense in all sectors. The military can operate in war or non-war activities. The state's existence and military power

can be used to approach the community, especially in health crises such as the global Covid-19 pandemic.

Indonesia's Military Corps: Getting Closer to the Society

The TNI as a state defense force, participates in carrying out security duties related to many people. The security here means health security during the Covid-19 pandemic. The Indonesian government involving the TNI in OMSP or operations other than war was the government's first effort during a pandemic (Menko & Fitri, 2020). This idea is based on Military Aid to The Civil Authority (MACA). The threat of state security and defense that continues to evolve and transform allows the military to step down in a civilian policy. Military Operations Other Than War (OMSP) Subject to Constitution No. 34 of 2004, Article 20 paragraph 2 states that the purpose of OMSP is to support the national interest under statutory regulations.

According to Sari, Sulistyani, and Pertiwi (2020), there are several roles of the TNI in dealing with the Covid-19 pandemic in Indonesia.

Health sector

The TNI has reallocated a budget of Rp 196,8 billion to help Covid-19 issues. This budget comes from the budget needs of the Indonesian National Armed Forces Headquarters (TNI Headquarters), the Indonesian Army National Army (TNI AD), the Indonesian Navy (TNI AL), and the Indonesian Air Force (TNI AU). The budget is used to procure Polymerase Chain Reaction (PCR), health kits, personal protective equipment (PPE), swabs, smart helmets, isolation rooms, vitamins, incentives for health workers, and other types of equipment.

Besides that, the TNI also participated in providing Covid-19 referral hospitals such as the Gatot Subroto Army Hospital and Mintoharjo Hospital. TNI hospitals will also be provided medical equipment to expand the scale of routine checks of Covid-19 patients. In addition, the TNI also provides tents and a standby post for isolation for infected people so that initial treatment occurs quickly and swiftly. Furthermore, it provides a proper place to help with the pandemic. Finally, it provides medical personnel and support personnel to treat Covid-19 patients, such as general practitioners and specialists, nurses, and additional health workers to non-medical personnel.

One of the difficulties experienced by health workers and the government in handling this pandemic is distribution. The help, especially the distribution of

personal protective equipment (PPE) is very much needed by health workers in tracing Covid-19 sufferers and also handling them. The TNI is a tool that helps the government to distribute PPE to many areas that have limited medical equipment. The distribution is carried out by land to be done quickly. Recorded in April 2020, 352.450 PPE was successfully distributed to 34 provinces in Indonesia. Not only that, the TNI also participates in tracing and tracking, quarantining, and research & development (R&D) with universities in terms of making massive vaccines at the Military Health Laboratory.

Security Sector

The TNI has established 4 Integrated Joint Task Forces or Kogasgabpad in 4 areas consisting of (1) Wisma Atlet Jakarta COVID-19 Emergency Hospital led by Pangdam Jaya, (2) Kogasgabpad Natuna led by Pangkoopsau I, (3) Kogasgabpad Sebaru Island led by Pangkoarmada I, (4) Kogasgabpad Special Hospital for Galang Island Infection led by Pangdam 1 Bukit Barisan. The TNI has formulated the worst-case scenario in the security sector and how to handle it if the created scenario occurs. In this condition, the TNI estimates that if the pandemic does not end or if the curve does not decrease, then there is the possibility of socio-economic chaos in society that will lead to violent acts such as demonstrations. So, there is a treatment scheme that has been prepared if the worst-case scenario happens.

The security sector will continue the role until the Indonesian government declares a new normal condition. The government deployed 340,000 TNI and Polri troops in 4 provinces and 25 regencies/cities in West Java, DKI Jakarta, West Sumatra, and Gorontalo to supervise the implementation of health protocols in the society. For example, TNI and Polri troops will be placed in markets, terminals, bus stops, shopping centers, and so on with the hope that the civilians will be disciplined and still productive and safe from the transmission of the Covid-19 virus.

Socio-Economic Sector

In the social and economic sector, the TNI plays a role in distributing food and social assistance to people in need, such as those affected by the termination of employment (PHK) and those laid off without income. The TNI, in collaboration with the National Police, also provides public kitchens in several locations such as Tamansari, Kota Tua, South Tambun, Tanjung Priok, Kemayoran, and several other areas in the Jakarta area. Provided communal kitchens are prepared by TNI and Polri officials for needy residents. The TNI is also involved in the rice ATM program to help the civilians during the pandemic. This program is good because it is

intended for people affected by Covid-19 but not registered as recipients of government assistance.

The activity that most demonstrates the role of the TNI in handling the pandemic, according to the author, is the participation of the TNI in the implementation of vaccines. Vaccines are an effort made by the international community in dealing with Covid-19 to establish group immunity or herd immunity so that viruses that mutate very quickly can be controlled by the immune system in the human body. In this case, the government has targeted the provision of vaccines to 181 million Indonesians, or about 70 percent of the total population of Indonesia.

The number of troops deployed by the TNI to run the vaccine program is 9,176 health workers. This program is followed by training of trainers (ToT) by health workers; even 164 TNI military officers who have specializations in the health sector were appointed to participate in the field implementing the vaccination program. Many troops were deployed in the hope that the target would be reached quickly. The TNI also helps oversee the distribution process of the Covid-19 vaccine so it can arrive safely. However, even though this program has good performance, the implementation in the field still reaps many misleading counter-narratives so there are obstacles in reaching the vaccination target within the specified timeframe. So, the TNI must also inform the civilians about the vaccine disinformation and the vaccination program.

India's Military Corps: Building the Infrastructure in Handling the Pandemic

Since the first wave of the pandemic occurred and was followed by the potential of the second wave in India, the state's government has deployed military forces to take part in handling Covid-19. One of them is the establishment of several emergency field hospitals. With the number of infected patients increasing every day, India is experiencing a shortage of medical facilities such as space in hospitals, oxygen, and medical and non-medical assistance. Army military officers thoroughly handle the war against this virus. 1.5 million trained and vaccinated personnel are deployed across the country. However, according to General Deepak Kapoor, as a former Army Commander, the existing military officers were not optimally deployed by the government. This issue has impacted Covid-19 cases in India for a long time.

The Indian military has a role in setting up the health infrastructure quickly; they even turned a stadium into an emergency hospital. A Signal Corps unit was also

formed to manage the latest information, such as setting up an emergency command and control room. The Indian military also distributes medicines to areas in need and keeps track of medical supplies. The Movement Control Office (MCO) was deployed to assist in planning, coordinating, and controlling military movements in operations, training, and dissemination of health kits throughout the region. The army in other areas was mobilized to set up places that produced new oxygen as a supply for the civilians. The armed forces have around 13,000 officers, including doctors, nurses, and support workers. However, only 600 medical personnel were deployed to deal with this Covid-19 problem. The military also built 4 Covid-19 referral hospitals in Delhi, Ahmedabad, Lucknow, and Varanasi. Defense scientists from Nuclear Medicine and Allied Sciences or INMAS have also developed an anti-Covid therapeutic application of 2-deoxy-D-glucose (2-DG).

CONCLUSIONS

The relationship between civilians and the military is relatively rigid through civilian control, as stated by Huntington. Huntington's emphasis that needs to be understood in this article is how the military works professionally through an idealistic civilian control mechanism. Both Indonesia and India have a long history of civil and military relations, but that does not mean the military can take over civilian power. Instead, the separation of powers between the military and civilians gave the view that the military is a professional institution that is ready to carry out its duties, whether related to violence or not.

Indonesia and India are both aware that cases of Covid-19 transmission in their countries have soared. Since the first three months, Indonesia and India have been overshadowed by the potential for a second wave of Covid-19. There are different responses between the Indonesian and Indian governments in the two comparisons or case studies above. The Indonesian government mobilized many military troops to contribute in various sectors under the government policies to fulfill the national interest –health–. However, with so many counter-arguments from the civilians, the Indonesian government continues to provide the best efforts to handle it, like a comprehensive vaccination program in Indonesia.

The description of the military institution's role in both countries related to handling the pandemic depicts the ideal civil-military relationship and how the military operates professionally. When the civilian government is having difficulty dealing with a pandemic that requires much energy, the military is present as an institution supporting the state without involving politics. The military's

involvement in handling the pandemic should be a turning point in the depiction of the ideal civil-military relationship, showing military compliance in the right place.

REFERENCES

Arbar, T. F. (2021, July 22). Kalahkan India, WHO: Indonesia Jadi Pusat Covid-19 di Asia. CNBC Indonesia. Retrieved from https://www.cnbcindonesia.com/news/20210722201624-4-262943/kalahkan-india-who-indonesia-jadi-pusat-covid-19-di-asia.

Atmaja, L. A. H. (2021, December 12). Militer dan Politik di Indonesia dari Masa ke Masa: Orde Lama-Reformasi. Kumparan. Retrieved from https://kumparan.com/lalu-agung-haris-atmaja/militer-dan-politik-di-indonesia-dari-masa-ke-masa-orde-lama-reformasi-1x65rKgmfWY.

Aziz, N. (2018, July 26). Soeharto 'koordinir' operasi pembantaian 1965-1966, sebut dokumen. BBC Indonesia. Retrieved from https://www.bbc.com/indonesia/indonesia-44962160.

Burk, J. (2002). Theories of democratic civil-military relations. *Armed Forces & Society*, *29*(1), 7-29.

Feaver, P. D. (1999). Civil-military relations. *Annual Review of Political Science*, *2*(1), 211-241.

Firdausi, F. A. (2020, April 13). Membungkam Pengkritik: Gaya Rezim Orde Baru Melanggengkan Kekuasaan. Tirto.id. Retrieved from https://tirto.id/membungkam-pengkritik-gaya-rezim-orde-baru-melanggengkan-kekuasaan-eL7f.

Hall, R. W. (2004). *Plato*. Routledge.

Human Rights Watch. (1996, May). *India's Secret Army In Kashmir: New Patterns of Abuse Emerge in the Conflict, 8*(4). Retrieved from https://www.hrw.org/reports/1996/India2.htm.

Human Rights Watch. (2008). *Getting Away With Murder: 50 Years of the Armed Forces (Special Powers) Act*. Retrieved from https://www.hrw.org/legacy/backgrounder/2008/india0808/india0808web.pdf.

Irfansyah, D. A. S. (2019, May). Bencana Alam, Militer, dan Pertahanan Negara. *Majalah WIRA, 3*(3), 5-11.

Kamradt-Scott, A., Harman, S., Wenham, C., & Smith, F. (2016). Civil–military cooperation in Ebola and beyond. *The Lancet*, *387*(10014), 104-105.

Kardi, K. (2014). Demokratisasi Relasi Sipil–Militer pada Era Reformasi di Indonesia. *MASYARAKAT: Jurnal Sosiologi*, 231-256.

Lee, T. (2000). The Nature and Future of Civil-Military Relations in Indonesia. *Asian Survey, 40*(4), 692-706.

Leni, N. (2013). Keterlibatan Militer dalam Kancah Politik di Indonesia. *Jurnal TAPIs, 9*(1).

Luerdi, L. (2021, December 27). Kekuatan Militer dan Diplomasi Negara di Tingkat Kawasan (Perbandingan India dengan Indonesia). OSF IO. Retrieved from file:///C:/Users/HP/Downloads/DiscussionPaper4.pdf.

Mengko, D. M., & Fitri, A. (2020). Peran Militer dalam Penanganan Pandemi Covid-19 dan Dinamika Pengawasannya Di Indonesia. *Jurnal Penelitian Politik, 17*(2), 219-234.

Orde Baru Suharto: Pembangunan Indonesia di Bawah Pemerintahan Otoriter. (n.d). Indonesia Investments. Retrieved from https://www.indonesia-investments.com/id/budaya/politik/orde-baru-suharto/item180.

Prasetya, E. (2018, May 21). Hari-hari jelang Reformasi, 20 tahun lalu, dalam gambar dan catatan. BBC News Indonesia. Retrieved from https://www.bbc.com/indonesia/indonesia-44192970.

Ringgi, H. Y. (2014). The Soldier and The State: The Theory and Politics of Civil–Military Relations. *MASYARAKAT: Jurnal Sosiologi*, 305-308.

Ristyawati, A. (2020). Efektifitas Kebijakan Pembatasan Sosial Berskala Besar Dalam Masa Pandemi Corona Virus 2019 Oleh Pemerintah Sesuai Amanat UUD NRI Tahun 1945. *Administrative Law & Governance Journal, 3*(2), 240-249.

Sagar, P. R. (2021, May 12). Why India should give a larger role to military in combating COVID-19. The Week. Retrieved from

https://www.theweek.in/news/india/2021/05/12/why-india-should-give-a-larger-role-to-military-in-combating-cov.html.

Sari, M. I., Sulistyani, Y. A., & Pertiwi, A. C. (2020). Peran Lembaga Pertahanan dalam Menangani Pandemi Covid-19. *Jurnal Pertahanan & Bela Negara, 10*(2), 189-208.

Sukatri, A., Husen, L. O., & Zainuddin. (2021). Peranan Tentara Nasional Indonesia Terhadap Penanggulangan Covid-19 Dalam Perspektif Hukum Ketatanegaraan. *Journal of Lex Generalis, 2*(5), 1629-1645.

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The Role of Business Firm in Indonesia's Environmental Diplomacy: A Case Study of PT. SMART (Tbk) and the European Union on Palm Oil Issue

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Abstract

Due to sustainability issues, the European Union (EU) imposed a stricter policy on Indonesia's palm oil trade. PT Smart Tbk, one of Indonesia's biggest palm oil companies, criticized the EU policy. PT Smart Tbk showed that palm oil production had adopted a sustainability approach. A series of dialogues has been conducted to change the EU policy. This research used primary data by interviewing a representative from PT Smart Tbk and secondary data from journals, books, and online/printed media. The authors concluded that the concept of Indonesia's environmental diplomacy needs to be reconstructed by emphasizing the impact of the global environmental agreement on the business actor and the role of the business actor in global environmental politics.

Key Words: Palm Oil, Eco-Bussiness Diplomacy, European, Union, PT smart Tbk.

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INTRODUCTION

Indonesia's environmental diplomacy has largely ignored the role of the business firm. Most research in Indonesia's environmental diplomacy focused on the role of the states (Robertua, 2019; Pramudianto, 2011; Siahaan, 2020; Ningsih, 2019). By using the case study of the PT. Sinar Mas Agro Resources and Technology Tbk. (hence called SMART) relationship with the European Union on palm oil issues, the authors would like to reconstruct the concept of Indonesia's environmental diplomacy focusing on the role of the business firm.

Palm oil is one of the commodities which has a strategic role in Indonesia's economic development. Established in 1962, SMART has been listed at the Indonesia Stock Exchange since 1992, with its headquarters in Jakarta. As a subsidiary of Golden Agri-Resources (GAR), SMART also manages business activity in the sector of palm oil, SMART Research Institute (SMARTRI), and SMART Biotechnology Center. As the world's largest oil palm producer, Indonesia's oil palm industry has provided 16 million workers directly and indirectly (Budidarsono, et.al, 2013). However, there have been critics regarding palm oil's unsustainable production in Indonesia. The European Union intends to restrict and even block the consumption of Indonesian palm oil products.

In Indonesia, the palm oil industry has grown significantly for many years. Since the economic crisis of 1997, the main area for the expansion of oil palm plantations has been Sumatra and Kalimantan. Seventy percent of the palm oil production in Indonesia is the export market. By 2012, Indonesia's palm oil production was 17.54 million tons in 2008 to 23.52 million tons in 2012 (Haekal, M.H., et al., 2013)

In early 2019, the European Union (EU) incurred tariffs ranging from 8% to 18% of the palm oil imports. The purpose of the EU policy is to limit the use of palm oil in the European Union region. The EU believed that the opening of plantation land in tropical forest areas is estimated to result in 1.47 gigatons of carbon every year. Indonesia criticized the policy by stating that Indonesia was planning to retaliate against these discriminatory acts with tariffs on dairy products from the European Union amounting to 20% to 25%. The European Union is the second-largest palm oil market for Indonesia. Furthermore, Indonesia's exports to the European Union increased by 27% in 2017 than in 2016 Council of Palm Oil Producing Countries, 2021).

The policy of the European Union also harms palm oil firms, including SMART. In response to the European Union's policy on palm oil, the current Commissioner of

SMART, Franky Widjaja, said that palm oil products were a highly efficient product and could supply future vegetable oil needs. Palm coconut business is an example of business commodities with high sustainability levels without overlooking environmental conditions (Sidik, 2018). SMART criticized the European Union policy because the policy would potentially provoke a trade war. Furthermore, SMART argued that it is unfair that the enormous expansion of palm oil land undertaken during the 1998 to 2008 period was the basis for the European Union to classify palm oil as an unsustainable commodity. In 2017, oil palm producer countries associated with the Council of Palm Oil Production Countries Association mentioned the willingness to fight the resolution by conducting a direct meeting with the European Union.

Literature Review And Statement Of Art

To understand the research gap related to the role of business firms in Indonesia's environmental diplomacy, the authors will review five articles focusing on the palm oil issue. The first literature review comes from the Cordula Hinkes journal titled "Adding fuel to the fire: courses on palm oil sustainability in European policy development.". Hinkes (2019) found that Indonesia's palm oil industry significantly contributed to the state's income. Hinkes also stated that oil palm was the most commonly consumed globally because of its practical, efficient, and cheap characteristics. Still, all good values owned by oil palm also come with some significant consequences in environmental and social aspects. At the end of the journal, Hinkes concluded three critical points in the oil palm discourse. Those three points are:

1. So far, no sustainable palm oil has been circulating in the market
2. Certification is one of the solutions to the palm oil sustainability problem
3. Palm oil is the most viable alternative among all the available energy forms

The second research related to palm oil politics is Oliver Pye, titled Palm Oil as a Transnational Crisis in South-East Asia. Pye focused on the root of the palm oil crisis, which relates to the roles of political elites in Indonesia, Malaysia, Singapore. Pye explained a massive expansion of oil palm oil commodities in the journal, significantly impacting environmental conditions (O. Pye 2009). It has also been discussed with the European Union's efforts to uphold rules that function to maintain environmental conditions and oligarchic intervention in Indonesia's conduct of palm oil business.

Adam Tyson and Eugenia Meganingtyas also discussed palm oil issues in their article titled "The Status of Palm Oil under the European Union's Renewable Energy Directive: Sustainability or Protectionism?" In this journal, Tyson and Meganingtyas explained trends in European Union policies governing the oil palm market, namely environmental protection and market protectionism (Tyson and Meganingtyas 2020). From Indonesia's perspective, January's Nayantakaningtyas and Henry K. Darto argued that Indonesia had intensified its efforts in developing its palm oil commodities in Indonesia (Nayantakaningtyas 2012). For example, Indonesia focused on developing human resources in the oil industry with training and innovation activities, the consideration of national and international issues by improving government policy, the development of downstream industries, and the increase in the value of added oil palm, and enhancing collaborative patterns with other country manufacturers through promotion.

The environmental issue is a driver for European integration as member states voluntarily support and implement the EU's decision related to environmental problems. Environmental diplomacy international sphere has some varied meanings, according to some experts. Ali and Vladich (2016) stated that environmental diplomacy is a conflict resolution between environment protection, economic development, and social justice also associated with a conflict of value. According to McBeath and Wang (2008), there are four environmental diplomacy goals: attracting foreign economic aid, institutional development and human capacity, maintaining domestic political stability, and preventing unsustainable economic growth (2008). Pramudianto attaches environmental diplomacy as science and art to study and deal with environmental issues to achieve national interests (or the interests and policies of non-state institutions), mainly foreign and political policies in an ecological field (Pramudianto, 2011). Pramudianto explains that environmental diplomacy has essential institutional structure, processes, and plans.

Business firms are more influential in the global decision-making policy process, including environmental issues. Lund (2013) explained that there are two explanatory frameworks regarding the influence of business firms in global environmental politics: the agent-based explanation and the structural explanation. Expert knowledge is the most important resource of business firms. Financial resources are another factor of the agent-based explanation. The last category of agent-based explanation is negotiation strategies, describing how agents use the resources at their disposal, for example, through coalition-building and the targeting of multiple levels. Lund elaborated the structural explanations by mentioning two sub-categories: those having to do with practical institutional

features, such as the rules of access or stage of the negotiations, and those having to do with how well policy proposals fit within the discourse dominating the negotiations.

METHOD

The environmental issue is complicated and complex because there are many significant differences in perspective. Green theory advised a radical change of the economic structures, including transforming foreign policy. Meanwhile, the liberal perspective emphasized the effectiveness of market mechanisms coping with global challenges. Noting these differences, the authors used the qualitative methodology to understand the role of business firms in Indonesia's environmental diplomacy. The qualitative methodology allowed the differences in ideas, values, and perspectives inserted into the research.

SMART is selected as the case study. The benefit of a case study is research to gain a deeper understanding of the issue's complexity. The selection of a case study is critical to achieving a comprehensive understanding of the issue. SMART is selected because SMART has attracted negative and positive attention from government leaders and civil society. Greenpeace has launched a publication arguing that SMART is involved in deforestation in Sumatra. It is also important to note that giant multinational corporations have banned the SMART's product to sustainability concerns. The debate regarding SMART's business decision is the impetus for authors to select SMART as the case study.

To answer the research questions, the authors have the opportunity to conduct online interviews with the representative of SMART's parent company: Golden Agri-Resources (GAR). There are five open-ended questions to achieve a comprehensive understanding of the company's perspective. The interview was conducted on Friday, June 4, 2021. The authors also gain data from journals, reports, and news media to support the research.

RESULT AND DISCUSSION

Palm oil markets in the European Union region

European countries have used palm oil as an alternative fuel. In 2018, at least two-thirds of all palm oil imports were used for biodiesel production in the European Union. A new policy that targets renewable energy use has initiated the European Union to eliminate fuel use in Europe. Responding directly to Renewable Energy Directive II's approach, the Malaysian and Indonesian governments escalated practically against the European Union against such moves, calling it a discriminatory act against palm oil producers (Chain Reaction Research, 2019).

The European Union has adopted a regional framework on alternative fuels, namely "The Renewable Energy Directive" (RED). The law encourages rapid absorption of vegetable fuel, especially from food crops, with significant improvements coming from palm oil. In 2018, the European Union changed the RED to end vegetable-based biofuels (RED II). The basic purpose of the RED is to promote biofuel use by establishing 10 percent of the national renewable energy use in the transport sector in 2020.

According to the Renewable Energy Directive II agreement, the European Union adopted actions that define biodiesel with a mixture of palm oil as an unsustainable fuel. This definition makes biodiesel with crude palm oil not categorized as fuels with a renewable target. Under the law, biodiesel is limited from 2019 to 2023 consumption and will likely remove from the target by 2030. Based on a study carried out by the European Union in 2016, biodiesel with oil palm is three times worse for the climate than biodiesel with fossil fuels. One of the leading causes of the emissions from palm oil biodiesel is the high deforestation rate due to opening new land for oil palm plantations. Forty-five percent of the expansion of global palm oil has led to deforestation.

In the Renewable Energy Directive regulations, the EU demanded palm oil imports to meet at least several of the following certification criteria:

- ISCC (International Sustainability and Carbon Certification)
- RSB (Roundtable pf Sustainable Biofuels) EU RED
- RSPO (Roundtable on Sustainable Palm Oil) RED

About 53% of the total imports of palm oil have been used as biodiesel fuel. The total consumption of oil palm in the European Union declined by 1% in 2018 compared to 2017. In the energy sector, the use of palm oil has increased to 18%, while its use for food has dropped 11% (Oilworld, 2019). That was caused by implementing the Renewable Energy Directive policy in 2009, which instructed that it would increase the use of palm oil in biodiesel. In addition to biodiesel imports, around 12% of CPO import is used for heating engines and electricity generators. About 65 percent of the total oil imports are allocated to the energy sector. Only one-third of the rest is used for food, animal feed, and other industrial goods such as cosmetics and soap (European Commission, 2019).

Indonesia's palm oil business response to the implementation of European Union policies

The EU's decision to limit oil palm products into its region has had many negative responses from oil palm industries to the government. It was caused by overstock phenomena occurring in the competing palm oil commodities, namely oil rapeseed and solar crude in the European Union (GIMNI, 2019). Vice-Chairman of Kelapa Sawit Indonesia Togar Sitanggang stated the European Union should be transparent when implementing the ILUC scheme. He said there had been indications that the European Union aimed to protect the European vegetable oil industry.

Sustainable Development Goals, or SDGs, are a form of initiative globally agreed upon by countries globally, including Indonesia. At this initiative, there are 17 Goals and 169 targets which are the bases for attainment by 2030 (Sustainable Development Goals 2018). The primary objective of these SDGs covers several aspects, such as ending poverty, reducing the gap, and protecting the environment.

The palm oil industry in Indonesia itself is considered to have met the sustainability values of SDGs. Production rate and consumption are responsible for meeting the implementation values of SDGs goals number 12 ("Responsible Consumption and Production). Besides, palm oil has provided a significant benefit to the welfare of the local communities, which is in line with SDG goals number 8 ("Decent Work and Economic Growth") (Purnomo 2018).

Lobbying efforts to the European Union government continue to be undertaken by Indonesia. On January 27, 2021, the ASEAN and the European Union organized a Joint Working Group (JWG). Earlier in December 2020, specifically at the ASEAN and European Union Level Meeting twenty-three held virtual, Indonesia has asked

the European Union to treat oil palm fairly and naturally. Indonesian Foreign Minister Retno Marsudi said, "Indonesia's demand to the European Union to treat oil palm fairly is an appropriate request. Indonesia does not sacrifice environmental sustainability only to pursue economic development." " (Maarif 2020).

The Southeast Asia region has become the largest palm oil production region globally and has contributed 89% of the world's total production. Besides, palm oil commodity also has an essential role in reaching 16 values included in the Sustainable Development Target/SDGs. The palm oil industry has opened many jobs in the ASEAN region. The palm oil industry has provided 26 million jobs in the ASEAN region, where small farmers manage 40 percent of the oil palm plantations. In Indonesia, the industry has reduced the poverty rate by 10 million and contributed to the country's foreign exchange payments this year, US$23 billion. Thus, it can say that palm oil has been considered a commodity with high utilization and impacts a country's socio-economic aspect.

Naturally, the JWG is considered capable of improving the negative image has attached to palm oil commodities. It is because of the vision on the low level of sustainability among palm oil commodities. On the other hand, JWG is considering not being taken seriously by the European Union. According to the Institute for Development of Economics and Finance (INDEF) economist, JWG is a diplomatic move with no significant contribution to concrete and concrete work results. On occasion, he added that the JWG should explore a valuable path for the European Union to recognize Indonesia's certification of Sustainable Palm Oil (ISPO) in various agreements and be under anyone's leadership (Hasan 2021). Thus, with the establishment of the JWG joint working group on vegetable oil coming from the 23rd ASEAN and European Union Meeting Level, it is expected to provide new opportunities to contribute together to find solutions to global challenges.

Earlier in 2018, Indonesia attended a joint meeting with European Union importers for the European Palm Oil Conference hosted by the European Palm Oil Alliance (EPOA) in Madrid. Indonesia was the speaker of sustainable oil palm commodities in the meeting. On this occasion, the Indonesian Commerce Ministry met with Spanish Minister for Industry and Trade to discuss the development of negotiations between Indonesia and the European Union under the Comprehensive Economic Partnership Agreement (CEPA). In this cooperation, Indonesia and the European Union hope to facilitate and open access to new markets, increase trade activities between the European Union and Indonesia and expand investment between the two parties. They also will host a business matching forum. In 2018, the Commerce

Ministry was able to complete eight trading missions valued at US$10.2 billion (PTPN 2018).

The regulations adopted by the European Union have had a significant impact on palm oil production in both ASEAN and Indonesia. The Indonesian government decided to bring RED II to the World Trade Organization (WTO). Indonesia communicated several points that the European Union had taken unfairly in the suit, such as:

1. The European Union uses wrong data in counting the costs of producing palm oil-based biodiesel
2. The European Union did not use up-to-date data in determining the margins of dumping
3. The European Union regulated an oversized limit for biodiesel from Indonesia
4. The European Union uses methods that do not conform to the conditions of determining export prices
5. The EU imposes higher rates than agreed-upon rules
6. The European Union has failed to prove that Indonesian biodiesel has had a detrimental effect on the domestic biodiesel harm of the European Union

SMART's response to the implementation of EU policies

Smart President Director Daud Dharsono argued that the EU should conduct a series of meeting with palm oil companies before restricting Indonesian palm oil. The limitation is ineffective in providing solutions, and the restriction will lead to other more significant problems. Many palm oil industry companies have implemented quality standards, viable environmental conservation, and upholding environmental values. Thus, the policies of the European Union provoked many protests from the world's palm oil industry, especially Indonesia and Malaysia, which have massive amounts of palm oil plantations (Masyarafina 2018).

Furthermore, SMART recommended that all oil palm producers unite in opposition to the protest of the policies of the European Union (Sukmana, 2019). SMART states that there is a misperception about palm oil production in Indonesia. Deforestation in Indonesia has decreased significantly. The main factor in reducing

deforestation in Indonesia is better forest management methods. In addition, SMART has implemented a zero-burning mandate and did not convert oil palm plantations from its High Carbon Stock/High Carbon Value forest.

Additionally, the company has committed fully to increasing the number of its sustainable palm oil certification. The company attempted to certify companies with a variety of certifications such as ISO 22000, Food Safety System Certification (FSSC), KOSHER, Good Manufacturing Practices +B2, Roundtable on Sustainable Palm Oil (RSPO), and the International Sustainability and Certification (ISCC).

Palm oil companies should participate in the Sustainable Development Goals (SDGs) values into the core business. In September 2018, PT SMART Tbk organized a discussion forum for Social and Environmental Development with the essence of the "Promoting Sustainable palm Industry in its Efforts to facilitate Sustainability Development Goals' achievement. On this occasion, companies encouraged oil palm businesses to practice sustainable oil palm plantation management.

PT SMART Tbk's efforts to implement Sustainable Development Goals values could be seen in the annual report. The company's contribution target on human resources points is to end hunger, the twelfth point of consumption and production responsible, the fifth point to safeguard the land ecosystem, and the seventeen points is a partnership to achieve aims. The massive existence of oil palm plantations in remote areas has contributed to the increasing income of local people. Projected from a report published by the European Union Commission, nearly 40 percent of the plantation land located in Indonesia is a plantation owned by two million oil palm farmers. Demand for palm oil commodities classified as high and valuable has led to a far higher income level owned by palm oil farmers than farmers who empower other entities.

In addition, palm oil commodities also have an impact on socio-cultural aspects. This commodity has helped reduce the access gap for residents in remote areas. Oil palm plantations located in remote areas have indirectly increased access for remote sites to better health and education services. Therefore, the surrounding community will be more helpful to have quality and improve living standards.

Based on SMART's 2020 annual report, the company has sought various ways to fulfill the core values of the SDGs. In the third goal of SDGs, the company was committed to actively conserving a forest area of 43 thousand hectares, even though the company's operations were being affected by the COVID-19 pandemic. Around 99.98% of PT SMART Tbk's operational area was not affected by land fires that

could damage the habitat of the animals in the forest. The fire mitigation carried out by the company has proven to reduce similar incidents in the future. SMART received the assistance of Non-Governmental organizations (NGOs) Orangutan Foundation International to ensure the habitat of the forests in Indonesia.

The values of the Sustainable Development Goals (SDGs) themselves apply not only in protecting oil palm and the environment but also in protecting the rights of workers in the company environment. Therefore, the company is committed to maintaining the relationship between the company and the trade union by conducting open dialogue, fair work practices, and respecting every worker in the work environment. Since 2018, the company has not received any reports of any forms of injustice experienced by workers.

In an interview the author conducted with Golden Agri-Resources as the parent company of SMART, the author answered that the restrictions on palm oil by the European Union would lead to higher quality standards for palm oil commodities. So far, the European Union has purchased palm oil products at special prices for sustainable palm oil. The European Union policy can be counterproductive for the progress of palm oil sustainability. If the EU stopped buying palm oil, SMART would not be able to finance the research and development of more modern and environmentally friendly palm oil management technologies.

In tackling the negative perception that hit the palm oil commodity, the company took several steps to deal with this phenomenon. The company actively participates in educating consumers about sustainable palm oil to understand that today's palm oil management meets the standards. In addition to being directly involved with consumers, the company also initiated direct meetings with EU delegates. At the meeting, the company emphasized that the high rate of deforestation caused by land clearing for oil palm was due primarily to small-scale plantation managers. It is because small-scale plantation managers tend to convert land by burning forests. Therefore, if the European Union wants to reduce the rate of deforestation caused by the management of oil palm by smallholders, the European Union must understand small-scale plantation management communities and ensure the welfare of smallholders.

In partnering with Non-Governmental Organizations (NGOs), the company stated that it had established partnerships with local and international NGOs. There are challenges in responding to the actions of NGOs that often issue opinions about unsustainable palm oil and participate in high rates of deforestation. Based on the difficulties experienced, the company responded to these challenges by actively

providing explanations to NGOs regarding the company's sustainable management. In addition, the company has also partnered with Greenpeace to conduct joint studies on oil palm. Companies can get information about oil palm management from the perspective of NGOs with different agendas from the company.

The Reconstruction of Environmental Diplomacy

SMART has pursued environmental diplomacy with the European Union over palm oil issues as a private firm. SMART wanted to protect the corporate image in the case of sustainable palm oil and maintain legitimacy in the public sphere.

Environmental diplomacy focused on conflict resolution between states, private firms, and civil society. According to Ali and Vladich, environmental diplomacy needs to solve the conflict between economic development and environmental protection. The value conflict between the EU and SMART is mitigated by the compliance of SMART with the national environmental regulation. SMART has joined a meeting with the delegation of the EU to convince that SMART has followed the sustainability criteria of palm oil production.

1. SMART focuses on several goals on SDGs such as goal 2 (zero hunger), goal 12 (responsible production and consumption), goal 15 (life on land), and goal 17 (partnership for the goal).

2. SMART focuses on the development of new technologies in palm oil seeds. The new types of seeds can increase the productivity level of oil palm trees to reduce the number of new land clearing for oil palm plantations.

3. SMART published its annual report to the public

To understand the role of business firms in environmental diplomacy, the authors used Lund's framework of environmental diplomacy. Lund mentioned that there are two explanations of the influence of business firms in environmental diplomacy: agent-based factors and structural factors. In the agent-based factors, the business firms own financial, expertise, and negotiation strategies; meanwhile, in the structural factors, the business firms have access to the diplomatic negotiation and the dominating discourses.

From the case study of SMART, the authors observed that the role of business firms in Indonesia's environmental diplomacy had expanded comprehensively into the agent-based and structural factors. SMART is one of the largest palm oil in Indonesia and has many policies to empower small palm oil farms in many remote

areas. Not only that, but SMART also has funded many corporate social responsibility programs in education, sport, and technology. Many local communities and regional governments depended on the financial power of SMART.

Based on the interview with SMART, the expertise factors are also mentioned significantly. SMART has funded numerous research on palm oil seeds so that SMART can advance the palm oil plantation into an environmentally friendly business. We can also observe that SMART has built coalition strategies with many environmental NGOs such as Orang Utan Internasional.

Interestingly, SMART also expanded its role to structural factors. SMART is involved directly with representatives of the EU regarding the palm oil conflict. Ministry of Foreign Affairs and Coordinating Ministry of Economy perceived SMART as the credible source of information in dealing with the negotiation partners. It is also important to highlight the discourse of Sustainable Development Goals is adopted by SMART in their annual reports. SMART wanted to align its objectives with the global effort to eradicate poverty and sustainable livelihood.

It is understood that business firms have strength in their financial and expertise factors and weaknesses in the political access and dominating discourses (Alanmar & Pauleen, 2015; Egea, M.A., et.al., 2015, Henisz, W.J., 2016). However, the case study of SMART showed that the role of business firms in Indonesia's environmental diplomacy not only focused on agent-based factors but also structural conditions.

CONCLUSIONS

The European Union's decision to impose stricter access for Indonesian palm oil provoked negative sentiments from Indonesian decision-makers. Indonesian government focused on the dialogue and official meeting with the EU to change the restriction on Indonesian palm oil. After a series of meetings, the Indonesian government decided to bring the palm oil issue to the international court.

Indonesia's environmental diplomacy largely ignored the role of business firms. Lund suggests that business firms have expertise advantage, financial power, an indirect influence on the government. To some extent, business firms also have direct access to the negotiation table and the ability to dominate the public discourse. In the case of palm oil issues, SMART has used its expertise advantage

and indirect influence on the government. SMART also attempted to engage with civil society in the framework of Sustainable Development Goals.

Based on SMART's move in the case of the EU's palm oil restriction, the concept of Indonesia's environmental diplomacy need to be reformulated. Business firms have an important role in Indonesia's environmental diplomacy through expert knowledge, financial power, expertise, direct influence on the government, and dominating discourses.

REFERENCES

Adelle, Camilla, Diarmuid Torney, dan Katja Biedenkopf. (2018). European Union External Environmental Policy. London: Palgrave Macmillan.

Alammar, F. & Pauleen, D. (2015). "Business Diplomacy in Practice: What Do the Experts Say?".

Alatas, A. (2015). Trend Produksi dan Ekspor Minyak Sawit (CPO) INDONESIA. AGRARIS: Journal of Agribusiness and Rural Development Research, 1(2), 114-124. doi:10.18196/agr.1215

Ali, S., & Vladich, H. (2016). Environmental Diplomacy. In C. Constantinou, P. Kerr, & P. Sharp, The SAGE Handbook of Diplomacy (pp. 601-616). London: SAGE.

Austin, K. G., et al. (2019). What causes deforestation in Indonesia? Environmental Research Letters, 14(2), 024007. doi:10.1088/1748-9326/aaf6db

Badan Pusat Statistik. (2020). Luas Tanaman Perkebunan Menurut Provinsi (Ribu Hektar), 2018-2020. Diakses pada 12 Mei 2021, dari https://www.bps.go.id/indicator/54/131/1/luas-tanaman-perkebunan-menurut-provinsi.html

Baker, S., Kousis, et al. (1997). Introduction: The theory and practice of sustainable development in EU perspective. In S. Baker, M. Kousis, D. Richardson, & S. Young, The Politics of Sustainable Development: Theory, Policy and Practice within the European Union (pp. 1-41). London: Routledge.

Balch, O. (2015). Indonesia's forest fires: Everything you need to know. Diakses pada 12 Mei 2021, dari https://www.theguardian.com/sustainable-

business/2015/nov/11/indonesia-forest-fires-explained-haze-palm-oil-timber-burning

Bicalho, T., et al. (2016). Land use change within EU sustainability criteria for biofuels: The case of oil palm expansion in the Brazilian Amazon. Renewable Energy, 89, 588-597. doi:10.1016/j.renene.2015.12.017

Bolewski, W. (2019). Diplomatic engagement with transnational corporations: a path to sustainable governance. International Journal of Diplomacy and Economy. 5. 42. 10.1504/IJDIPE.2019.10020207.

Budidarsono, et al. (2013). Oil Palm plantations in Indonesia: The implications for Migration, Settlement/resettlement and local economic development. Biofuels - Economy, Environment and Sustainability. doi:10.5772/53586

Chaves, Rodrigo, ed. (2014). "Indonesia Economic Quarterly". Jakarta: World Bank.

Council of Palm Oil Producing Countries. (2021). Palm Oil Supply and Demand Outlook Report 2021.

Damuri, Y. R., et al. (2015). Kajian Tentang Dampak CEPA Uni Eropa - Indonesia.

Egea, M. A., et al. (2020). Corporate diplomacy strategy and instruments; with a discussion about "corporate diplomacy and cyclical dynamics of open innovation". Journal of Open Innovation: Technology, Market, and Complexity, 6(3), 55. doi:10.3390/joitmc6030055

European Union, Indonesia-European Union Partnership and Cooperation Agreement. (2014). Joint Press Release Indonesia and the European Union advance their broad bilateral agenda [Press release]. Diakses pada 12 Mei 2021.

European Union. (2017). Report on Palm Oil and Deforestation of Rainforests (Rep.).

Gerasimchuk, I., et al. (2013). The EU Biofuel Policy and Palm Oil: Cutting Subsidies or Cutting Rainforest?

Golden Agri-Resources, Ltd. (2020). Golden Agri-Resources Annual Report 2020 (Rep.).

Green Diplomacy. (2019). Diakses pada 13 Mei 2021, dari https://ec.europa.eu/environment/international_issues/green_diplomacy_en.htm

Haekal, M. H., et al. (2013). The green economics in PT Sinar Mas Agro resources and Technology TBK (PT SMART Tbk.). International Journal of Trade, Economics and Finance, 14-18. doi:10.7763/ijtef.2013.v4.253

Hansen, S. B., et al. (2015). Trends in global palm oil sustainability research. Journal of Cleaner Production, 100, 140–149. doi:10.1016/j.jclepro.2015.03.051

Hasan, F. (2021, April). Can European Union Adapt to a New Palm Reality? Diambil kembali dari The Jakarta Post: https://www.thejakartapost.com/paper/2021/04/26/can-european-union-adapt-to-a-new-palm-reality.html

Hendromono, et al. (2007). "Penyiapan Lahan Tanpa Bakar Untuk Penanaman". Jakarta.

Henisz, W. J. (2016). The dynamic capability of corporate diplomacy. Global Strategy Journal, 6(3), 183-196. doi:10.1002/gsj.1121

Hinkes, C. (2019). "Adding (Bio)Fuel to the Fire: Discourses on Palm Oil Sustainability in the Context of European Policy Development." Environment, Development and Sustainability 22, no. 8: 7661–82. https://doi.org/10.1007/s10668-019-00541-y.

Jane Dalton. (2018). Certified sustainable palm oil may kill more wildlife, say scientists. Diakses pada 18 April 2021, from https://www.independent.co.uk/news/world/asia/palm-oil-sustainable-certified-plantations-orangutans-indonesia-southeast-asia-greenwashing- purdue-a8674681.html

Jokowi Says EU Palm Oil Restrictions Are 'Act of Trade War'. (2020, January). Diakses pada 27 April 2021, from https://jakartaglobe.id/business/jokowi-says-eu-palm-oil-restrictions-are-act-of-trade-war

Khairunissa, G. R., & Novianti, T. (2017). "Daya Saing Minyak Sawit dan Dampak Renewable Energy Directive (RED) Uni Eropa terhadap Ekspor

Indonesia di Pasar Uni Eropa." Jurnal Agribisnis Indonesia, vol. 3, no. 2.

Lingkar Temu Kabupaten Lestari. (2018, October 04). European Palm Oil Conference 2018: Bupati Musi Banyuasin Sampaikan Komitmennya Terkait Isu Komoditas. Diakses pada 28 Mei 2021, dari https://kabupatenlestari.org/berita/read/european-palm-oil-conference-2018-bupati-musi-banyuasin-sampaikan-komitmennya-terkait-isu-komoditas

Luhulima, C. P. (2018). Uni Eropa dan ASEAN: Suatu Pembandingan.

Luttrell, C., et al. (2018). Implementing sustainability commitments for palm oil in Indonesia: Governance arrangements of sustainability initiatives involving public and private actors. doi:10.17528/cifor/006884

Maarif, N. (2020, December). Menlu RI desak Uni Eropa Perlakukan Minyak Kelapa Sawit Secara adil. Diakses pada 27 Mei 2021, dari https://news.detik.com/berita/d-5277701/menlu-ri-desak-uni-eropa-perlakukan-minyak-kelapa-sawit-secara-adil

Mandatori B30, Solusi Atasi Kelebihan Stok Minyak Sawit?: Ekonomi. (2018, July 15). diakses pada 27 April 2021, dari https://ekonomi.bisnis.com/read/20180715/12/816698/mandatori-b30-solusi-atasi-kelebihan-stok-minyak-sawit

Manurung, H. (2016). "Improving Free Trade Agreement (FTA): A Study on the European Union (EU) – Indonesia Comprehensive Economic Partnership Agreement, 2012 – 2016".

Masyarafina, I. (2018, April). Uni Eropa Boikot CPO Indonesia Dinilai Menambah Masalah. Diambil kembali dari Republika Online: https://republika.co.id/berita/ekonomi/korporasi/18/04/13/p7493u377-uni-eropa-boikot-cpo-indonesia-dinilai-menambah-masalah

Nayantakaningtyas, J. S., et al. (2012). "Daya Saing Dan Strategi Pengembangan Minyak Sawit Di Indonesia." Jurnal Manajemen & Agribisnis 9, no. 3.

Nesadurai, H. E. (2018). Transnational private governance as a Developmental driver in Southeast Asia: The case of Sustainable palm oil standards

in Indonesia and Malaysia. The Journal of Development Studies, 55(9), 1892-1908. doi:10.1080/00220388.2018.1536262

Ningsih, P. C. (2019). Diplomasi Lingkungan Hidup Indonesia-Norwegia Melalui REDD+ Agreement. Insignia Journal of International Relations, vol. 6, no. 2, 83-93.

Obidzinski, K., et al. (2012). "Environmental and social impacts of oil palm plantations and their implications for biofuel production in Indonesia". Ecology and Society, 17(1). doi:10.5751/es-04775-170125

Oosterveer, P. (2015). Promoting sustainable palm oil: viewed from a global networks and flows perspective. Journal of Cleaner Production, 107, 146–153. doi:10.1016/j.jclepro.2014.01.019

Palm oil biofuels market may see shake-up in 2020, heightening Leakage Risks. (2020, June 15). Diakses pada 14 Mei 2021, dari https://chainreactionresearch.com/report/palm-oil-biofuels-market-may-see-shake-up-in-2020-heightening-leakage-risks/#:~:text=In%202017%2C%20palm%20oil%20accounted,global%20feedstock%20use%20for%20biodiesel.

Pramudianto, Andreas. (2011). Diplomasi Lingkungan. Jakarta: UI Press.

Primastika, W., & Apinino, R. (2019). Saat Kabut Asap Pekat, Pemerintah Malah Kampanye 'Sawit Baik'. Diakses pada 27 April 2021, dari https://tirto.id/saat-kabut- asap-pekat-pemerintah-malah-kampanye-sawit-baik-eig9

PT SINAR MAS AGRO RESOURCES AND TECHNOLOGY TBK. (2017). Annual Report.

PT Sinar Mas Agro Resources and Technology Tbk. (2018). Sinar Mas Agribusiness and Food Ajak Para Pemasok Membangun Citra Positif Industri Sawit Yang Berkelanjutan Melalui Sustainable Development Goals (SDGs).

PT Sinar Mas Agro Resources and Technology Tbk. (2020, January 06). Tren Minyak Sawit pada 2020. Diakses pada 28 Mei 2021, dari https://www.smart-tbk.com/tren-minyak-sawit-pada-2020/

PTPN. (2018, Oktober). Mendag Bicara Minyak Sawit di European Palm Oil Conference. Diakses pada 28 Mei 2021, dari http://ptpn13.com/news-selengkapnya&c=011810030415486534O-mendag-bicara-minyak-sawit-di-european-palm-oil-conference.html

Purnomo, H., et al. (2018). Reducing forest and land fires through good palm oil value chain governance. Forest Policy and Economics, 91(January), 94–106. https://doi.org/10.1016/j.forpol.2017.12.014

Pusat Data dan Sistem Informasi Kementerian Perdagangan Indonesia. (2015). Lawan Diskriminasi Kelapa Sawit, Indonesia Gugat Uni Eropa di WTO - Kementerian Perdagangan Republik Indonesia. Diakses pada 17 April 2021, dari https://www.kemendag.go.id/id/newsroom/press-release/lawan-diskriminasi-kelapa-sawit-indonesia-gugat-uni-eropa-di-wto-3

Pye, O. (2009). Palm oil as a Transnational Crisis in South-East Asia. ASEAS: Österreichische Zeitschrift für Südostasienwissenschaften.

Pye, O., et al. (2012). The Palm Oil Controversy in Southeast Asia. doi:10.1355/9789814311458

Rifin, A., et al. (2020). Assessing the impact of Limiting Indonesian palm oil exports to the European Union. Journal of Economic Structures, 9(1). doi:10.1186/s40008-020-00202-8

Robertua, V. (2019). Environmental Diplomacy: Case Study of the EU-Indonesia Palm Oil Dispute. Mandala: Jurnal Hubungan Internasional

Romain, P., et al. (2015). Deforestation-free commitments: The challenge of implementation - an application to Indonesia. doi:10.17528/cifor/005572

RSPO. (2018). Principles and Criteria for the Production of Sustainable Palm Oil 2018

Ruël, H., et al. (2013). Business diplomacy in multinational corporations (MNCs): An exploratory study. In Academy of International Meetings, Istanbul, Turkey.

Sahide, M. A., et al. (2015). Towards state hegemony Over Agricultural Certification: From voluntary private to mandatory State regimes on palm oil in Indonesia. Jurnal Manajemen Hutan Tropika (Journal of Tropical Forest Management), 21(3), 162-171. doi:10.7226/jtfm.21.3.162

Siahaan, T. (2020). Indonesia Environmental Diplomacy in President Joko Widodo's Era (2014-2019) of the Issue Rejection Indonesia's CPO by European Union. Sociae Polites: Majalah Ilmiah Sosial Politik, 73-94.

Sidik, R. M. (2018). CPO Indonesia ditolak Uni Eropa, Kenapa? Monitoring Pangan 2018.

Susila, W. R. (2012). Peluang Pengembangan Kelapa Sawit di Indonesia: Perspektif Jangka Panjang 2025.

Suwarno, W. (2019). The challenge of indonesian diplomacy against palm oil discrimination. Jurnal Ilmiah Hubungan Internasional, 15(2), 197-212. doi:10.26593/jihi.v15i2.3416.197-212

Transport and Environment. (2019). The trend worsens: More palm oil for energy, less for food. Final Palm Briefing.

Tyson, A., & Meganingtyas E. (2020). "The Status of Palm Oil under the European Union's Renewable Energy Directive: Sustainability or Protectionism?" Bulletin of Indonesian Economic Studies, 2020, 1–44. https://doi.org/10.1080/00074918.2020.1862411.

Widiono, S. (2008). Studi Kasus Terbentuknya Perkebunan Kelapa Sawit Rakyat pada Dua Desa Sawah Etnis Serawai dan Jawa di Kabupaten Seluma, Provinsi Bengkulu. Jurnal AGRISEP, 7(1), 54-71. doi:10.31186/jagrisep.7.1.54-71

Zoological Society of London. (2017). Palm oil certification. From Disclosure to Engagement: A Guide to the SPOTT Indicator Framework for Assessing Palm Oil Producers and Traders. London: UKAID

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Analysis of Determining Factors for Indonesian Coal Exports to 11 Regional Comprehensive Economic Partnership (RCEP) Countries

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Abstract

This study aims to determine export price, real GDP, exchange rates, geographic distance, and coal reserves of export destination countries on Indonesia coal export value to 11 RCEP countries for period 2010-2019 and describe the growth of Indonesian coal export value to 11 RCEP countries for period 2010-2019. The eleven RCEP countries are China, Australia, Japan, Korea, New Zealand, Singapore, Malaysia, Thailand, Philippines, Vietnam, dan Cambodia. This study used quantitative data with panel data regression. The results of the simultaneous significance test indicate that globally the independent variables in the model significantly affect the dependent variable. These results are supported by the partial test that export price, real GDP, and exchange rates has a positive significant effect on value of Indonesia coal export, while geographic distance and coal reserves of export destination countries has a negative significant effect on Indonesia coal export value.

Key Words: Export, Coal, RCEP, Panel Data

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INTRODUCTION

The main problem in economics is scarcity, namely the problem of shortage or scarcity. The problem of scarcity is due to an imbalance between needs (consumption) and available resources (production). Limited resources cannot meet relatively unlimited needs (Sukirno, 2016). In the macroeconomic aspect, the problem of scarcity can also occur in the country's economic activities. With this situation, countries can carry out international trade, namely imports and exports, to overcome the problem of scarcity. As quoted in Ragimun (2018), several factors that encourage international trade include fulfilling domestic demand for goods and services, the desire to earn profits and increase national income, and differences in the ability of science and technology to manage economic resources and the existence of a surplus of products. Domestically so that new markets are needed. Although it is not the only factor that affects economic growth, if international trade is carried out effectively by knowing the trade opportunities of a country, then international trade has an essential role as an engine that drives a country's economic growth, trade as an engine of growth (Salvatore, 2013).

In the practice of international trade, all countries impose some restrictions on the flow of free trade or free trade. This restriction is better known as a trade policy to protect the welfare of the national economy. However, this is a barrier or obstacle for traders. Based on Salvatore (2013), economic integration is carried out, which refers to trade policies, namely reducing or eliminating trade barriers between countries that join together in an agreement. The Free Trade Agreement and the Comprehensive Economic Partnership Agreement are forms of economic integration where the agreement reduces or eliminates trade barriers between member countries, but each country continues to apply these barriers to trade with non-member countries (Ragimun, 2018).

Indonesia has joined various FTAs and CEPAs, for example, the Association of Southeast Asian Nations (ASEAN) and the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA). In addition, in November 2020, a new trade pact was signed, namely the Regional Comprehensive Economic Partnership (RCEP), involving 15 countries consisting of 10 ASEAN countries and 5 FTA Dialogue Partners, namely Indonesia, Malaysia, Singapore, Philippines, Thailand, Vietnam, Myanmar, Lao People's Democratic Republic, Cambodia, Brunei Darussalam, China, South Korea, Japan, Australia, and New Zealand. The potential benefits from the formation of RCEP are the opening of market access from the spillover effect of the opening of markets between fellow FTA partners, as

well as bilateral FTAs of each RCEP country with non-RCEP as well as trade efficiency between member countries through the Rules of Origin (ROO), and schemes. Other RCEP trade facilitation. In addition, RCEP also encourages the entry of Foreign Investment (PMA) (Gultom, 2020).

The economic potential resulting from the integration of the RCEP market is approximately 30% of the world's population, 30% of the world's gross domestic product (GDP), 27% of world trade, and 29% of world foreign investment (FDI). It is believed that the formation of this trade pact will positively influence the economies of ASEAN countries, including Indonesia (Gultom, 2020). Even though the RCEP agreement occurred when the world economy was not doing well and even in a recession due to the Covid-19 pandemic, all RCEP member countries could commit to immediately work together to recover the world economy by continuing to develop trade and global economic relations.

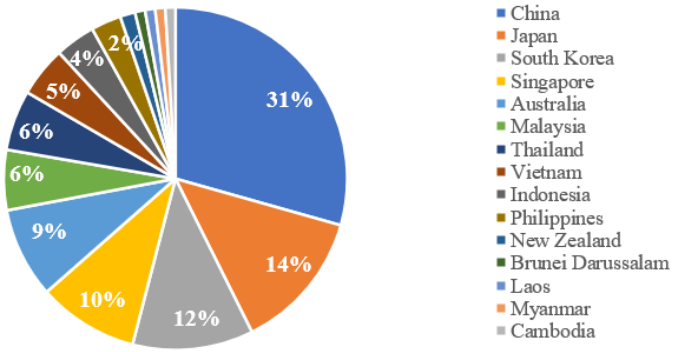

Figure 1. Total Exports of All Commodities in the RCEP Area in 2019
Source: UN Comtrade (2019)

Based on Figure 1, the total value of Indonesia's exports to the 14 RCEP member countries ranks 9th with an export value of US$ 95.4 billion or around 4%. The most significant RCEP country's export contribution was occupied by China (31%), and the smallest was Cambodia (0.18%). This shows that Indonesia still has the potential to increase exports of its oil and gas and non-oil and gas products in the RCEP area. Based on data from the Central Statistics Agency (BPS) in 2019, the total value of Indonesia's non-oil and gas exports to the world was much greater than the value of its oil and gas exports, which was US$ 130.8 billion, while the total value of oil and gas was only US$ 7.2 billion. At the press conference for the signing of the RCEP, the Ministry of Trade (2020) explained that in the same year,

Indonesia's total non-oil and gas exports, including the mineral and coal mining sector, to the RCEP area represented 56.51% of Indonesia's total exports to the world, which amounted to US$ 84.4 billion. Therefore, the contribution of non-oil and gas exports from Indonesia to the RCEP area to total exports is enormous.

According to data from the Ministry of Trade of the Republic of Indonesia, Indonesia's primary export sector is the mining sector. In 2019, the mining sector dominated 16% of Indonesia's exports. This figure is the highest contribution figure compared to the contribution of other sectors to Indonesia's exports. Coal is the largest export contributor commodity in the mining sector, contributing 22% of the entire mining sector in the same year. In addition, in terms of energy consumption in the Asia Pacific region, where the majority of countries are RCEP member countries, based on data from the British Petroleum (BP) (2020) report, the most significant energy consumption in 2019 was coal, which was 77.4 percent of its total consumption. Meanwhile, oil and gas energy consumption was only 37.1 percent and 22.1 percent, respectively. The utilization of coal energy sources is also increasing along with the decline in oil production. The large consumption of coal indicates that coal is widely used for electricity generation and functions as a vital energy source for metal smelting, cement, and other industries (Gunara, 2017).

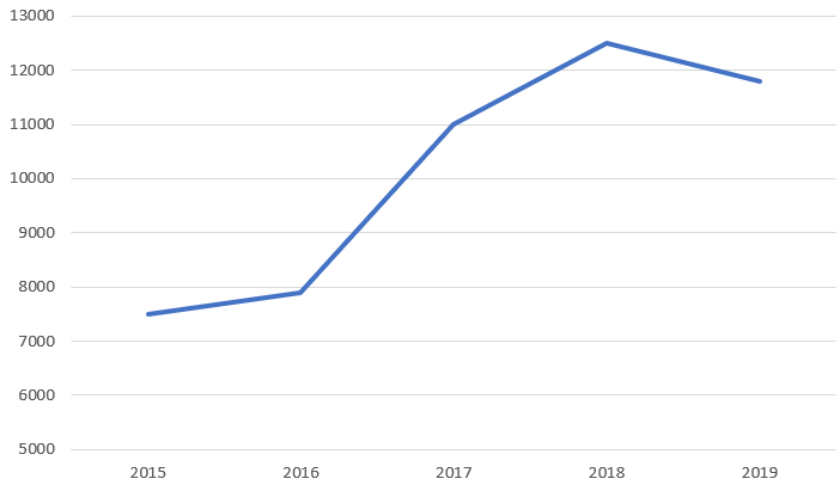

Figure 2. Value of Indonesian Coal Exports to 15 RCEP Countries 2010-2019
Source : ASEANstats (2019)

Most coal commodities are exported from Indonesia to East Asian and Pacific countries, most RCEP member countries. Based on Figure 2, the value of Indonesia's coal exports to 15 RCEP countries in the last five years has increased quite significantly and decreased slightly from 2018 to 2019. The rise and fall in the

value of Indonesian coal exports were caused by internal and external factors, such as policies in the country, policies of coal-consuming countries, and geopolitical issues.

The World Coal Institute explains the high demand for coal because it has many important uses. Coal is the single largest source of electricity in the world, producing nearly 40% of electricity. Electricity is one of the needs of every country and even individuals to carry out various activities. Coal will still contribute 22% in 2040 while remaining the most significant contributor. According to Hendra Sinadia at the Minerba Virtual Expo (2020), although many developed countries voiced clean energy campaigns and began to reduce or even stop the use of coal, the demand for coal in the Pacific region, especially China, is one of the primary coal consumers, is expected to continue to grow. Increase. According to the China Electricity Council (CEC), electricity consumption in China will increase by 7% in 2020 and continue to increase yearly. This is because the energy shift in the world's central coal-consuming countries takes a long time. In addition, along with the decline in the production of petroleum as the primary energy, the demand for coal is increasing because coal is an alternative energy source of primary energy (Silalahi & Saragih, 2010).

Even though Indonesia supplies coal, Indonesia still supports using clean energy. According to the Ministry of Energy and Mineral Resources, Indonesia is taking strategic steps such as encouraging clean coal technology and co-firing biomass coal to reduce emissions.

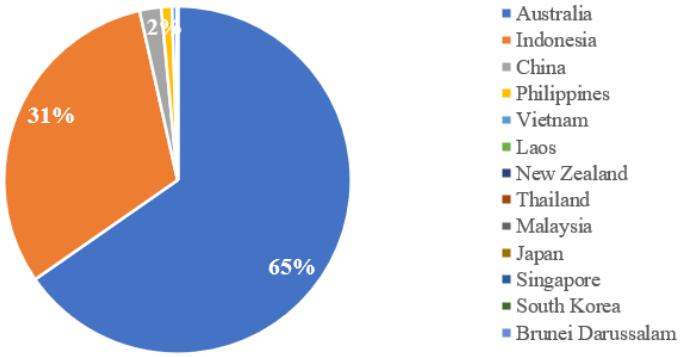

Figure 3. Total Coal Exports in the 2019 RCEP Area
Source: UN Comtrade (2019)

Figure 3 shows the contribution of coal exports in the RCEP area. The immense contribution was occupied by Australia (65 percent), and the most negligible contribution was Brunei Darussalam. The contribution of Indonesia's coal exports to RCEP member countries is the second largest, which is US$ 11.68 billion or 31 percent. Therefore, coal commodities play a significant role in Indonesia's export activities to RCEP member countries.

Coal mining also provides royalties included in the Indonesian State Revenue and Expenditure Budget (APBN) as Non-Tax State Revenue (PNBP). Realization of revenue until November 2020 reached IDR 18.94 trillion or 97.87 percent of the target, and this was supported by the increase in Indonesian coal prices due to increasing global market demand (Ministry of Finance of the Republic of Indonesia, 2020). According to Law Number 9 of 2018, several objectives of PNBP management are to support Government policies to improve people's welfare, increase quality economic growth, and improve income distribution. Therefore, the significant contribution of coal to Indonesia's exports can be used as a reference to optimize the potential for coal exports from Indonesia to the RCEP area.

Indonesia must be able to prepare superior export products with high-quality standards and affordable prices to compete with other countries considering that Indonesia is not the only producer and exporter of coal in RCEP, especially in continuously accessing international markets. Therefore, this study analyzes the development of Indonesia's coal exports to 11 RCEP member countries from 2010-2019? Moreover, What is the factors influencing Indonesia's coal exports to the 11 RCEP countries?

Literature Review

International Trade

International trade is when countries sell goods and services to other countries. International trade occurs because the exchange of goods or services provides benefits between trading countries (Krugman & Obstfeld, 2003). Based on Salvatore in Tilova (2012), the benefits that can be obtained from international trade include:

1. A country can obtain goods that cannot be produced domestically to meet the demand for goods or services that cannot be produced locally due to limited production capabilities.

2. A country can specialize in a commodity, which can later be exported with cheaper products in exchange for expensive commodities if produced locally but cheaper by other countries.

3. There will be an expansion of demand and supply of a country so that national income will increase. This can increase economic growth, create new jobs and increase wages for the world's population, generate foreign exchange, and enable the transfer of technology that was not previously available domestically.

Krugman & Obstfeld (2003) state that the country's gains from trade are due to two fundamental reasons. First, countries trade because each country has different factors of production and technology. Second, countries trade to achieve economies of scale, meaning that if each country only produces a certain number of goods, they can produce these goods on a larger scale, and therefore production is more efficient than the country's efforts to produce all types of goods.

The export activities of a country's commodities occur because of the difference between domestic supply and domestic demand, known as excess supply. In other countries, excess supply is an import demand for other countries or is excess demand.

Theoretically, country A will export a commodity to another country (e.g., country B). A domestic price is lower because country A's production exceeds its domestic consumption or there is overproduction. Therefore, country A has the opportunity to export excess production to country B. Meanwhile, there is a supply shortage in country B because country B's domestic consumption exceeds its domestic production, so prices in country B are higher. In this condition, country B will buy the commodity from country A, whose price is relatively lower. Then there will be trade between the two countries so that the price received is the equilibrium price. Figure 2.1 explains the mechanism for the occurrence of international trade (Salvatore, 2013).

The Export Determinants

Exports are influenced by internal and external factors. According to Ekananda & Mahyus (2014), internal factors that affect exports are the number of products and domestic prices. Meanwhile, external factors influence international prices, exchange rates, and GDP of export destination countries. In addition, according to (Lubis, 2010). Internal factors include production capacity, prices in the domestic market, and various domestic policies. On the other hand, external factors that influence price in the international market, exchange rates, and the demand side of

the importing country can be seen from the production capacity of the destination country. In this study, the focus is more on external factors that affect exports. Distance between countries is also essential in international trade because it will affect the number of export costs incurred (Mankiw, 2010).

METHOD

This research will use annual secondary data from 2009 to 2019. This study focuses on eleven RCEP member countries. The countries in question are Australia, China, the Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, and Vietnam.

The secondary data used in this analysis were obtained from various sources. The value of coal exports in US$ from Indonesia to eleven RCEP countries and export prices are obtained from the United Nations International Trade Statistics Database (UN Comtrade). Then the 2010 constant Real GDP and the exchange rate between the destination country's currency and US$ were obtained from the World Bank, the distance between Indonesia and each destination country was obtained from Indonesia Distance World, and coal reserves were obtained from the US Energy Information Administration.

This research uses the descriptive analysis method and panel data regression using the gravity model to determine the effect of independent variables on the dependent variable. The parameters used in this study are the value of Indonesian coal exports as the dependent variable, and the independent variables are coal export prices, real GDP, exchange rates, geographical distances, and coal reserves of destination countries. The data processing was carried out using Stata software and Microsoft Excel.

RESULT AND DISCUSSION

Result

At the end of 2020, Indonesia will achieve economic integration by joining the RCEP FTA. RCEP will substantially remove tariff and non-tariff barriers on all trade in goods. Therefore, RCEP can provide several advantages that make it easier for Indonesia to export, such as opening market access and encouraging the entry of foreign investment (Gultom, 2020).

From 2010 to 2011, coal exports increased by 3.95 billion USD. One of the triggers was that Japan, as one of the central destination countries for Indonesia's coal exports, imposed restrictions on coal exports from China to Japan. The export restrictions are due to China prioritizing coal for its domestic development needs. So Indonesia's coal exports have increased (Petromindo, 2009). However, from 2011 to mid-2016, global economic activity weakened. This has caused China, the largest export destination for Indonesian coal commodities, to experience a slowdown in economic growth marked by a decline in its GDP. This slowdown was due to a decline in foreign demand, especially in the United States, due to economic instability after the global crisis. The weakening of China's economic growth caused the level of Indonesian coal exports to decline due to the low purchasing power of the Chinese people. Hence, the demand for coal in Indonesia decreased (Mardiana & Husaini, 2017). In the second half of 2016, coal prices soared, thus providing potential for the mining sector again.

This price increase was triggered by recovering crude oil prices, increasing domestic coal demand in Indonesia, and the return of new coal-fired power plants. In addition, China, as a competitor to Indonesia, has decided to make a policy to cut the working hours of its domestic coal production. This policy was implemented because China wanted to increase coal prices due to the high ratio of non-performing loans (NPL) in China's banking sector due to Chinese coal mining companies having difficulty paying their debts to banks (Indonesia Investments, 2018). Then from 2018 to 2019, there was a decline in Indonesia's coal exports because the Ministry of Energy and Mineral Resources (ESDM) determined that the sale of coal for domestic purposes or the Domestic Market Obligation (DMO) in 2018 was 25 percent (more significant). Then the previous year). Throughout 2017, the absorption of coal DMO was recorded at 97 million tons. This number is lower than the target required in the 2017 DMO, as much as 121 million tons. This means that as many as 364 million tons, or 78.96 percent of the total production in 2017, are still exported by miners. In 2018, the Ministry of Energy and Mineral Resources targeted domestic coal utilization 2018 could reach 121 million tons or a minimum of 114 million tons. If the miners do not reach the target, they will be subject to sanctions in the form of production cuts and a reduction in export quotas in 2019.

Data Estimation Results

In determining the best model, it is necessary to test the suitability of the model through several stages of testing involving the estimation of PLS, FEM, and REM. The results of this model suitability test can be seen in Table 4.1. The first test must be the Chow test to determine the best model between PLS and FEM. In this study,

the results of the Chow test showed that the value of the probability in the model is 0.0000, where this value is lower than the significance level with a significance level of five percent (0.05), then H0 is rejected. So the best estimation model in this test is FEM. The next stage is the Hausman Test to determine the best model between FEM and REM. The Hausman test results in this study indicate that the probability in the model is 0.0808, where this value is greater than the significance level with a significance level of five percent (0.05), meaning that H0 is accepted. So the best estimation model in this study is REM. The last test is the Lagrange Multiplier test to determine the best model between PLS and REM. In this study, the Lagrange Multiplier test results show that the probability value in the model is 0.0000, where the value is smaller than the significance level with a significance level of five percent (0.05), then H0 is rejected. Then the best estimation model in this test is REM. From the three model suitability tests, it can be concluded that the best model in this study is REM.

Table 1. Model Conformity Test Results

Chi-square Probability Model Fit Test	Chi-square probability	Best Model
Chow Test	0,0000*	FEM
Hausman Test	0,8080*	REM
Lagrange Multiplier Test	0,0000*	REM

Information:)* = Significant with a significance level of five percent (0.05)

After testing the suitability of the model, then it is necessary to test the classical assumptions. The classic assumption test in this study is the autocorrelation and multicollinearity test. In this study, the test normality and heteroscedasticity are not needed because the estimation model used is REM, where this model has the assumption that it is generally distributed if the number of research observations is more significant than thirty (N > 30) and the component of REM error at each level of the independent variable is the same (homoscedastic) (Gujarati, 2003).

The autocorrelation test is used to see whether there is a correlation between errors in a certain period (et) and the previous period (et-1). This study uses the Woodridge Test to detect autocorrelation problems. The results of the autocorrelation test in this study showed a probability value of 0.0048, where this value was less than the five-level significance percent, then H0 is rejected. The results of this test indicate that the model indicates an autocorrelation problem. If

there is a correlation between independent variables, then the multicollinearity test is used.

The multicollinearity test in this study used the Pearson Correlation Test. The model does not indicate multicollinearity if the correlation value is not greater than |0.8|. On the contrary, if the correlation value is more significant than |0.8|, then the model indicates the existence of multicollinearity. The results of the Pearson Correlation Test in this study can be seen in Table 4.2. These values are smaller than |0.8|. Therefore this model does not indicate multicollinearity.

Table 2. Multicollinearity Test Results

	Ln_X	EP	Ln_GDP	Ln_KRS	DIST	Ln_CAB
Ln_X	1,0000					
EP	0,2001	1,0000				
	Ln_X	EP	Ln_GDP	Ln_KRS	DIST	Ln_CAB
Ln_GDP	0,3301	0,0383	1,0000			
Ln_KURS	0,2842	-0,052	-0,1227	1,0000		
DIST	0,1633	0,3283	0,7123	-0,106	1,0000	
Ln_CAB	-0,454	-0,189	0,2916	-0,328	0,1422	1,0000

The results of the model suitability test show that the best estimation model that can be used in this study is REM. After testing the classical assumption, the test results show that the model indicated an autocorrelation problem. Repair of classical assumptions for this model is carried out using the Generalized Least Square (GLS) method. GLS efficiently estimates data with model errors autocorrelation (GLS) (Iswati, Syahni, & Maiyastri, 2014).

Table 3. REM Classic Assumption Improvement Results

Variable	Coefficient	Prob
EP	32,34966*	0,021
Ln_GDP	1,417285**	0,000
Ln_KURS	0,1641398*	0,024

DIST	-0,0004435**	0,005
Ln_CAB	-0,6424431**	0,000
Konstanta	-15,2221	0,009
Prob>F		0,0000
R^2		0,5032
rho		0,9259

Information:)*;** = Significant with a significance level of five percent (0.05); one percent (0.01)

Based on Table 3, the results of the regression equation are as follows:

From the regression results above, it can be interpreted:

Ln_X = -15,221 + 32,3497EP + 1,4173ln_GDP + 0,1641ln_KURS – 0,0004DIST – 0,6424ln_CAB

1. The value of Indonesian coal exports to 11 RCEP countries is -15.22 percent if the variables of export prices, real GDP, exchange rates, geographical distances, and coal reserves of destination countries are zero, ceteris paribus;
2. An increase in export prices by one USD/kg or one USD/ton, significantly increasing the value of Indonesian coal exports to 11 RCEP countries by 3234.96 percent or 3.23 percent, caters paribus;
3. An increase in the real GDP of the destination country by 1 percent, significantly increasing the value of Indonesia's coal exports to the 11 RCEP countries by 1.41 percent, ceteris paribus;
4. An increase in the exchange rate by 1 percent, significantly increasing the value of Indonesia's coal exports to the 11 RCEP countries by 0.16 percent, ceteris paribus;
5. Increasing the geographical distance by 1 km, significantly reducing the value of Indonesia's coal exports to the 11 RCEP countries by 0.044 percent, ceteris paribus;

6. Increase in coal reserves of destination countries by 1 percent, significantly reducing the value of Indonesia's coal exports to 11 RCEP countries by 0.64 percent, ceteris paribus.

After improving the model, the next step is to perform statistical tests on the model simultaneously or partially by using the simultaneous significance test (F-test), partial test (t-test), and the coefficient of determination test (R^2). The final regression results in this study can be seen in the results of improving the classical assumptions of REM estimation in Table 4.3. In the regression results, the significance test simultaneously shows a probability value (Prob>F) of 0.0000 at a five percent significance level. The probability value indicates that globally the independent variable in the model affects the variable tied up. These results are supported by the results of the partial test (t-test), where all independent variables have a significant influence on the dependent variable, where the probability value of each variable is 0.0021 (EP), 0.009 (GDP), 0.000 (EXCHANGE), 0.005 (DIST), and 0.000 (CAB) with a significance level of five percent. Then the R^2 value in the estimation results shows a figure of 0.5032 or 50.32 percent. The value of R^2 states that the independent variables in this model can explain the dependent variable by 50.32 percent. While other variables outside the model can explain 49.68 percent.

Discussion

The Effect of Export Prices on the Value of Indonesian Coal Exports. Based on the research hypothesis, export prices positively affect the value of Indonesian coal exports. The results of previous studies (Muharami & Novianti, 2018) and (Hakam & Firmansyah, 2019) state that an increase in export prices illustrates a commodity's quality. An increase in prices will encourage the value of commodity exports to increase in the international market. According to (Mejaya, Fanani, & Mawardi, 2016), if the price in the global market is more significant than that in the domestic market, the number of commodities exported will increase. Thus the value of exports and export prices have a positive correlation. In this study, the export price variable has a significant positive effect on the value of Indonesian coal exports. These results indicate that an increase in export prices by 1usd/kg or 1 USD/ton will increase the value of Indonesian coal exports by 3234.96 percent or 3.23 percent, assuming all other independent variables are constant. The accordance with a hypothesis in this study is regarding the relationship between export prices and the value of Indonesian coal exports to 11 RCEP countries.

The Effect of Real GDP on Indonesia's Coal Export Value. Real GDP is capable and more accurate in representing a country's ability to meet the needs of its population.

The hypothesis in this study, the real GDP of the destination country has a positive effect on the value of Indonesia's coal exports. Previous research supports that export destination countries' real GDP can increase exports' value. Indonesia. According to research by Muharami & Novianti (2018), Nopeline (2018), Ni'mah (2018), and Amrullah (2020), increasing the real GDP of importing countries will encourage people to consume more goods so that demand for imported goods and services from destination countries exports are getting bigger. In the gravity model, trade flows between two countries are determined by economies of scale and distance. Trade flows should be positively related to economies of scale, measured by GDP, and negatively related to the distance between the two countries (Chaney, 2011).

In this study, the real GDP variable significantly positively affects the value of Indonesia's coal exports. These results indicate that an increase in export prices of 1 percent will increase the value of Indonesian coal exports to the 11 RCEP countries by 1.41 percent, assuming all other independent variables are constant. This is following the hypothesis on this study examines the relationship between real GDP and the value of Indonesia's coal exports to 11 RCEP countries.

Effect of Real Exchange Rate on Indonesian Coal Export Value. The exchange rate is the price of one country's currency against another. The exchange rate is an essential factor in international trade, both imports and exports because it can express the rate at which we can trade goods from one country for goods from other countries. Therefore, the greater or the smaller the real exchange rate will affect the amount of trade carried out by a country. Based on research (Hakam & Firmansyah, 2019), if the LCU strengthens against the USD, the demand for coal exports will increase. On the contrary, if the LCU weakens against the USD, the demand for coal exports will decrease. In this study, an increase in the exchange rate of the destination country against the USD by 1 percent will increase the value of Indonesia's coal exports to the 11 RCEP countries by 0.16 percent, assuming all other independent variables are constant. These results are under the hypothesis built previously, namely, the real exchange rate of 11 coal export destination countries (LCU) against the USD has a positive effect on the value of Indonesia's coal exports. If the LCU strengthens against the USD, the price of domestic goods becomes relatively more expensive so that the domestic population will buy a lot of imported goods from exporting countries (Mankiw, 2010).

The Effect of Geographical Distance on the Value of Indonesian Coal Exports The distance between two trading countries is one of the obstacles to international trade practices. Distance is a proxy for transportation costs between the two countries.

Based on the gravity model, distance has a negative relationship to exports. The gravity model has been used in several studies on international trade, especially for exports. Based on research by Wahyudi & Anggita (2015), Binh, Duong, & Cuong (2013), Chaney (2011), and Li, Song, & Zhao (2007), when the distance between the exporting country and the importing country is getting further, it will reduce the value of exports.

In this study, the distance variable harms the value of Indonesia's coal exports. The results show that the distance between Indonesia and the destination country by 1 km will reduce the value of Indonesia's coal exports to the 11 RCEP countries by 0.044 percent, assuming all other independent variables are constant. These results follow the hypothesis that was built previously. Therefore, as an exporting country, Indonesia must decide on the best trading partner to make costs efficient for transportation and logistics.

The Effect of Destination Coal Reserves on Indonesia's Coal Export Value. A country's coal reserves are an indicator of the country's coal energy security. According to the Asia Pacific Energy Research Center (APERC), energy security is a condition of ensuring the availability of energy and public access to energy at affordable prices in the long term.

In this study, the coal reserves of the destination country have a significant adverse effect on the value of Indonesia's coal exports. These results show that every increase in reserves destination country's coal by 1 percent will increase the value of Indonesia's coal exports to the 11 RCEP countries by 0.64 percent, assuming all other independent variables are constant. Thing this follows the hypothesis in this study regarding the relationship between coal reserves and the value of Indonesia's coal exports to 11 RCEP countries. Based on BP data (2020), coal reserves in Australia is the largest RCEP area, with 149,049 million tons in 2019. Due to the ample coal reserves in Australia, Australia exports more than imports.

CONCLUSION

The RCEP area has enormous economic potential. The potential resulting from this market integration is approximately 30% of the world's population, 30% of the world's gross domestic product (GDP), 27% of world trade, and 29% of world foreign investment (FDI). The signing of the RCEP has signalled to the world that its 15 member countries are highly committed to working together to strive for the recovery of the world economy and that global trade and economic relations are still developing. It is believed that the formation of this FTA will positively impact the

economies of ASEAN countries, including Indonesia. The benefit of RCEP for Indonesia is the potential for opening up market access and encouraging the entry of FDI. With the benefits of this economic integration, Indonesia must know what factors affect exporting its leading commodities to RCEP member countries.

This study analyzes the influence factors that influence coal exports from Indonesia to 11 RCEP countries to export optimally with the following conclusions: first, an increase in the export price variable increases the value of coal exports to 11 RCEP countries, namely Australia, and China, the Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Vietnam, and Cambodia. Second, the real GDP variable increased the value of coal exports to 11 RCEP countries: Australia, China, the Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Vietnam, and Cambodia. In this study, real GDP used is real GDP at constant 2010 prices. Third, an increase in the exchange rate variable increases the value of coal exports to 11 RCEP countries are Australia, China, Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Vietnam, and Cambodia. In this study, the exchange rate is the exchange rate of the domestic currency of the export destination country against the exchange rate of the United States dollar as a reference for international trade. Fourth, an increase in the geographical distance variable reduces the value of coal exports to 11 RCEP countries: Australia, China, the Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Vietnam, and Cambodia. In this study, the geographical distance used is the distance between Indonesia and the export destination country in kilometres. Fifth, an increase in the variable coal reserves decreased the value of coal exports to 11 RCEP countries: Australia, China, the Philippines, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Vietnam, and Cambodia. In this study, the coal reserves of export destination countries are the coal reserves as an indicator of energy security.

REFERENCES

Amrullah, M. H. (2020). Analisis determinan ekspor batu bara ke lima negara tujuan utama tahun 2004-2018. Yogyakarta: Institutional Repository UIN Sunan Kalijaga.

Arinaldo, D., & Adiatma, J. C. (2019). Dinamika batu bara Indonesia: Menuju transisi energi yang adil. Jakarta: Institute for Essential Services Reform (IESR).

ASEANstats. (2019). Trade in goods, annually, HS 2-digit up to 8-digit, in US$. Diambil kembali dari https://data.aseanstats.org/trade annually

Baltagi, B. H. (2005). Econometric analysis of panel data, 3rd edition. New York: John Wiley & Sons Inc.

Binh, D. T., Duong, N. V., & Cuong, H. M. (2013). Applying gravity model to analyze trade activities of vietnam. Hanoi: Foreign Trade University.

Boedoyo, M. S. (2012). Analisis ketahanan energi di Indonesia. Jakarta: Pusat Teknologi Pengembangan Sumberdaya Energi.

BP p.l.c. (2020). BP statistical review of world energy 2020. London: BP p.l.c.

Can, E., & Hastiadi, F. (2020). RCEP dari perspektif Indonesia: Menguji faktor kedekatan pembangunan sebagai strategi peningkatan ekspor. Jurnal Ekonomi dan Kebijakan Publik, 11(2), 79-92.

Carolina, T. L., & Aminata, J. (2019). Analisis daya saing dan faktor yang mempengaruhi ekspor batu bara. Diponegoro Journal of Economics, 1(1), 9-21.

Chaney, T. (2011). The gravity equation in international trade: An explanation. Journal of Political Economy, 126(1), 150-177.

Ekananda, M. (2014). Ekonomi internasional. Jakarta: Erlangga.

Ewaldo, E. (2015). Analisis ekspor minyak kelapa sawit di Indonesia. Perdagangan, Industri dan Moneter, (3)1, 10-15.

Fawthrop, A. (2020). Profiling the top five countries with the world's largest coal reserves. Retrieved from www.nsenergybusiness.com/features/countries-largestcoal-reserves/

Gujarati, D. N. (2003). Basic econometrics. New York: The McGraw-Hili Companies,Inc.

Gultom, D. (2020, November). Perjanjian regional comprehensive economic partnership (RCEP): Peluangnya bagi Indonesia dan langkah pemanfaatannya. Jakarta: Center for Indonesian Policy Studies.

Gunara, M. (2017). Potensi batu bara sebagai sumber energi alternatif untuk pengembangan industri logam. Jurnal Seri Seminar Nasional TEKNOKA, 2(2), 22-27.

Hakam, L. I., & Firmansyah. (2019). Analisis daya saing dan faktor-faktor yang memengaruhi permintaan ekspor batu bara Indonesia di negara tujuan ekspor utama. Diponegoro Journal of Economics, 31-46.

IDX Channel. (2020). Cegah oversupply batu bara, ini saran Perhapi. Jakarta: IDX Channel TV. Indonesia Investments. (2018). Batubara: Indonesia. Retrieved from www.indonesiainvestments.com/id/bisnis/komoditas/batubara/item236 ?

Iswati, H., Syahni, R., & Maiyastri. (2014). Perbandingan penduga ordinary least squares (OLS) dan generalized least squares (GLS) pada model regresi linier dengan regresor bersifat stokastik dan galat model berautokorelasi. Jurnal Matematika, 3(4), 168-176.

Kementerian Keuangan Republik Indonesia. (2020). APBN kita: Kinerja dan fakta. Jakarta: Kementerian Keuangan Republik Indonesia.

Kementerian Perdagangan Republik Indonesia. (2020). Konferensi pers penandatanganan perjanjian RCEP. Jakarta: Kementerian Perdagangan Republik Indonesia.

Krugman, P. R., & Obstfeld, M. (2003). International economics: Theory and policy. Boston: Pearson Education.

Li, K., Song, L., & Zhao, X. (2007). Component trade and china's global economic integration. Canberra: ANU Press.

Lubis, A. D. (2010). Analisis faktor yang mempengaruhi kinerja ekspor Indonesia.

Buletin Ilmiah Litbang Perdagangan, (4)1, 1-13. Mankiw, N. G. (2010). Macroeconomics, 7th Edition. Toronto: Worth Publisher.

Mardiana, N., & Husaini, A. (2017). Pengaruh perlambatan perekonomian China terhadap perdagangan internasional Indonesia periode tahun 2011-2016. Jurnal Administrasi Bisnis, 50(1), 200-209.

Mejaya, A. S., Fanani, D., & Mawardi, M. K. (2016). Pengaruh produksi, harga internasional, dan nilai tukar terhadap volume ekspor. Jurnal Administrasi Bisnis, 35(2), 20-29.

Muharami, G., & Novianti, T. (2018). Analisis kinerja ekspor komoditas karet Indonesia ke Amerika Latin. Jurnal Agribisnis Indonesia, 6(1), 15-26.

Ni'mah, S. Z. (2018). Analisis ekspor minyak kelapa sawit dan faktor yang mempengaruhinya. Semarang, Indonesia: Universitas Diponegoro.

Nopeline, N. (2018). Determinan perdagangan ekspor Indonesia ke negara tujuan utama ekspor 2000-2015. Jurnal Mitra Manajemen, 2(4), 329-339.

Petromindo. (2009). Indonesian oil, mining and energy. Retrieved from https://www.petromindo.com/

Ragimun. (2018). Kerjasama perdagangan barang pada forum RCEP bagi Indonesia. Jurnal Ekonomi dan Kebijakan Publik, 9(1), 67-81.

Sa'adah, A. F., Fauzi, A., & Juanda, B. (2017). Peramalan penyediaan dan konsumsi bahan bakar minyak Indonesia dengan model sistem dinamik prediction of fuel supply and consumption in Indonesia with system dynamics. Jurnal Ekonomi dan Pembangunan Indonesia, 17(2), 118-137.

Salvatore, D. (2013). International economics, 11th ed. United States: New York: John Wiley & Sons.

Silalahi, S. A., & Saragih, J. P. (2010). Kebijakan pendukung batubara sebagai komponen diversifikasi energi tahun 2025. Jurnal Ekonomi dan Kebijakan Publik, 1(1), 2546.

Sukirno, S. (2016). Mikroekonomi teori pengantar, edisi ketiga. Jakarta: Raja Grafindo Persada.

Sukmadinata, N. S. (2008). Metode penelitian pendidikan. Bandung: Remaja Rosdakarya.

Tilova, R. (2012). Analisis faktor-faktor yang memengaruhi permintaan batu bara Indonesia di empat negara tujuan utama. Bogor: IPB Repository.

United Nations Conference on Trade and Development. (2019). Global Transport Costs for International Trade. Retrieved from https://unctadstat.unctad.org/EN/TransportCost.html

Ustriaji, F. (2016). Analisis daya saing komoditi ekspor unggulan Indonesia di pasar internasional. Jurnal Ekonomi Pembangunan, 14(2), 149-159.

Wahyudi, S. T., & Anggita, R. S. (2015). The gravity model of Indonesia bilateral trade. International Journal of Social and Local Economic Governance (IJLEG), 1(2), 153-156.

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