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DECARBONIZATION IN THE SHADOW OF NEOLIBERAL DEVELOPMENTALISM: THE CASE OF TURKEY'S COAL INDUSTRY

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ABSTRACT

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The Paris Agreement, signed in 2015, was approved by the Turkish Grand National Assembly (TBMM) on November 10, 2021, after a delay of 6 years. Finally, Turkey has become a party to this Agreement. The Agreement's main objective is undoubtedly to combat climate change and, in parallel, to reduce carbon emissions. It aimed to limit the global temperature change to 1.5 degrees by the end of this century. Paris Agreement has paved the way for a progressive transformation from carbon-intensive sources to clean, renewable energy. The International Energy Agency's (2021a) road map for the exit from carbon has emphasized that policy revisions should be made in various fields at the national and international levels.

In addition to environmental and energy policies, a green economy has taken its place on the agenda with the Green Deal being enforced by the European Union. This process paid particular attention to the role of national governments and their policy priorities. In this context, some countries undertaking the decarbonization process are determining their commitments and policies in parallel with international agreements. On the other hand, other countries have made less progress than others.

Turkey, defined as a developing country, has taken various steps and has adopted action plans in line with international climate agreements. For instance, Turkey's National Renewable Energy Action Plan (2014) supports this agenda. Likewise, targets for renewable energy have been specified with a focus on sustainability in development plans (Eleventh National Development Plan, 2019). However, carbon emission rates have increased since 1990. While developments regarding the fight against global climate change and the transition to renewable

energy continue, the dependence on fossil fuels continues, and a clear roadmap has not been established. Turkey, a developing economy with increasing energy demands, has found its solution in energy imports. In 2020, the country became a net importer of energy with a rate of 70.0% (IEA, 2021b). At that time, this situation concerned energy security. Reducing the effects of climate change, being a part of the international trend, and showing the adverse results of fossil fuels are all significant themes in the discussion of Turkey's decarbonization process. This study, as mentioned above, endeavors to answer the question of why it is that especially developing countries have shown limited progress in the decarbonization process by analyzing the Turkish case at the national level.

In light of the background above, the main argument of this thesis is that the reason Turkey has not made sufficient progress is because of the neoliberal developmental model it has adopted. This economical approach prioritizes rapid growth which is carbon intensive and has left environmental and renewable energy policies in the background. The study examines Turkey's dependency on fossil fuels to support this argument. Data was collected from financial reports and statistics on the adverse economic effects of coal and national plans, which highlight various incentives for the coal industry.

According to this analysis using qualitative and quantitative research data, the neoliberal developmentalist approach shows a negative correlation and contradictions between economic, environmental, and renewable energy policies. The resulting recommendation of this analysis is to change the status quo by adapting the current growth model into a greener capitalist development model. As a result, Turkey will be compatible with Paris targets by reducing its dependence on fossil fuels and, most significantly, gradually phasing out coal. For this reason, it has been concluded that it will be possible to change this course through the evolution of Turkey's growth model to a greener capitalist development model.

Keywords: Political economy, neoliberal developmentalism, climate change, brown capitalism, fossil dependency, renewable energy transition

ÖZ

NEOLİBERAL KALKINMACILIĞIN GÖLGESİNDE DEKARBONİZASYON: TÜRKİYE'NİN KÖMÜR SEKTÖRÜ ÖRNEĞİ

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2015 yılında imzalanan Paris Anlaşması, 6 yıl gecikmeli olarak 10 Kasım 2021 tarihinde Türkiye Büyük Millet Meclisi'nde (TBMM) onaylanmıştır.Nihayet, Türkiye de bu anlaşmanın tarafı olmuştur. Anlaşma'nın temel hedefi şüphesiz ki iklim değişikliği ile mücadele ve bunun paralelinde karbon emisyonu azaltımı sağlanmaktır. Bu yüzyılın sonuna kadar küresel sıcaklığın 1,5 derece ile sınırlandırılması hedeflenmektedir. Paris Anlaşması, karbon yoğun kaynaklardan temiz enerjiye, yani yenilenebilir enerji kaynaklarına doğru ilerleyen bir dönüşüm için uygun zemini hazırlamıştır. Uluslararası Enerji Ajansı'nın (2021a) karbondan çıkış için ortaya koymuş olduğu yol haritasına göre, gerek uluslararası boyutta çabaların artması planlanırken gerek ise ulusal boyutta başta enerji olmak üzere çeşitli alanlara ilişkin politikalarda radikal değişikliklere gidilmesi gerektiğini vurgulamıştır. Avrupa Birliği'nin yürürlüğe koyduğu Yeşil Mutabakat ile birlikte yeşil ekonomik dönüşüm gündemdeki yerini almıştır. Bu süreçte yerel hükümetlerin rolü ve politika önceliklerine özel olarak önem atfedilmiştir. Bu bağlamda, bazı ülkeler yenilenebilir enerji dönüşümü ile gerçekleşen karbonsuzlaşma sürecinde; uluslararası anlaşmalara paralel olarak taahhütlerine ve politikalarına yön vermektedir. Diğer bir yandan ise bazı ülkelerin hangi nedenler ile diğer ülkelere kıyasla daha az ilerleme kaydettikleri literatürde tartışılmaktadır.

Gelişmekte olan bir ülke olarak nitelendirilen Türkiye özelinde bakıldığında, yenilenebilir enerji dönüşümü için ciddi adımlar atılmış ve uluslararası anlaşmalara taraf olup bunlara hizmet eden eylem planları ortaya konmuştur. Örneğin Türkiye Ulusal Yenilenebilir Enerji Eylem Planı (2014) bunu desteklerken, öte yandan kalkınma planlarında da sürdürülebilirliğe dikkat çekilerek yenilenebilir enerji için de hedefler belirtilmiştir (On Birinci Ulusal Kalkınma Planı, 2019). Fakat, karbon

emisyon oranları 1990'dan bu yana artmıştır. Küresel iklim değişikliği ile mücadele ve yenilenebilir enerji geçişi sürecine ilişkin gelişmeler devam ederken, fosil yakıtlara olan bağımlılık da devam etmekte ve net bir yol haritası oluşturulamamıştır. Fosil yakıtların sebep olduğu emisyonlar çevresel bozulmaları tetiklerken, gelişmekte olan ekonomisi ve artan enerji ihtiyacı ile birlikte Türkiye çareyi enerji ithalatında bulmuştur. 2020 yılında %70,0'lik bir oran ile net bit ithalatçı konumundadır (IEA, 2021b).

Bu durum ise bir de enerji güvenliğine atıfta bulunmaktadır. Hâlihazırda hem iklim değişikliğinin etkilerini hafifletmek hem uluslararası trendin bir parçası olmak, hem de fosil yakıtların sebep olduğu negatif etkileri göstermek için Türkiye'nin karbondan çıkış sürecini analiz etmek önem arz etmektedir. Bu çalışmada, yukarıda da bahsedildiği gibi özellikle gelişmekte olan ülkelerin de-karbonizasyon sürecinde neden yeterince ilerleme kaydedemedikleri sorusuna Türkiye örneğinin ulusal düzeydeki analizi üzerinden cevap verilecektir.

Bahsedilen arka plan ışığında bu tezin temel savı, Türkiye'nin bu süreçte yeterli seviyede yol kat edememesinin nedeni benimsemiş olduğu neoliberal kalkınmacı modeldir. Karbon yoğun bir şekilde, hızlı büyümeyi ön planda tutan bu ekonomik yaklaşım, çevre ve yenilenebilir enerji politikalarını geri planda bırakmıştır. Bu savı desteklemek için çalışmada fosil yakıtlara olan yatkınlığın devam etmesi irdelenerek; veri ise kömür sektörüne ilişkin sağlanan çeşitli teşviklerin yer aldığı ulusal planlar, finansal raporlar ve kömürün yol açtığı negatif ekonomik etkilere ilişkin istatistiklerden toplanacaktır.

Nitel ve nicel araştırma verilerinin eş zamanlı kullanılarak ulaşılan analizin ışığında, neoliberal kalkınmacı olarak nitelendirilen yaklaşım, ekonomi, çevre ve yenilenebilir enerji politikaları arasında negatif bir korelasyona ve çelişkilere sebep olduğu belirlenmiştir. Sonuç olarak, Türkiye'nin fosil yakıtlara olan bağımlılığını azaltması ve en önemlisi kömürden kademeli olarak çıkması durumunda Paris hedeflerine daha uyumlu olabilecektir. Bunun için ise, Türkiye'nin büyüme modelinin daha yeşil kapitalist bir kalkınma modeline evirilmesi aracılığıyla bu gidişatın değiştirilmesinin mümkün olacağı sonucuna varılmıştır.

Anahtar kelimeler: Politik ekonomi, neoliberal kalkınmacılık, iklim değişikliği, kahverengi kapitalizm, fosil bağımlılık, yenilenebilir enerji dönüşümü.

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Ecem Evrensel

İzmir, 2022

TEXT OF OATH

I declare and honestly confirm that my study, titled “Decarbonization in the Shadow of Neoliberal Developmentalism: The Case Of Turkey’s Coal Industry,” and presented as a Master’s Thesis, has been written without any assistance inconsistent with scientific research ethics. All arguments and ideas are indicated in the text and specified in the list of references.

Ecem Evrensel

Signature

Date, 2022

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LIST OF ABBREVIATIONS

AKP : Justice and Development Party

APC : The Announced Pledges Case

AR5 : IPCC Fifth Assessment Report

BASIC : Brazil, South Africa, India, and China

BAU : Business as Usual

BRICS : Brazil, Russia, India, China and South Africa

CANZ : Canada, Australia and New Zealand

CBDR-RC : The Principle of Common but Differentiated Responsibilities and Respective Capabilities

CCPI : Climate Change Performance Index

CDR : Climate Data Record

COP : Conference of the Parties

DB : Development Bank

ECLAC : The Economic Commission of Latin America

EIA : Energy Information Management Administration

EML : The Enactment of the Electricity Market Law

EMRA : Energy Market Regulatory Authority

Eq : Equivalent

EU : European Union

FDI : Foreign Direct Investment

FYP : Five-Year Plans of China

GCF : Green Climate Fund

GDP : Gross Domestic Product

GHG : Greenhouse Gas Emissions

GHG : Greenhouse Gas

GSI : Global Subsidies Initiative

GW : GigaWatt

HEPP : Hydroelectric Power Plants

IISD : The International Institute for Sustainable Development

IMF : International Monetary Fund

INC : The UN Intergovernmental Negotiation Committee

IPC : Istanbul Policy Center

IPCC : Intergovernmental Panel on Climate Change

IRENA : International Renewable Energy Agency

ISI : Import Substitution Industrialization

MFA : Turkish Ministry of Foreign Affairs

Mt : Megaton

NDC : Nationally Determined Contributions

NGO : Non- Governmental Organization

NoN : Non-nuclear

NZE : Net by Zero

OECD : Organization for Economic Co-operation and Development

OPEC : Organization of Petroleum Exporting Countries

PA : Paris Agreement

PEMM : Political Economy Mapping Methodology

PV : Photovoltaic

PWC : Post Washington Consensus

QUAL : Qualitative

QUAN : Quantitative

R&D : Research and Development

RD&D : Research and Development Dissemination

RE : Renewable Energy

RENAC AG : The Renewables Academy

STEPS : The Stated Policies Scenario

SWCC : Second World Climate Conference

tCO2 : Ton carbon dioxide

TINA : There is no alternative

TKİ : Turkey Coal Enterprises Institution

TRY : Turkish Lira

TTK : Tukey Hard Coal Institution

TURKSTAT : Turkish Statistical Institute

UK : United Kingdom

UN : United Nations

UNCEP : United Nations Conference on Environment and Development

UNFCCC : United Nations Framework Convention on Climate Change

US : United States

USD : United States Dollar

USSR : The Union of Soviet Socialist Republics

VAT : Value Added Tax

SYMBOLS

$	: Dollar
%	: Percentage
°C	: Degree Celsius

INTRODUCTION

At present, initiatives surrounding climate change issues, which are highly related to the political economy and its energy policies, are becoming more numerous under the influence of the Paris Agreement. The primary goal is a decrease in the rate of greenhouse gases to alleviate the effects of climate change and environmental degradation. According to International Energy Agency (IAE) data (2021a), the common aim among the Paris Agreement's member countries should include limiting global warming to under 2 ° C degrees. This common aim, which the IAE highlights, is a very significant step that should be taken. The usage of fossil fuels (natural gas, coal, and petroleum) in the production of electricity is leading to an increase in the rate of "anthropogenic" greenhouse gas emissions. Every day fossil fuel consumption, triggers many environmental problems such as melting glaciers, rising seas, and agricultural drought (Ayanoğlu, 2018:31-33). For instance, in the case of Turkey, the Greenhouse Gas Emission Statistics 1990-2019 report by TURKSTAT (2021) shows the total greenhouse gas emission per capita in Turkey was 4 tons CO2 eq in 1990- and 6.4-tons CO2 eq in 2018, while it was declared as 6.1 tons of CO2 eq in 2019. Although there was a reduction in 2019, it is well above the rates in 1990. The biggest share of greenhouse gas emissions comes from energy-related emissions at 72%, which is even more significant because it once again highlights Turkey's commitment to and dependency on fossil fuel consumption.

In line with this, another significant point comes with fossil fuel usage - specifically the inadequacy and scarcity of these resources. Although it is an issue that concerns all countries, countries which are net importers raise the most concern about energy supply security. Energy, which is already of critical significance for growing populations and economies, has been used as political leverage by those producing energy, such as during the energy crises in the 1970s. Today this political tool has once again demonstrated its significance. Especially import-dependent countries have learned lessons (Ayanoğlu, 2018:31-33). In this context, if viewed from the perspective of Turkey as a developing country, the energy sector report published by the Energy Market Regulatory Authority (EMRA) (2021) and International Energy Agency (2021b) report show that Turkey has an import dependency of almost 99% for

natural gas, 93% for crude oil and petroleum products, 58% for coal, and 100% for nuclear (although usage is rare) (IEA, 2021b).

In this respect, the most significant problem that comes to the forefront, as revealed by the numbers, is how Turkey's import rate is at a critical point. Turkey's foreign dependency ratio on primary energy has been increasing over the years; it almost reached 70.0% in 2020 (IEA, 2021b). Considering these numerical data, it should be emphasized how important energy supply security is for a country that is a net importer and developing country while understanding how much foreign dependency on energy there is (Hale, 2022: 453). In the relevant period, Turkey took steps to increase both coal and renewable energy production (especially hydro) to establish energy supply security - as targeted in the Electricity Energy Market and Supply Security Strategy Document (2009). In this regard, 2002 was declared the "year of coal," and in 2017, the emphasis was placed on “a strong economy and national security” through the "National Energy and Mining Policy" (2017). According to the GSI report (2015) on renewable energy in Turkey, the exploitation of renewable energy resources in Turkey has been restricted to hydropower plants despite having a huge potential in other renewable energy sources. The Turkish government has continued to emphasize energy security in its strategy for the sector, hence its fixation on coal is owing to the assumption that coal is cheaper despite the carbon emissions and the adverse effects on the environment, specifically climate change.

From an economic perspective, the "Green Deal" designed and put forward by the EU is currently on the agenda as a roadmap. In its essence, the Green Deal plans to reach climate-neutrality by 2050 to reduce climate change and environmental degradation, and in parallel, provides a modern renewable/sustainable economic growth model to cover all sectors. To achieve these main objectives, while a series of standards are gradually created for member countries, it also creates a series of secondary effects on non-member countries (Official website of the European Union).

Although they have not been implemented yet, taxes are planned to be applied to goods from non-EU countries by means of the "***carbon adjustment mechanism***" at the designated border (TÜSİAD, 2021). In case such a situation is realized, Turkey will be exposed to massive carbon costs on its exports. There are two possible scenarios; one based on the ton price of carbon at 30 Euro/tCO2e and the other on the ton price of carbon at 50 Euro/tCO2eIn the case of 30 Euro/tCO2, a -1.1 Billion Euro

invoice will be generated. If 50 Euro/tCO2, a -1.8 Billion Euro tax will be paid (TUSIAD, 2021).

The major policy issues, as mentioned above, are mitigating the effects of climate change, acting in coherence with the international consensus of the Paris Agreement, energy supply security, and a sustainable green economy through modern renewables. These highlighted problems refer to the existence of fossil fuels and the countries' decarbonization. Under the circumstances, if countries intend to follow the international trend, first of all, the high-level consumption of fossil fuels should be decreased gradually. The year 2053 has been determined as the greenhouse gas net-zero emission target for the Turkish Republic. To achieve this goal, the country needs to transform its carbon-intensive economy into a green economic model, and one of the key sectors of this transformation will undoubtedly be energy (İşeri, 2023). According to Newell and Paterson (2010), "decarbonization of the economy" known as climate capitalism is presented as a possible last exit and as a bridge to catch current developments adopted by the global political economy. Instead of eliminating capitalism, it makes it possible to catch the international trend by adapting capitalism to green policies and reinterpreting it in light of regulations (Newell and Paterson, 2010:1). The essence of this approach is to explore how international initiatives as well as national governments, considering their political and economic structures, could play major roles in the speed and effectiveness of the coming energy transition. In this regard, the existing literature draws attention to the fact that some countries have made further progress in this process, while others have made limited progress for various complex reasons (CCPI, 2020), as in the case of Turkey.

Although Turkey signed the Paris Agreement in 2015, it was not ratified by the Turkish Grand National Assembly until 6 years later in 2021. With its growing population and developing economy, Turkey has advanced trade relations with the European Union. Increasing energy security, mitigating the effects of climate change, and, most importantly, transitioning to a sustainable green economy will align the country with the international trend. However, the existing literature has argued that Turkey has not come a long way in this process. When Turkey entered into an economic structural transformation in which the economy was liberalized, the effect of liberalization meant that the industrial structure was shaped to "self-produce all its needs" and thus increased the exploitation of coal mining and other energy resources

to meet the country's energy needs (Aşıcı, 2015). As a result, this transformation meant that the share of agriculture in production was rapidly decreasing, and employment was at the forefront of the transformation. However, this transformation in the economic structure has an impact on the environment. For instance, the government sees environmental and labor standards as barriers to economic growth. As Aşıcı (2015) argues , this is based on the fact that the policies surrounding the transformation of the economic structure emphasize the need to direct industrial policy and regulatory tools to economic growth at all costs.

From the perspective of Aşıcı, the unsustainability of Turkey's strategic economic growth plan is far from accidental as it is the result of policy (Aşıcı, 2015). Turkey's focus on low-value-added products in energy and pollution-intensive sectors, such as coal mining, appeals to the private sector by waiving environmental regulations. This results in significant exploitation of natural resources and carbon-oriented growth at the point where the understanding of neoliberalism and developmentalism develop parallelly (İseri and Uygurtürk, 2021:2-4). Under these circumstances, this thesis' major aim is to analyze the country's decarbonization process at the agent level from a general framework. This thesis hypothesizes that a new economic approach, neoliberal developmentalism based on carbon-oriented growth, leads to Turkey's weak progress in this process because the growth model is based on carbon, which causes policy dilemmas. Accordingly, the research question of this thesis stems from attempting to discern why some countries, specifically Turkey, are lagging behind others in decarbonization. In order to achieve this understanding, it is significant to discuss through a new economic approach why Turkey has poor progress as a developing country with particular attention to three key areas; 1) environmental impacts, 2) adherence to and compliance with International Agreements, and 3) economics.

As a consequence of analysis, the economic policies based on the national government and neoliberal developmentalism (Adaman et al., 2015) are incompatible with decarbonization because the high usage of fossil fuels is the chosen growth model. And so, the thesis reveals Turkey's development policies' contradictions with decarbonization through an analysis of the coal industry. As a result of the analysis, the incumbent government's dependency on fossil fuels is continuing in contrast with the international trend. With the Turkish government supporting carbon-intensive

mega-project investments and uncertainties in the renewable energy legislation, the development of Turkey's renewable energy resources has been described as “two steps forward, one step back" (Bayülgen 2021: 165). In this final stage, where neoliberalism and developmentalism are blended, high extraction of natural resources and carbon-oriented growth are the aim despite the fact that this state of affairs also causes environmental governance to be ignored (İşeri and Uygurtürk, 2021:2-4).

CHAPTER 1. CONCEPTUAL FRAMEWORK

Social scientific research by its nature deals with relations among ontology, epistemology, and methodology. Accordingly, a social and political analysis includes specific assumptions on things that make up social reality (ontology). Following therefrom is this existing social reality's possibility of knowledge (epistemology), and finally, the field of methodology seeks to identify which method or strategy is suitable to reach historical-social knowledge (Balta, 2014:78). All of these components work simultaneously with each other. In light of this, international relations, as a social science, arises from the structure of international politics, its process, and issues that provide any analyses, jurisdiction, and assumptions based on scientific and methodological knowledge. Through these assumptions, a general framework is presented, and this framework will be conceptualized, including several explanations. In order to support hypotheses about international relations and politics, analysis and interpretation are grounded through theory, perspectives, and paradigms. Considering these, the essence of international relations studies has arisen from a basis in theory. With the acceptance of international relations as a separate discipline, theories provided fertile ground to explain current issues in the field from several perspectives. When we criticize any existing issue, different theoretical lenses ensure different "styles" and "methods" to understand that political issue (Balta, 2014:82).

This thesis seeks to understand the major reasons behind the Turkish government’s economic policy choices, the apparent contrast with their specified policy objectives in government publications, and their actions on the decarbonization process and climate change issues. To that end, this study will consider that research question through an understanding of "neoliberal developmentalism" which arises from the combination of two different international political economy theories. By making use of a general conceptual framework, which is intrinsically related to neoliberal developmentalism, it will provide clarity on Turkey's political economy and its connection to energy policies. Above all, this chapter evaluates political and economic approaches from classical developmentalism to neoliberal developmentalism. Thanks to this economic development approach, the analysis of the decarbonization process provided an analytical framework. Also, how this issue was

handled in the relevant sources in the literature is examined. And so, the fundamental argument of the thesis is based on this approach.

1.1. The Logic of Developmentalism

A study by Güngen analyzes the transition period from developmentalism to neoliberal market settings (Güngen, 2014). Due to the eruption of the international crisis (e.g., increases in petroleum prices), countries with problems in the balance of payments have embarked on a quest for a new development strategy. Starting in the 1970s and gradually increasing in the 1980s, these tendencies have led to the cancellation of import substitute industrialization (ISI) because of export-oriented industrialization. Against this backdrop, the IMF and the World Bank have proposed the readjustment of the relations between state and national markets. Essentially this readjustment consists of redefining state-market relations based on neoliberal understanding. In this regard, countries should concentrate on whichever field they have a competitive advantage in, and at the same time, incentives should focus on exportation. The significant highlight of Güngen's analyses is to exemplify Bela Balassa's (1986) conceptualization. According to Balassa (1986), developing countries consist of two groups: outward countries and introverted countries. While South Korea, Singapore, Taiwan, Chile, and Uruguay symbolize the outward nations, Turkey, Argentina, Brazil, Mexico, and Portugal represent introverted countries.

In light of this grouping, Balassa (1986) argues that extroverted countries are more successful against the "external shocks" than introverted countries due to the successful implementation of incentives for exportation and real foreign exchange rate. Although the economic crisis affected both of these groups in a negative way, outward-oriented countries have recovered in a shorter period. In contrast, introverted countries embraced an incentive system that prevented exportation, and those countries could not cope with the crises due to the high cost of government investments (Güngen, 2014:444). In this context, export-oriented growth envisions the liberalization of the market and foreign exchange rates and the implementation of positive rates of interest. Another significant point is that the neoliberal approach prejudges government investment because, under the influence of the protectionism of the state, rent-seeking groups or inefficient companies may come to the fore.

1.2. The Logic of Neoliberalism

In the 1980s, while national developmentalism was starting to decrease, Conventional Orthodoxy was gaining significance and acceptance. After the military coups in Brazil (1964), Argentina (1967), and finally Uruguay (1967), these governments started to move towards new reforms in the economy. The results were threefold. Firstly, previously embraced import-substitution strategies dissolved. Then in the 1980s, a significant foreign debt crisis occurred. And thirdly, the successful policies of the US led to an enlargement of the neoliberal waves in the economies of almost all countries in the world.

Further, as suggested by Güngen, Wiltze (2014) explains that the expansion of neoliberalism is related to the decrease of developmentalism. In particular, the developments following World War I (i.e., the failure of the League of Nations) led to the erosion of liberalism and idealism. Nevertheless, even though the domination of realism seemed like a leader in the battle of theories, from the 1970s, the significance of the political economy and its actors started to rise in the international arena. The oil crisis in the 1970s led to an economic crisis in many states, and secondly, the effects of the concept of globalization paved the way for further developments in nearly every aspect of the international system. Activities of production, finance, and banking services have gained new character, becoming transnational (Wiltze, 2014:138-139).

One of the significant theorists of modern liberals and neoliberals, Andrew Moravcsik (2008), defines the main features of this approach that contradict the concept of developmentalism. First of all, the notion of national interest does not exist because of the society's heterogeneous structure based on different classes.

However, the second point is that, contrary to other theories, the state does not always tend to pursue power or wealth because it could move towards different social, political, or economic goals in parallel with recent improvements. Most importantly, the high level of cooperation and connection among the states affects their policy choices over time. They support this with the following logic; rational states realize the positive returns of cooperation. In return for this, states choose to adapt to international trends rather than moving away from them or isolating themselves on international platforms.

Furthermore, academic studies have provided fertile ground for the enlargement of neoliberalism through three sophisticated approaches: neoclassical economics, public choice theory, and new institutionalism (Bresser-Pereira, 2009, p.5). As a replacement for developmentalism, Washington suggested a new economic model named "Washington Consensus." This consensus is based on Orthodox macro-economic policies and institutional reforms that are market-oriented. This approach advocating financial liberalization has been highly criticized in developing countries due to it being in opposition to developmentalism.

1.2.1. Washington Consensus

Cemil Boyraz (2014) explained it as follows: Washington Consensus has shaped nearly all developments in international economics in the last 20 years. In particular, the acceleration of globalization and consolidation of international organizations, such as the International Monetary Fund (IMF) and Development Banks (DB), are providing considerable improvement in developing countries. These institutions provide policy recommendations for developing countries to resolve economic crises. First of all, these policies start with the control of budget deficits. While states are implementing those policies, there must be sustainability and discipline. In order to foster this, discipline is provided by the IMF's stand-by agreements and the adaptation programs into neoliberal economic policies. As described in Williamson's article titled "What Washington Means by Policy Reform", policies' major denominators are listed as fiscal austerity, policies of privatization and liberalization of foreign investments, importation, and interest rates for deregulation of markets. Boyraz (2014) emphasized that countries with fragile economies such as Turkey, Mexico, and Argentina are not achieving those policies successfully. The challenges that these governments face is the sustainability of economic developments, providing employment, unequal income distribution, and current account deficits.

Bresser-Pereira (2009) argued that when the Washington Consensus was adopted after the 1980s, nourished by neoliberal policies, annual growth rates of states did not reflect positive results, except in Chile's case. Between 1950 and 1980, collectively the countries of Argentina, Mexico, Uruguay, Chile, Costa Rica, Panama, Brazil, Venezuela, Colombia, Peru, Ecuador, Paraguay, Bolivia, and Cuba experienced an annual growth rate of 3.11%. After that period between the years 1981

and 2006, those countries' average annual growth rate was only 0.77 %. However, during the period from 1990 to 2006, the average annual growth rate increased to 1.60 %. Even so, when compared with the first period, while these countries were following the developmentalist approach, the annual growth rate had reached higher rates than another period (Bresser-Pereira, 2009:6). To clarify why those countries are not achieving desirable growth, the neoliberal perspective offers these suggestions:

1) These countries lack the required microeconomic reforms to liberalize the market.

2) Despite inflation rates being reasonable, controlling the inflation rate is the major objective of macroeconomic policies.

3) To achieve control of inflation rates, interest rates should be increased.

4) Economic development is defined as the competition among states to gain significantly more foreign savings to meet current account deficits, so foreign exchange appreciation occurs as a result of capital flows into the country; however, this is not a cause for concern because rates of investment will produce a balance.

According to Boyraz (2014), many financial crises have happened in the international capitalist economy - specifically since the last quarter of the 19th century. However, these financial crises are natural consequences of capitalist capital accumulation. In the international political economy literature, Kondratieff, Schumpeter, and Wallerstein designed several approaches to explain those financial crises. According to Kondratieff (1922), capitalism always has prolonged fluctuations between degradation and escalation. While theorists analyzed several processes, economic factors from production and price of products to interest rates were taken into consideration.

The research results show that, despite deep crises or major wars (e.g., First and Second World Wars), capitalism always rebounds better off than it previously was. Kondratieff claims that a crisis, defined as the creative feature, leads to new technological developments and production methods. As Kondratieff stated, another theorist, Schumpeter, argues that achieving remarkable development, technology improvement, renewed research activities, and entrepreneurship are vital building blocks. The system has processes that follow each other, like so; "prosperity-recession-depression-recovery" (Boyraz, 2014:421). But, the salient point is the state’s capacity

to recover. For instance, during the oil crisis, less developed countries to complete their industrialization process sought the importation of technical equipment and machines from foreign countries, which triggered the foreign indebtment. Countries that could not benefit from the IMF or the benefits of financial liberalization could not balance interest rate policies and inflation, so they could not achieve sustainable development. Uncertainties in financial markets and speculative capital flows will always create an unsustainable environment for economic growth (Boyraz, 2014:425).

Globalization in the financial markets has caused an increase in the mobility of international capital. In particular after the 1980s, it gradually turned into a speculative structure. Economic crises in many countries with different economic and political structures, which became open to speculative capital movements with financial liberalization, brought the economic effects of financial liberalization and capital movements more into the agenda of national governments (Aytekin, 2018).

Rapid growth in the global economy leads to much more internationalization of the economies. Financial expansion is deepening and getting out of control, dragging the world economy toward a more unstable structure. In other words, dependency is increasing more and more. This increasing dependency is a serious risk because of instabilities and uncertainties. As a result of the deepening of economic relations, the level of impact which crises are capable of has increased (Boyraz, 2014).

1.2.2. Post-Washington Consensus (PWC)

In a study by John Williamson (2000), Washington Consensus has a set of neoliberal policy recommendations, which include fiscal discipline, tax reform, liberalization of interest rates, trade liberalization, a competitive exchange rate, liberalization of mobility of foreign direct investments (FDI), privatization, deregulation which is based on reducing barriers to enter or exit the market and secure property rights. These reforms, which were put forward against the developmentalist approach, caused numerous controversies. But, Williamson underscores the concerns on those reforms. In particular, the interpretations of these reforms have created an indefinite situation because these policy recommendations or alternative suggestions in replacement of developmentalism were imposed by Washington rather than intellectual convergence. In addition, Williamson stated that "a real danger" is here in

the battle of economic theories. If these reforms imposed by international development institutions lose effectiveness, the credibility of the system will suffer in people's eyes.

As Williamson predicted and Güngen (2014) stated, due to the deficiencies of neoliberalism, Washington has criticized itself. Parallel with this, deficiencies were eliminated by the Post Washington Consensus (PWC). Unlike the Washington consensus, the reformed version proposed more controlled liberalization, and to provide a powerful financial sector. The state's position should have been "watcher" (Güngen, 2014:450). Further, in times of financial crisis, neoliberalism has tendencies that disregard the poverty and inequalities within societies. Thus, the suggested policy recommendations were criticized. To expand the content of the Washington consensus through the PWC, a more institutional framework was provided. The point highlighted here is the different approaches among the Washington consensus and PWC. While the Washington consensus suggests completely removing the influence of the state, the new form of the consensus advocates supporting the market through corporate governance and reforms (Güngen, 2014:450). In the light of these developments, the risky environment created by neoliberalism serves as an impotence for states to seek a new economic approach or development model for themselves.

To eliminate poverty and inequalities at both the national and international levels, growth and development adapt to the influence of globalization and liberalization of the economy. However, while states are trying to achieve economic growth, indeed inequalities and poverty increase as natural consequences of capitalism. Because the system allows the reproduction of capital and its enlargement thus, eternal relations have occurred among the national or international economies. The capital always turns over from developed economies with a high level of technology and a strong economy to less developed or developing countries; thereby, within this process, while some of them are developing, some will be set back. Against this backdrop, the system always repeats itself (Güngen, 2014:452).

The study of Fukuyama in 1989, known as *End of History*, claims the neo-liberal approach's victory because he argues that neoliberalism is the only alternative to adopting international economic settings. He goes so far as to claim that sooner or later; every state will adopt this system. Further, the TINA syndrome (there-is-no-alternative) establishes a barrier for developing countries (Fukuyama, 1989). There are no uniform market economies such as in the examples of Anglo-American style market

economy in the United States and England, the domination of social state mentality in Scandinavian countries, and besides that, in the rapidly growing China and the East Asia countries' hybrid development model, which arising from politically centrist and authoritarian and economically free-market adoption (Wiltse, 2014).

1.3. Return to Developmentalism: "Neo-Developmentalism"

In the light of these issues, new approaches began to emerge as alternatives for replacing neoliberalism. According to Schmalz and Ebenau (2012), the newly emerging approach is a new phase of neoliberalism or is an alternative term for post-neoliberalism. Although the essence of the approach is similar, different terms and concepts are used to define it. Besides that, for every state, the interpretation and implementation of the approach differs. Particularly among the middle powers or BRICs countries, the "neo-developmentalist" approach is designed by governments as a strategy against the global economic crisis due to substantial global economic liberal circumstances. For instance, in Brazil, the government has adopted the neo-developmentalist economic model, which is a combination of a competitive liberal market economy and the Keynesian economic model.

Moraris and Filho (2012) emphasized that since the 1980s, Brazil has adopted neoliberal reforms in the liberalization of trade and finance, and in the privatization intensive economic settings for the increment of market efficiency. But after the global economic crisis in 2012, the government decided to transition from neoliberalism to neo-developmentalism. According to understanding in the Brazilian government, the neo-developmentalist economic approach grants more control to the states over the economic activities to reduce risks. In contrast to neoliberalism, national governments support stronger state activism in the economy in order to achieve pragmatic decisions. At the same time, Moraris and Filho (2012) highlighted the Bresser- Pereira (2007) study that specified the differences between neoliberalism and neo-developmentalism.

According to his study, neo-developmentalism is much more comprehensive than the neoliberal's major aim, which is based on monetary stability. Neo-developmentalism is referring a concept of macroeconomic stability that involves inflation control, power over exchange rate, and payment stability supported through capital controls and fiscal sustainability to minimize uncertainties. In addition to these, government intervention provides more stable environments for private investment

decisions. In their study, the differences between neoliberalism and neo-developmentalism are specified.

Most importantly, in their study, the neo-developmentalist economic approach emphasizes maintaining macroeconomic stability; secondly, strengthening government's and its institutions' role in the economy to adopt policies for a national development strategy, and finally to improve domestic circumstances, innovation, and investment.

The research of Howe (2016) underlined the new concept to explain the national government's economic growth tendencies known as "Econophoria." This concept was coined by Barry Buzan and Gerald Segal to explain government dependence on purely economic growth and expansion as a solution to all social problems within society. As a result of states' economic growth under the control of the government, other areas of concern can be disregarded because economic development is identified as the solution for all illnesses in society. Falling in line with such notions, Turkey's economic policy priorities are based only on economic growth through high consumption of fossil fuels, which disregards other policy areas, as in the case of climate change and the energy transition process into renewables. Currently, it is not only Turkey. The global economy is also under the influence of authoritarian and populist leaders. Also, this situation is characteristic of the latest stage of neoliberalism (Arsel, et. al, 2021). In the latest stage, authoritarian and populist leaders want to consolidate their own hegemonic power as indicated above and transform authoritarian neoliberalism to authoritarian developmentalism. The complementary part of the neoliberalism becomes developmentalism with notions of authoritarianism. For instance, despite the fact that the significance of ecological crises has gain acceptance internationally for achieving the de-/post growth, still some countries continue their own developmentalist practices in line with their political projects. Under this current situation, neoliberalism is articulated as authoritarian neoliberalism as such in Brazil, Egypt, Turkey, Hungary, India and also the USA (Arsel, et. al, 2021). That current combination of economization and politicization are common symptoms in these countries. This new version of the political economy has turned into authoritarianism and developmentalism. In this respect, while economic development is playing a key role as the dominant human motivation, authoritarianism paves the ways to consolidate the government hegemonic role in accordance with their political

interest over some specific sectors. For the purposes of this thesis which is based on Turkey, the construction of mega projects seems to be glorious achievements of the developmental practices, but indeed, these activities could not respond to all of the problems in every segments of the society (Arsel et al., 2021:262-263).

These initiatives are supported by populist rhetoric and instrumentalized economic development as a tool to achieve political goals. The main points that will feed authoritarianism, especially in economic terms, are the strengthening of the state's role in the economy and the redistribution of wealth. According to Adaman and Akbulut (2021), if it is an action in the interest of the society in question, this is accepted. In this context, economic development is already based on this ground. But, in the current portrayal of the economy, each individual within the society does not have equal standards which are class-based. However, this approach stimulates individuals' desire for "development". In the field where it interacts with the growth model, environment and energy policies, the fact that development can be achieved with a more sustainable economic model will be discussed in the following pages with the greener way based on Green Politics.

1.4. Green Politics

State intervention in the economy is also a key feature of green politics. Talu (2015) states that in conjunction with decreasing resources and increasing issues of climate change, all states must determine an economic growth model, and thus this issue has turned into a political choice rather than a non-political choice. While capitalism has a consumption-based relationship between nature and people that serves the purpose of rent, states must either continue the status quo or change it because high consumption leads to careless use of resources as the world's resources are diminishing. Furthermore, the effects of environmental problems are increasing. At this point, states should adopt an "eco-centered" or green political theory growth model. The eco-centered approach or deep ecology has been active since the 1970s. In 1973, Norwegian philosopher Arne Naess published the article “Deep Ecology”, one of the earliest studies in the literature. To put it briefly, this way of thinking puts the environment in the center, believing that people are not superior to the environment. Accordingly, everything in nature is in harmony and balance, so people need to get enough from nature to sustain their lives without destroying the environment. Based

on the reconstruction of the relationship between people and the environment, deep ecology has presented political movements such as eco-socialism and revolutionary ecology. Although there are various political approaches, the fundamental problem is that capitalism and its system have a direct negative impact on the environment because one of the significant features of capitalism is the privatization of land.

In other words, they argue that there is no green liberalization by saying that the whole system should change (Talu, 2015:147). Nevertheless, as an alternative, modern green social democrats have developed proposals that are compatible with the environment but do not reject capitalism.

According to green politics, the economy needs to use natural resources sustainably. To achieve this, the carbon price must first be high enough to encourage energy efficiency investment and by making the burning of polluting coal unprofitable. Secondly, subsidies should be provided for renewable energy sources through price support such as a feed-in tariff for as long as they are more expensive than fossil fuels. It is necessary to give up oil in transportation (decarbonization), invest in resource efficiency, ensure the research and development of new green technologies, and get the support of the public while doing these. And significantly, since this is a global problem, it needs to be a part of international agreements that will make every state strive to adhere. In the past, it was claimed that this environmental policy was costly, that is, expensive. However, a block to economic growth has now been invalidated by economic reports and growth rates seen in successful countries such as England and Germany. A well implemented green politics approach may incur costs in the short term. However, efficient investments in natural resources, industries, and infrastructure which have a long-term outlook will return high economic production. Thus, states should implement an economy based on the environment (Talu, 2015:150-151).

Newell and Paterson (2010) proposed a similar approach with a differentiated definition. When these two authors analyze the transformation of the global economy and its changes after the 2000s, they focus on the concept of "decarbonization of the economy," which is based on smooth changes within the neoliberal body in gradual steps. According to their arguments, the world economy is evolving towards low-carbon energy usage in national development. Decarbonization of the economy is explained as a break with the carbon-based industrial development with a re-

interpretation of neoliberalism. This approach is defined as "climate capitalism" (Newell and Paterson, 2010:1-3). With the help of compelling, specific examples of climate change and its threat against all humankind, the authors argue that the world has to respond. But differently, Newell and Paterson (2010) are not claiming the acceptance of the negative correlation between capitalism and climate change. In this regard, creating a solution rather than embracing the natural consequences of this relationship is defined from within a capitalist framework, but in a greener way. During the process of decarbonization of the economy, some groups of people or specific sectors, including the coal or mining sectors and workers who work in these places, will of course be affected negatively. However, the general framework is pushing the world economy into a new type of capitalism. Under these circumstances, the authors are underlining that abandoning capitalism is not realistic. And besides that, cutting the usage of coal, oil, and other fossil fuels is also impossible because if the states choose this path, it may cause the collapse of economic growth in the short term. Rather the authors suggest finding some middle ground, while renewables take the place of the fossils. The most significant question coming to the floor is which type of capitalism will respond to this transformation (Newell and Paterson, 2010: 9).

The study of Newell and Paterson (2010) analyzes certain changes within neoliberalism. In particular, in the late 1980s, when people also started to talk about climate policies in politics, a remarkable shift based on neoliberal ideology was happening in the global economy. In the first period of this development, also in the 1970s, the common perspective was supported by the Club of Rome, which argued the environmental limits of economic growth. But, in the 1980s, with economic analysis, the new politics of pollution and ecological modernization approaches started to pave the way to understanding the possibility of keeping a compatible environment and growth (Newell and Paterson, 2010:24). Under these circumstances, the focal point here should be on the "market and its mechanisms." Because if markets are designed to work for the environment, the national governments could calculate their own cost and benefits in achieving environmental goals. To regulate markets as eco-friendly, authors refer to the "Blueprint for a Green Economy " published in 1989. As discussed above, market incentives allow national governments to transition gradually. So, there is an increased significance of national governments' interpretation of the market and its mechanisms.

1.4.1. Eco-Marxism vs. Green Capitalism

As mentioned in a greener way, Ünver (2017) put forward the main divergences between Neoliberalism, Eco-Marxism, and Green Capitalism. In particular, a major point here is the clash of ideas among political economy theories. But, the main point of view could explain how different approaches affect the renewable energy policy of national governments in parallel with their economic policies. According to Ünver (2017), the neoliberal perspective always urges states to produce high gains, creating fertile ground for disputes among themselves for supply and markets. To reduce inequalities between states in the race for power and gains, international mechanisms have been created such as International Energy Agency and OPEC. These mechanisms support the balance for both energy producers and energy consumers through cooperation. It is by way of such mechanisms that energy security should be taken as an important target in climate negotiations. However, a solid link between fossil fuels, economic growth and production negatively triggers cooperation on climate and energy policies because of energy security and survival instincts. Because, despite the existence of states, international norms, and institutions, international climate targets have an effect on domestic policies of countries and are perceived as a security issue for the states, as is in the region of Westphalia, Germany.

Two more perspectives on the climate transition are explained by Ünver (2017), who highlights the main points of divergence between Eco-Marxism and Green Capitalism. Eco-Marxism and Green Capitalism are two different schools that produce different solutions to carbon driven growth (Ünver, 2017:12-15). First, Eco-Marxism criticized the capitalist system's continual growth fetishism. The problematic point here is that the source of this growth is based on dependency on a forever increasing consumption of fossil fuels. So, under these circumstances, this school proposed, as a clear solution, the abolition of capitalism, no matter what kind. In response, Green Capitalism is another one of capitalism’s many iterations. Ünver (2017) emphasizes that, contrary to Marxism, Green Capitalism advocates the reform of capitalism without completely ending capitalism since the transition to a much more sustainable and less carbon-intensive system is quite possible through free-market regulation (Ünver, 2017:14). One of Unver’s more noteworthy points is that through specific support for renewable energy sources, these alternatives will be more profitable than fossil fuels. If this strategy is properly applied by national governments, states based

on a capitalist development model will leave the old road based on fossil fuels. The new alternative should attract the attention of the state due to its more profitable profile. However, models of growth are continually influenced by interest groups of various energy resources. Suppose there are more interest groups fed by fossil resources, then the development will be slow. In that case, government ownership of interest groups in renewable energy would accelerate the process. As always, there are many factors, especially national governments, who must take critical decisions regarding the distribution of a country's energy consumption based on resources, how the market will be designed, and infrastructure investments (Kuzemko, Keating, and Goldthau, 2016:79).

In this thesis, instead of evaluating the transition process as a successful or unsuccessful, the aim is to evaluate why countries such as Turkey lag behind. For instance, in the case of Poland, one of the worst-performing countries, Schwartzkopff and Schulz (2017) present the political economy of the low-carbon transition in the EU member state. First, although the global renewable energy transition is progressing, some countries are unwilling to participate actively. To clarify the major factors affecting a country's situation on decarbonization and climate change policies, the E3G, an independent European think tank, has used the Political Economy Mapping Methodology (PEMM) on the Visegrad states, Romania, and Bulgaria. In general, the framework supports claims that critical disagreements exist among the countries. Specifically, Poland is a climate policy opponent because of the significant position of the coal industry within the country.

To analyze a country's position on energy transition, PEMM embodies three major components: national conditions, the political system, and external projection and choice. These three components are divided within themselves as several parameters, as indicated in the table below.

Table 1. **National Conditions' major parameters**

Energy Security
Climate Vulnerability
Public Goods
High-carbon economy
Low-carbon economy
Technology and innovation capacity

Table 2. **The Political System's major parameters**

Government and Civil Services
Business
Public discourse
European Union

Table 3. **External Projection and Choice**

European Climate Change and Energy Policy
Broader European Union Engagement

According to analysis, these parameters are applied wherever they will give the same results to a large extent. Specifically, to my thesis, which focuses on only the agent level, the parameters specified in Table 1 explain that the national conditions influence the energy transition's success.

Against this backdrop, A number of factors become apparent. First, Poland is highly dependent on the coal industry (the high carbon-emission sector refers to the

coal industry). Another issue is the significant relations between the coal industry and the national government. In the 1990s, the energy sector was shaped by privatization in the Polish economy. In the energy sector, oligopolistic behavior dominates the market because four of the five major hard coal companies are either partially or fully state-owned. Thus, national government incentives support the coal industry. The country is heavily reliant on coal and its industry, but this is not sustainable or profitable because the major economic sources of the coal sector survive with subsidies.

On the other hand, to embrace a low-carbon economy, Schwartzkopff and Schulz's (2017) briefing paper argues that there is a lack of political support and the existence of only slight support for renewables. Lastly, coal acts as a safeguard of energy security since Poland has no substantial oil or natural gas resources. Hence, there is a high level of dependency on the Russian energy supply (Schwartzkopff and Schulz, 2017:10). Under these circumstances, except for the analyses of other parameters in Table 2 and Table 3, national conditions cover the government's economic policies, technological capacity, the understanding of energy security, and reliance on only one domestic resource (e.g., coal). It is these factors which lead to a lack of progress in the energy transition.

This thesis specifically examines why Turkey, under the AK Party administration as the incumbent government, lags behind in the decarbonization process in the light of the agent level, as indicated in Table 1. In this context, the major parameters of Table 1 provide a specific framework by considering six key areas to understand and evaluate the country's improvement at the national level.

First, Turkey is a high-carbon economy, which plays a major role as a significant barrier to a low-carbon transition due to its high level of fossil fuel dependency. Secondly, the country's low-carbon economy is less developed than its high-carbon economy, which is also a significant factor. Thirdly, the technology and innovation capacity are critical determiners. This is because if the public sector is unable to provide a stable and coherent support framework, in parallel, the private sector's capacity for innovative research and development will be weak. Fourth is energy security. When energy security comes to the fore, especially in developing countries with high import dependency, a low carbon economy should be prioritized rather than the political-economic national interests of the national government. In

interest of the public good, if the government chooses to embrace greener energy, it will do less harm to the environment. Finally, in the context of climate vulnerability, climate change and its negative effects must be taken into consideration. Table 1. gives a framework to this thesis in that it enables the economic analysis of the decarbonization process. Table 2 focuses on the political system of government, while Table 3 focuses on more external drivers. The particular focus of this thesis is on low carbon economy and high carbon economy and energy security factors. Examining all these determinants will reveal an analysis of the country. It provides a framework for literature review and which determinants should be analyzed.

In this context, the main question is the economic dynamics of the current government's energy preferences. The main argument of the thesis, which will be examined in detail in the following pages, is that it has a neoliberal understanding of the development model. This study will reveal how and to what extent neoliberal developmentalism, a newly emerging approach in the literature, affects the decarbonization process in developing countries.

CHAPTER 2. LITERATURE REVIEW

The literature review includes articles, books, and reports on the historical development of climate change, renewable energy issues, and the Turkish government's economic policy preferences related to the energy transition process. The literature review examines how other academic publications are related to the current study's aim and perspective, how they explore the topic, and how the current study can contribute to the existing literature.

2.1. From Fossil Fuel to Renewable Energy Transition

Energy has always been a vital need for the continuation of life. To meet energy demand, fossil fuels have become the primary choice. With the population increase in a specific location, coal was the first fossil discovered (Kete, 2020). From the first Industrial Revolution, when coal was a primary resource, preferred energy resources have been evaluated in terms of intensity of carbon emissions as well as levels of hydrogen. To be more precise, in the 1880s, coal was the most common resource to meet energy demands despite its high carbon rate. However, after about 60 years, petroleum replaced coal as more efficient and lighter, and was utilized in internal combustion engines. Following these developments, in the 1960s and after that period, natural gas, with less carbon emission than petroleum, started to earn an increased share of the market of 25-35 %.

In addition to what is mentioned above, the article "An Integrated review and analysis of multi-energy transition fossil fuels to renewables" written by Volkan S. Ediger (2019) examines the relationship between energy transitions and power struggles in history. Further, it explores major changes in trends and energy crises and reveals fossil fuel use patterns. It is mentioned in the article that, after 1780, coal surpassed renewables during the Industrial Revolution and was mined extensively starting in Britain. Britain became the global hegemon as the world's largest coal producer, consumer, and reserve holder during the nineteenth century. Further, oil immediately started to eclipse coal in 1859, which allowed the United States to become

the global hegemon in the 1940s. In addition to coal and oil, gas was considered the best alternative for oil at the close of the nineteenth century (Ediger, 2019:3).

Ediger (2019) further explores trend reversals in shares of fossil fuels in the world's energy mix between 1960-2016 with a figure. According to the figure, "gas was expected to continue its rise in the first period while coal continued its rapid decrease to 20.4% in 1977. Instead of coal, oil's share peaked in 1973 (46.2%), coal stopped declining after 1974 (25.5%), and gas's ascent slowed after 1971 (17.6%). During this period, oil's market share (9.0%) was replaced by nuclear (4.1%), gas (2.0%), coal (1.7%), hydro (1.0%), and renewables (0.1%)" (Ediger, 2019:4). High prices and oil-supply security concerns, especially in the developed world, drove these changes.

During the second crisis period after 1998, gas was expected to rise which would cut coal's share of the market at 21- 24%, and become the second most used energy source after oil sometime between 1999 to 2001. Despite predictions, coal increased, and gas decreased. Lastly, from 2011 to 2014, coal was expected to increase and cut the decreasing curve of oil at 29-32%, but oil began to increase, and coal started to decline. In this phase, oil (-5.7%) and nuclear (-1.7%) were substituted by coal (3.8%), renewables (2.3%), gas (1.1%), and hydro (0.3%). In this period, though the long-term historical trend would have predicted that coal's share would continue to decline, coal replaced gas (Ediger, 2019:4). While oil and gas are currently rising, coal is declining. The coal curve is expected to decrease until it matches the slightly rising gas curve at around 24% in 2020. This means that gas will become the second most used energy source after oil around 2020 if current trends continue (Ediger, 2019:4).

Ediger mentions that the global economy is unlikely to move away from fossil fuels as the dominant energy source. Their production will continue to grow for some decades, even if their share decreases. He also points out that the transition to a low carbon economy will only be possible with "decarbonization." This may be achieved through increasing the share of low-carbon intensity fossil fuels such as gas and increasing the share of renewables. Moreover, as the gas seems unlikely to become dominant under present energy geopolitical circumstances, different countries will follow different paths for adopting gas and other energy sources (Ediger, 2019:5).

Although the reasons for the support of the energy transition by the states have been clearly stated, the energy transition process and willingness of the states could show variation by country. This is because, according to Ediger (2019), the energy transformation process of states is occurring at different speeds and is relative since there are different determinants in each country. Due to the complexity of energy systems; various interacting factors exist, which can be listed as hegemonic power change, geopolitics, economic indicators and regulations, the level of technology, prices, company structures, resource status, differences in levels of development, governance process of the transition, regime type, civil society's reflections and public opinion about on that process. Indeed, all of these factors highlight the fact that the multidimensional structure of the issue cannot be controlled through energy policy alone.

Ediger (2019) defines that situation as "multiple energy transformations." In addition to all this, if we analyze the issue from the agent level, Ediger stresses the importance of the political choices and stances of the national government and policymakers. For instance, political regulation, economic incentives, tariff guarantees, tax exemptions, and removal of state subsidies to fossil resources will determine the direction and speed of energy transformation.

According to the International Energy Agency (IEA, 2021a), energy demand is always rising in parallel with industrialization and population growth. On the other hand, although resources may not cease to be used completely, they may be reduced as a result of the next transition. Today, more than 80 percent of the world's primary energy supply is obtained from fossil resources (petroleum, coal, and natural gas). The intensive use of fossil resources naturally creates serious environmental problems. According to IEA data on CO2 emissions from1990 to 2018, natural gas is responsible for 7.104.0 Mt CO2. Oil is responsible for 11.415.0 Mt CO2, and finally, coal's share is at 14.766.0 Mt CO2. In total, overall CO2 emissions have remained at 31.5 Gt (IEA, 2021a). Carbon emissions caused by fossil fuels lead to many environmental problems such as air pollution, water pollution, and soil loss. Besides the environmental problems that arise, fossil resources will be insufficient to meet the energy needs of the increasing world population. Fossil fuels have seemingly been used without much consideration for the future, particularly because this energy source is limited by its nature as well as being overused in the industrialization process. Thus, these energy

sources will not provide a sustainable environment or economic growth. Specifically, developing countries and emerging economies, such as China, Brazil, and India, need a high level of energy consumption because of the positive correlation between energy consumption and economic growth.

On that point, the sustainability of fossil resources is a serious threat. As a solution to these concerns, the remedy is modern renewable resources themselves. Modern renewables, such as wind power, hydropower, geothermal power, and bioenergy, may replace fossil fuels. The IEA defines these resources as "less carbon-intensive and more sustainable energy systems" (RENAC, 2020).

In the Renewables Academy (RENAC) AG's report (2019), the analysis clearly stated that policymakers and the tendencies of national governments are becoming more favorable to renewable energy sources in order to expand renewables' share in the energy mix of their countries. For a variety of reasons, renewable energy sources and the energy transition should be supported with energy policies. The benefits of an energy transition are listed as follows:

1) an increase in energy security through substantial national energy sources such as wind power or solar PV

2) macroeconomic benefits of the renewable energy sources and energy transition in job creation specifically for the local workforce to develop the renewable energy industry

3) supplying power at low-cost of generation

4) an increase in the security of supply through diversifying of the fuel mix

5) a reduction in environmental impacts of high carbon emission, preferring the renewable energy sources rather than fossil fuels for both importers and exporters

6) readjustment of energy access

7) mitigation of climate change and at the same time, other environmental risks for future of the humanity

8) investments for the renewable energy industry in the private sector.

Against this backdrop, these reasons have already provided a fertile ground for increasing international trends into an energy transition process based on new energy

sources. The advantages of renewable energy are categorized as physical, economic, environmental, social, technological, and political benefits. In this respect, physical diversification of energy sources will be possible. Economically, renewables will decrease the costs of imports. Environmentally, protection of climate and health of people will be provided. Socially, widespread energy access, job creation, and public participation in energy policies will be achieved.

Technological improvements in research and development will create an opportunity for further technological innovations. Finally, political energy independence will be a major pushing factor to accelerate renewables (RENAC, 2020:10). In light of this, collective action has happened at the international level to decrease the usage of fossil fuels gradually. All states that are party to the UNFCCC agreed on keeping the global temperature increase to well below 2 degrees above pre-industrial levels and aiming at 1.5 degrees Celsius. The European Green deal presented by the European Commission in December 2019 aims to make the continent the first to be carbon-neutral by mid-century. As put in this strategy, a carbon adjustment is being considered, which would increase the cost of carbon-intensive goods imported to the EU. This is projected to reverse the carbon leakage debate from Europe's border to countries that export goods to the EU, including Turkey, which borders South-Eastern Europe.

The targets expressed in NDCs could boost the creation of renewable-based electricity rapidly by 2030. Furthermore, according to this report, if all renewable energy targets in NDCs, specifically within the power sector, were implemented, an additional 1041 Gigawatts of renewables would be added within the decade, according to estimates by the international renewable energy agency (IRENA).

2.1.1. Roadmap for Net Zero By 2050

According to the European Commission (2020), the year 2020 marked the beginning of the formal NDC submission cycle. All parties to the agreement were expected to submit new updated NDCs by 2020, with updates every five years after that. In line with the Net Zero by 2050 - a roadmap for global energy - published by the IEA in 2021, rapid development has occurred in countries' national ambitions as evidenced by pledges to achieve net zero increasing. Specifically, 44 countries and the European Union have claimed a net-zero emission target. According to The Stated

Policies Scenario (STEPS), annual energy-related CO2 emissions will increase from 34 Gt in 2020 to 36 Gt in 2030. So, this situation indicates that if current energy policy continues, GHG emissions will continue to increase. Thus, the temperature will increase by 2.70 C by 2100 (IEA, 2021a:29). Plans for the development of renewables show that those resources should meet 55% of global electricity generation in 2050. In 2020, renewables already provided % 29. This clearly shows the expansion of rates of renewables in energy production. But, A complete energy transition is still questionable.

According to STEPS by the IEA, global coal consumption should decrease by 15 % between 2020 and 2050. In contrast, oil usage was predicted to rise by 15 % in 2020, and natural gas was expected to have the largest share with an increase of 50%. However according to the Announced Pledges Case (APC), decreases will happen both in energy-related and industrial CO2 emissions. In contrast with the STEPS, emissions should decrease to 30 Gt in 2030 and 22 Gt in 2050. In this respect, the temperature is predicted to rise by 2.10 C in 2100. For the usage of renewables, electricity generation from renewable energy sources will almost double to 70%. The usage of fossil fuels must significantly decrease. The rate of coal consumption must drop by 50%. Oil consumption should be reduced by 10%, while natural gas is expected to rise by only 10% by 2050 (IEA, 2021a:29).

A clear divergence exists between the current trends. The Stated Policies Scenario (STEPS) lags significantly behind APC. That is why the IEA argues that national governments apply stricter policies. If intensified long-term policies are not implemented, carbon emissions will continue to increase. To provide a roadmap for the countries' energy transition, IEA suggests technological development, infrastructure development, investment, and policy milestones. For instance, Net Zero Emissions (NZE) recommends that developed economies strive to achieve net zero in 2035, and developing countries and emerging economies should have a goal of 2040.

To achieve these results, the first significant step is gradually phasing out coal-fired power plants by 2030. And, before 2030, There should be a phasing out of all oil-fired power plants. The major aim of NZE is the decrease in fossil fuels. NZE does not recommend expansion of the coal market. At that point, national governments are central to reaching net-zero emissions in 2050. In particular, NZE requires coordination among energy ministries and incumbent governments. Also, international

cooperation is key to being compatible with global standards and tendencies (IEA, 2021a:151). Climate change is now a crisis that is not only related to the environment, but also concerns the states' economies, technologies, and investments.

At present, decarbonization through clean energy resources is happening under a cooperation umbrella supported by international treaties and binding commitments. So how far will this umbrella extend? Or in other words, which countries will join global trends in the decarbonization and energy transition, and which states will reject the environmental movement?

2.1.2. Criticisms to The Paris Agreement

Peter Christoff (2016) argues the Paris Agreement and its significant articles are not clear enough to energize states' actions. The decision made in Paris includes the process of adopting the agreement and the articles of the Agreement. The text outlining the adoption of the agreement has six parts which are "Adoption of the Agreement; Intended Nationally Determined Contributions, Decisions to give effect to the Agreement (including elements on mitigation, adaptation, loss and damage, finance and technology development and transfer, and compliance); Enhanced Action before 2020; Non-Party Stakeholders; and Administrative and budgetary matters" (Christoff, 2016:774). Christoff explores some of the Agreement's key elements: legal forms, ambition, mitigation goals and targets, nationally determined contributions, climate finance, compensation, losses and damages, differentiation, and equity.

Firstly, some have questioned how binding the agreement actually is. As stated in the document “agreed outcome with legal force" is not quite clear. Although it is considered that the Paris Agreement as an international agreement is binding on States who signed it, according to the head of France's negotiating team, Paul Watkinson, just exactly how binding the agreement is in question. Moreover, he argues the need for a stronger legal agreement and points out the importance of finding a workable, realistic and useful solution with long-term predictability (Christoff, 2016:775). Christoff goes further by pointing out that although the scientific communities state the need for contributions "as soon as possible" (Art. 4.1), "the Agreement fails to include specific targets or dates, or the means for coordinating national contributions to ensure effective collective outcomes" (Christoff, 2016:776).

Secondly concerning its ambition, the Paris Agreement has the strongest temperature goal among all other international climates. This article frames the Agreement's ambition. Article 2(1) "emphasizes the importance of 'holding the increase in the global average temperature to well below 2 C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 C above pre-industrial levels" (Christoff, 2016:776). Third, according to the decision that emerged in Copenhagen, developed countries agreed to provide national mitigation pledges for the period between the signing and 2020. At Warsaw and Lima, the EU and the Small Island States stated that "a higher level of commitment and performance would be achieved through Nationally Determined Contributions (NDCs) that have legal force." According to article 4.9, new NDCs must be presented every five years. Furthermore, these presentations must represent a progression and reflect the state's highest possible ambition while examining different national circumstances (Christoff, 2016:778).

Last but not least, the issue of climate finance was essential to the Paris Agreement. Also, the conference of parties (COP) accepted a new financial goal of $100 billion dollars as its floor f before 2025. However, the US and other developed countries "refused to open the door to what some called a 'poorly defined attempt to get limitless funding' for climate-related damages ascribed to their historical contribution to global warming" (Christoff, 2016:778).

Another critic on global climate change developments, Peters (2016), explores the necessity of the IPCC Special Report on 1.5 °C and how it should focus on resolving fundamental scientific and political uncertainties instead of fixating on developing unachievable mitigation pathways. Peters also critiques the Paris Agreement and its ambiguous nature. According to Peters (2016), "the long-term mitigation goal is broadly consistent with a range of mitigation scenarios assessed in the IPCC Fifth Assessment Report (AR5) and more recent studies, but there are sufficient uncertainties to ensure years of scientific and political debate" (Peters, 2016:646). Peters points out that the key ambiguity in the Paris Agreement is what "well below 2 °C" means. "Interpretations on 'well below' are likely to persist, but more fundamental is ambiguities around which period the target covers, and the likelihood of staying below the target given a variety of different emission pathways" (Peters, 2016:646).

Peters (2016) further discusses political choice as perhaps the biggest uncertainty. According to Peters, very few 2 °C scenarios assume plausible political narratives, questioning the applicability of the Agreement's scenarios in a political context. The Paris Agreement placed the words "by best available science" in the long-term temperature goal. It is unclear why, but it does emphasize that there are many key scientific knowledge gaps to be resolved before one can say, with confidence, whether 1.5 °C or 2 °C are realistic temperature goals. There is certainly a need, and demand, for an IPCC Special Report. Prioritizing research to fill the existing knowledge gaps will lead to a more balanced and valued Special Report (Peters, 2016:648-649).

There are indeed on-going international debates about uncertainties and insufficiencies of substantial initiatives and plenty of political criticism of national governments' regarding the Paris Climate Change Agreement even after it was signed. However, Bodansky (2016) emphasizes that the Paris Climate Change Agreement has been called "historic," a "landmark," the "world's greatest diplomatic success," and a "big, big deal (Bodansky, 2016: 289).

2.1.3. The "World's Greatest Diplomatic Success:" The Paris Agreement

The achievements of the Paris Agreement are numerous. Firstly, it is a legally binding instrument, in contrast to the Copenhagen Accord, which was purely a political deal. Second, it is global. It applies not only to developed countries, like the Kyoto Protocol's mitigation targets, but also to developing countries, which account for a growing share of global emissions. Third, it specifies the same core obligations for all countries. In doing so, it abandons the static, annex-based approach to differentiation in the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, in favor of a more flexible, calibrated approach. This is a critical improvement because it considers changes in a country's circumstances and capacities and is operationalized differently for different regime elements. Fourth, it establishes a long-term, durable architecture, in contrast to the Copenhagen Accord, which involved one-shot pledges addressing only the period up to 2020. Fifth, the long-term architecture institutionalizes an iterative process in which, every five years, parties will come back to the table to take stock of their collective progress and put forward emission reduction plans for the next five-year period. Sixth, it sets an expectation of progressively stronger action over time. Seventh, it establishes an enhanced

transparency and accountability framework that reflects Justice Brandeis's admonition that sunlight is the "best of disinfectants." Eighth, it appears to command universal, or near-universal, acceptance. (Bodansky, 2016, p.290)

Nevertheless, Bodansky's analysis of the Paris Agreement's pledges uncovers some recurrent problems. One significant issue at Paris was the "differentiation approach". According to Bodansky, participant countries were identified according to their capacity and responsibilities before the Paris period due to the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC). Countries were divided into Annex I and II based on a country's economic growth and capacity. Economically developed OECD countries were identified as Annex I, and developing countries represented Annex II. The UNFCCC's climate change regime approach, based on differentiation, has led to a sharp division between the countries. UNFCCC's Annex structure of states creates an unclear situation. This is because, according to Bodansky, while the state's economic growth and capacity change suddenly in the international system, their clarification is not necessarily reflective of ever-changing realities. In the current global economy, countries such as Singapore and Qatar can develop rapidly. Despite these countries' developed economies, they are still identified as "developing." According to many developing countries, this division is equitable and fair. Their responsibilities are much more limited in comparison to those of developed countries. For the Annex I countries, the annex structure has led states to move away from the UNFCCC (Bodansky, 2016:299). As in Turkey's Annex problem, understanding the differentiation approach was a problem for countries. But, the Paris Agreement is completing the Kyoto Protocol's imperfections. Most importantly, Paris has not included any reference for dividing the participant's countries as an annex structure. For instance, the provisions on the economy, technology, and capacity building, as well as some hortatory provisions on NDCs, appear to be more categorically divided between developed and developing countries—though, because the divisions between' developed' and 'developing' countries remain vague, they are less strict than the annexes to the UNFCCC and the Kyoto Protocol.

In this regard, although there are some weaknesses or shortcomings of the Paris Agreement, it is clear that it is stronger and more developed than previous agreements. Although it is true that the bindingness of climate agreements and the effectiveness of

sanctions are important topics in the literature, what is more significant is the creation of an environment of cooperation in the international arena. Like other developed and developing countries, Turkey has been involved in this process and has taken the necessary strategic steps and formalized its commitments. Although there are many critical opinions, Turkey has completed the steps despite being delayed as a result of bureaucratic or structural problems, at least according to the government. The main topic of discussion in the coming section is the continuation of fossil dependence. Although the Paris Agreement may be considered successful or unsuccessful, Turkey signed this agreement and put it into effect, albeit late. However, the country is still in a growth model that conflicts with international agreements. This is one of the significant reasons why Turkey has covered less distance in this process compared to other countries. Moreover, The Turkish government has also criticized this agreement. Since signing the Paris Agreement, Turkey has already made steps in the opposite direction of its commitments. Of those steps, the issues that merits the most attention is Turkey's dependence on fossils and especially on coal.

2.2. Evaluation of Countries' Climate Performances

The Climate Change Performance Index (CCPI), published by Germanwatch, New Climate Institute, and the Climate Action Network in 2021, tracks countries' climate protection performance, aims to enhance transparency in international climate politics, and enables comparison of climate protection efforts and progress made by individual countries. Based on standardized criteria, the CCPI compared the climate protection performance of 57 countries. It also includes European Union (EU) countries responsible for more than 90% of global greenhouse gas (GHG) emissions. The last country to be added was Chile for the CCPI 2020 "(CCPI, 2020:4). The CCPI assesses countries' performance in four categories: GHG Emissions, Renewable Energy, Energy Use and Climate Policy.

Overall results show that no country performs well enough in all index categories to achieve a very high rating. Therefore, the first three positions in the overall ranking remain empty. Of the G20 countries, this year, only the EU as a whole, along with the UK and India, rank among high performers, while six G20 countries rank as very low performers. In terms of EU performance, Hungary and Slovenia supersede Poland as the worst-performing EU countries in this year's index; all ranked

as very low performers. Seven EU countries (excluding the UK) and the EU rank under high performers this year. The EU gains six places (CCPI, 2020: 6).

Instead of labeling these countries as simply successful or unsuccessful, it is more important to evaluate why they might have scored so low. In an article of Lachapelle and Patterson (2013), their research focuses on drivers of national climate policy related to GHG emissions rates and the renewable energy transition process. The major research question is very similar to my thesis' purpose: it aims to analyze why some countries are performing at low levels of GHG emissions according to others. Although international cooperation on global climate change paves the way for transition, a significant consideration is how countries perceive and interpret these developments. This point of view addresses how climate change policy is reflected at the national / state level.

Lachapelle and Paterson (2013) define these differences as national climate change policy drivers. In the light of this approach, the article argues that countries could differ. For instance, while some countries focus on technological development, others focus on the institutional part of this issue. According to their results, the institutional aspects, emission rates and policies based on incumbent governments are extremely significant determiners. As such, if one country has a high dependency rate on fossil fuels and meets electricity demand through coal, petroleum, and gas, of course, these countries will have a different rate of emissions than others. In these types of countries, due to the dependency on fossil fuels, "carbon-lock" will happen, and mitigation policies will attempt varying solutions based on technological development rather than an institutional and political focal point. Indeed, the demographics of these societies and their economic environments determine political choices and the approach to climate change policy.

One of the concepts that the article focuses on is having a - **developmental state** - mentality. A developmental state is defined as state-led macroeconomic planning. According to Lachapelle and Paterson (2013), developmental states aggressively focus on rapid economic growth. In some cases, the government controls a huge part of the economy such as in China. However, in some cases, the government designs the coordination of private industry investment such as in South Korea or an early period of Japan. Although some differences exist in the application of policies, this approach focuses on rapid economic growth rather than socio-cultural problems

in society, and it drives these states aggressively toward economic development (Lachapelle and Paterson, 2013:550).

Dent's article "Renewable energy and East Asia's new developmentalism: towards a low carbon future" (2012) discusses the energy transition process within developmental states. The fundamental conclusion of the article is that although renewable energy is significant for both developed and developing countries and various initiatives have been made, in new developmental developing countries, there is a great dependence on fossil fuels. Thus, energy transition does not seem possible in the short term. Climate change and energy security are two strategic push factors for East Asian countries to expand renewable energy sources and green economy sectors. Dent (2012) explains development in this region. Firstly, a low carbon economy will provide a much cleaner environment. Secondly, all those countries can have green energy sectors as developed countries. Thirdly, Dent (2012) cites Kondratiev's long-wave development cycle theory which claims that renewables will create a fertile ground for a further long-wave cycle of advanced development, such as wind energy technology's relations with aerospace and nanotechnology.

Energy has always been vital to meet the economic needs of these countries because of their high level of industrialization. In particular, after the 1980s and 1990s, the neoliberal economic approach entered developmental and socialist states. In addition, renewable energy is defined as one of the major features of the East Asian countries' new developmental policies.

Globally, significant economic changes have led to a decrease in state authority on national markets. However, East Asian countries have designed a new developmentalism, which directly supports the government's role for a better market. In parallel, states continue to design developmental plans based on strategic economics which strive to mitigate any risk or challenges. In the energy sector, Japan and South Korea are highly dependent on imported energy; thus, renewables seem like the best choice to decrease dependency. Each state takes its own approach. For instance, while Japan, South Korea, and Singapore are embracing the more technology-oriented approach, which emphasizes improvement in research, development, and dissemination (RD&D), most of Southeast Asia and China have adopted an installed-capacity-oriented approach to RE policies. China, Japan, South Korea, and Singapore claimed that their national development strategies rely on expanding renewable energy

and increasing energy efficiency towards a low carbon transition. However, these governments' actions are in conflict with their stated goals.

Dent (2012) suggests that despite the existence of physical improvements of RE infrastructure and promotion of the renewable industry through direct state financial assistance by China's 12th FYP, the level of coal-fired power generation has increased. Still, electricity generation heavily depends on coal because those countries still follow the basic logic of the old developmentalism that focuses almost exclusively on economic growth. Dent also (2012) claims that East Asia's new developmentalist approach, like the old version, promotes economic objectives over environmental issues. It is economic growth that is the major aim, not sustainable development. On the one hand, those governments are promoting the growth of the RE sector under the new version of developmentalism and at the same time that fossil fuel practices exist. There is a newly developing sector, and renewable energy development provides some economic gains. Although the developmental state approach is applied differently by the countries in this region, major concerns still focus on the promotion of industries which will provide significant economic growth (Dent, 2012). If those governments could change the people's mindsets as a green society, they would believe in creating a positive image, even if the top-down approach is embraced. The case chosen for this thesis is Turkey, which has the status of a developing country. The purpose of this is to show the contradiction that has arisen due to the adoption of the neoliberal developmentalism approach by the developing countries. In Turkey, a developing country with an increasing population, the incumbent government could not present a solid basis for policies to reduce carbon due to neoliberal developmentalism, as in the examples in other geographies. A strong analysis of Turkey should discuss whether it has renewable resources that can perform the energy transformation to get off of fossil fuels, or if the current situation is the result of neoliberal developmentalism. For that reason, the next section touches on the literature concerning Turkey's renewable energy capacity for decarbonization.

2.3. Turkey's National Energy Strategic and Action Plan

Energy governance or management is a very significant task at the international level, which aims to achieve specifically targeted standards. However, in order to reach those goals, national/domestic energy governance must be considered at least as

important as that of the international level (İseri and Günay, 2017). Despite the existence of substantial internationally binding commitments, governments have faced several obstacles, besides the Annex problem, in the decarbonization process. These problems are specifically the implementation of those commitments at the domestic level (Fisher, 2004). In light of this information, the implementation stage is perhaps the most significant problem with continuing global climate change policies. Under these circumstances, the role of national governments and their policy orientation cannot be disregarded.

When the Turkish government agreed to the climate change policy under international agreements, Turkey's National Climate Change Adaptation Strategy and Action Plan were designed in 2010 to specify the vision of the Turkish government on the climate issue. After the definition of the government's strategy and action plan, when the time came in 2012, the Turkish government started implementing the National Climate Change Action Plan (Turhan et al., 2016). According to an official document of the National Action Plan published by the Ministry of Environment and Urbanization (2011), increased global warming in the Mediterranean region, which includes Turkey, will increase day by day. The Action Plan and its strategies are focused on clean, low carbon emission sustainable development for public health. So, if the incumbent government implements these targeted policies, the energy transition process would provide opportunities for Turkey's sustainable development.

In conclusion, Turkey lags behind other countries in the energy transition process, and this fact has been analyzed in two ways in the literature, both in terms of the structure and the agent level. Although this thesis focuses on the agent level, the literature has looked at the structural level for the integrity of the subject and to provide historical background.

2.4. “Special Circumstances” for Turkey

From the perspective of Umit Sahin’s (2016) article, “Warming a Frozen Policy: Challenges to Turkey’s Climate Politics After Paris”, Turkey has the chance to warm its “frozen” climate policy with this important turning point. Sahin’s article underlines challenges to Turkey’s climate change politics at this inevitable turning point, the dawn of the post-Paris era. “It is an issue that deserves consideration to understand the significance of the short transitional period that Turkey is

experiencing" (Sahin, 2016:118). Turkey is trying to place itself in the best possible position inside the new global regime, however, it faces challenges because of the country's extremely protective climate policies, partly due to its unfortunate categorization over the years. "Diplomats now need to be more careful than ever so that Turkey's so-called "special circumstances" do not slip through their fingers, although it is not easy to explain what their real use is". However, according to Şahin, this overprotectiveness can create even more unsolvable problems. In the article, the author first explores why climate change is a crucial issue for Turkey and why it has been avoided by successive governments. Şahin further provides a summary of advances in Turkey's climate politics. He also explores some facts about its emissions and economy-energy policies and provides insight into the reasons for what he calls "frozen policy." Further, he summarizes the institutional framework that was created because of this approach, and why and how Turkish climate governance is so non-transparent and reticent (Sahin, 2016:119).

Şahin (2016) argues that Turkey never really had been part of international agreements. This is because, in the first part of the period, UNFCCC accepted that all OECD members were developed countries, which refers to Annex I countries without any division according to their economic capacity and GDP. Turkey was one of the significant examples of that issue. Due to Turkey's special circumstance status, the country is identified as a developed country. Since they were not members of the OECD, other countries such as petroleum-rich countries, were excluded from the responsibilities and obligations. In reality, Turkey did not have an equal capacity to fulfill the demands as did the other OECD members. Due to political mistakes in the grouping of countries in the UNFCCC, complexity has occurred in Turkey's case.

Turkey adopted the UNFCCC in 2004, and in 2009 Kyoto Protocol entered into force after a solution to Turkey's position. Between those periods, the perception of "policy-based-lock" occurred. Under these circumstances, the impacts of climate change policies are defined as significant but these policies are not urgent. The Turkish government suggested that this issue was the fault of industrialized countries to a large extent rather than Turkey's economic policies and carbon emission rates. From this perspective, international climate change policies are in conflict with Turkey's realities, which are based on economic policies. Additionally, Turhan (2016) claims the Turkish government is unwilling to continue further environmental commitments

related to high carbon emission intensive policies such as government support for the coal industry.

These are some of the reasons why the Turkish government has chosen national economic growth rather than mitigation policies. In the above-mentioned case analyses and as in the case of Turkey, countries may lag behind the mitigation process for various reasons. Although there are some systemic obstacles, the area to be analyzed in this thesis specifically is primarily at the agent level. As seen in the literature, the renewable energy transition process has significance at the national level and internationally. To this point, the policies adopted by national governments can affect this process positively or negatively. Clearly, there is a high level of connection between economy and energy. And sometimes, the economic development models adopted by national governments may become obstacles to the renewable energy transformation process, just like in the case of Turkey.

2.5. Turkey's Economic Transition: Neoliberal or Developmentalist?

Turkey's process of neo-liberalization of the economy in the 1980s was appreciated by the international finance community as one of the earliest examples in developing countries. Consequently, the Turkish market's new economic experience achieved economic growth through relatively controlled inflation and neoliberal principles during the first seven years. Indeed, the Turkish example has become evidence demonstrating the practicality of neoliberalism in developing countries. But after the 1990s, the glory days of the economy started to reverse, and was named a lost decade (Erensü, 2018:150). The economy experienced difficulties due to short-term capital flows and high domestic and foreign debts. Increasing concerns led to attempting a solution focused on foreign direct investment. According to Erensü's research (2018), neoliberalism faced four economic crises in 1990-1991, 1994, 1999, 2000-2001. During these crises, the meaning of implementation of neoliberalism took on various forms. During the first period as well as throughout the 2000s, neo-liberalization was fostered by the increased involvement of the private sector in the economy and the privatization of industries. The second phase of neoliberalism was approximately between 2008-2015. This era saw the privatization of state-owned companies, such as electricity distribution companies, because of its attractive outlook for the "accumulation of capital." The latest version of neoliberalism has been crowned

neoliberal developmentalism, which is based on historically embraced top-down developmentalism. This iteration is marked by government activity in whichever sector will provide economic boom under the neoliberal market conditions.

Furthermore, Erensü claims that neoliberalism provides different modalities depending on individual national conditions and the current state of the economy. Until the 2008s, neoliberalism had a hegemonic status. After the 2008s, the defeat of the neoliberal market outlook occurred with the economic crisis. Cecena argues that neoliberalism "met its definitive end with the crisis that erupted in 2008" (51:33). Erensü (2018) highlights the significance of this process as well as the post-neoliberalism era. Under these circumstances, anti-capitalism and anti-neoliberalism has spread rapidly. To decrease the negative effects of the economic crisis, governments have been obliged to adopt some Keynesian measures. Although the neoliberal approach provides economic and political liberalization, post-neoliberalism could manifest more authoritarian and state-controlled tendencies. This prediction seems to hold true for Turkey after 2015-2016 where post-neoliberalism appears to have become much more centralized, authoritarian, and nationalist. The latest period also is characteristic of the major features of post-neoliberalism, and several terms and concepts are associated together: development, growth, capitalism, and national security (Erensü, 2018:16).

When Turkey's economy's transition period was analyzed by Öniş (2019), neo-developmentalism was used as the economic approach. He emphasized that, after the economic crises in 2008 and 2012, the prominence of a Western style economic model started to dissolve due to the instability and reliability of neoliberalism. For these reasons, particularly in Eastern countries such as Turkey, the Russian Federation, and China, a new economic model was created based on intensive, rapid economic growth more in line with the priorities of the national governments. This economic orientation was categorized as "new developmentalism" or "state-led capitalism" (Öniş, 2019).

In light of Öniş, Tansel (2018) argues in his article titled “Authoritarian Neoliberalism and Democratic Backsliding in Turkey: Beyond the Narratives of Progress” that Turkey transformed economically and politically. While in the first period of the incumbent government (2002-2007 and 2011-2013), AKP (the Justice and Development Party) was following the neoliberal prescriptions coordinated by the IMF. In contrast with this period, in the years 2011 to2013 and after, the government

turned into an "authoritarian type." Economically, in the early period of neoliberalisation in the 2000s, the government decided to follow neoliberal market principles rather than presenting an alternative trajectory. Still, the AKP proposed an economic program under the aegis of the IMF-backed reform package. The macroeconomic policies based on expanded trade liberalization and attractive conditions for foreign investment, despite the short-term positive consequences of this strategy, have led to a "growth" fetishism which has become an obstacle for neoliberalism and its survival. In this framework, the picture of the economy shows the failure of "neoliberalism" and the "state-controlled economic model."

Bringing forward AKP's "Third Way" politics, Öniş and Keyman (2003) assert that the party's economic model was signaling the emergence of the new model as a "post-developmental" state with a strong reliance on the effective and developed free-market economy but with suppression of some market mechanisms (Tansel, 2018:202-203). According to this design, the newly consisted economic approach is not neoliberal. Merely, the state provides a liberal outlook fundamentally, but pragmatically an intelligently designed and regulated market economy exists. Because of this strategy, Turkey's economic growth and success seem like impressive results of the powerful implementation of the liberal market economy. In this parallel, Tansel (2018) put that the AKP's "authoritarian turn" with increased anti-democratic tendencies affected the nature of the political economy in line with the transformation from neoliberalism to post-developmentalism. The existing literature explains this switch from democracy towards a hybrid regime as “delegative democracy”, “electoral competitive authoritarianism” or “unconsolidated democracy”. These three concepts focus on the political dimension solely. In addition to that, Tansel (2018) highlights how this turn might reflect on the political economy of the country. While understanding the interactions between the political system and economy, due to the nature of the political economy, the authoritarian turn shapes the production, accumulation, (re)distribution, and wealth system. The analysis Tansel (2018) investigates this situation through the lens of authoritarian neoliberalism. In the light of this approach by the AKP government; outputs take precedence over state apparatuses and the relations of state-civil society. These are as follows;

1) strict centralization tendencies over the decision-making process which includes both politics and economics.

2) weakening of the rule of law through state interventions on executive and legislative branch.

3) usage of strategic and important major administrative and bureaucratic functions of the state in line with the governing party's interests.

4) the interventions of the state over media

5) de-collectivising of the labour relations

6) reproducing discourses for consent generation and mobilisation (e.g. Gezi Park movements in 2013) (Tansel, 2018: 199-200).

In this respect, authoritarian neoliberalism paves the way to undertand the state's role while neoliberalism is redefining the interactions between states and society. In particular in first phase of the AKP governments in 2000s and 2001 years, the party embraced the Western type of liberal democracy in every sphere of influence of the state. Specifically in the economic pillar, AKP government adopted reform packages which rely on inflation reduction, extended trade liberalisation and the power of foreign direct investments. These initiatives created a positive image, but it was only for the short-term. In essence, the incumbent government-led economic growth quickly failed because the determined growth model was fundamentally based on privatization, financialization, and foreign direct investment. After the post-2013 years era, with the influence of political developments within the state in line with anti-democratic tendencies, authoritarian neoliberalism replaced standard neoliberalism. In this regard, Tansel (2018) clearly states that after 2013, the AKP government started to increase authoritarian tendencies gradually under the concept of an authoritarian neoliberal regime. But, this does not show that all developments are in fact authoritarian. Despite adoption and implementation of classical, it is the emergence of the authoritarian practices within the political-economic trajectory of the AKP which points out the shift (Tansel, 2018).

Another analysis of Turkey's economic transformation is the article of Zengin and Ongur (2019) which refers to the populist outlook of the political economy of the AK Party in Turkey. To provide a theoretical background for this assumption, the authors use Muddle's well-known definition of populism. According to Mudde's (2004) definition, populism is an ideology that covers society without any division between the pure people and the corrupt elite. In this respect, populism represents the pure

people against the domination of the political elites. Populism is not limited to only politics; in contrast, populism covers a broad area in international relations which includes migration politics of states to economic policies and actions. Zengin and Onur (2019) emphasize the stance of populism on the neoliberal economic policies of the Turkish government. In the case of Turkey, populism and neoliberalism work together in parallel with each other. In this respect, populism gains a powerful means as a tactic to implement economic policies that serve leaders' interests because of the non-democratic structure of neoliberalism in Turkey. Even neoliberalism comes from an authoritarian background as such in Turkey's sudden changes in the Özal period towards a free-market economy. The comparison of Turkey's economic crises in 2001-2002 and 2018-2019 shows that in the first crisis the Turkish government decided to promulgate the IMF arrangements to recover the Turkish economy. In the second crisis in 2018, the unwillingness of the Turkish government to cooperate with the IMF was clearly apparent. This may have been because populism provides a solution to conceal economic developments in the country. Indeed, although Zengin and Ongur (2019) do not propose a new concept for neoliberalism, they claim the government actions to be the articulation of neoliberalism and populism.

To draw a framework for conceptual approaches in the case of Turkey's economic transition, after the economic crisis, many states around the world, particularly developing countries, have turned to controlled markets rather than free markets because of neoliberalism's lack of reliability. Although they may be named differently, these economic theories, "state-led capitalism" (Öniş, 2019), "neo-developmentalism" (Moraris and Filho, 2012), "post-neoliberalism" (Erensü, 2018), and "neoliberal developmentalism" (Adaman et al., 2015) support increasing the role and control of the state over the economy. The aim is to create a reliable and stable economic environment with state and private sector cooperation, provided their interests overlap. In particular, national governments emphasize rapid economic growth and developmentalism to expand their area of control or consolidate their power at the national level. Indeed, post-neoliberalism signals the emergence of a new approach to the neoliberal economic system. But, in particular, post-neoliberalism means the transition process from neoliberalism to a new economic model. In this regard, this understanding does not symbolize specific economic principles and practices of a traditional approach. The lack of clarity is leading to different iterations

in several countries and regions because each and every national government interprets and improves its own practices. For instance, especially in Latin American countries (e.g. Brazil), the post-neoliberal process has led to neo-developmentalism. After the dissolution of neoliberal conditions within these countries, the classical developmental approach was returned to with small changes. In comparison with classical developmentalism, neo-developmentalism highlights the state's control of macroeconomic conditions and also, more moderate state intervention than before. The private sector has a share, but its impact is reduced at the macro level. Another approach has also emerged against the international neoliberal economic system, state-run capitalism. This model can be seen in Eastern countries such as China or the Russian Federation. This economic model directly points to the economic development model of authoritarian regimes. It is an approach in which capitalist order and practices are directly managed and implemented by the state, rather than private sector activities. Thirdly, neoliberal developmentalism attempts to blend these two different economic models. As seen in this thesis, this is realized in the post-neoliberalism of Turkey. In this model, a developmental approach is based on neoliberal practices and mechanisms. Free market conditions exist in neoliberal developmentalism at the macroeconomic level.

In other respects, the national government is not willing to create an explicitly authoritarian image in the market as in state-controlled capitalism, and besides, the government is not a single economic actor in the market. In this context, neoliberal developmentalism acts according to free market conditions and neoliberal calculations at the macro level and claims to create a competitive economic system. However, an important distinction is that while controlling the market in the neoliberal order, it performs its developmental practices by prioritizing and supporting certain sectors as tools. As we mentioned above, in recent years, while neoliberal principles have weakened in the neoliberal developmental approach, the viewpoint has evolved towards the concept of developmentalism with the influence of the political system of the state. However, while all these concepts fit into the general concept of neoliberal developmentalism in the broadest sense, they have sub-categories as discussed above.

The results of these discussions show that neoliberal developmentalism implemented by the incumbent government is highly dependent on rapid economic growth through specific industries, specifically mining activities. On the other hand,

the government is implementing partly neoliberal market conditions, such as privatization of energy distribution companies and deregulation of energy markets. That emergent approach's major characteristics are states' and institutions' presence in the economy and an emphasis on the national development strategy. Even though the strong relations between the states' climate change policies and economic policies are being discussed, Paterson (2020) highlighted the fact that the main issue is that national governments are following what their interests require. The state of the political economy suggests that new accumulation regimes ought to be in parallel with climate change and the transition into post-capitalist societies. This course of action would follow with international developments which highlight the "end" of fossil fuels because capitalism and climate change have a problematic relationship.

Despite the strong position of capitalism, more attention is being paid to the relationship between an energy transition and the economic activities of the state and private sector. A study by McKibbin and Wilcoxen (2002), titled The Role of Economics in Climate Change Policy, argues that although climate change creates some uncertainties, an efficient and proper economic policy may provide a good governance guide for states. If the state is to intervene, action should be aimed at preserving and even expanding the existing favorable conditions because the best way to reduce carbon emissions depends on political intentions increasingly continuing. The review article of Helm (2010) lists the reasons for states to explain under what conditions they fail in order to underline the political priorities of incumbent governments, the weakness of market–based regulations as well as insufficient incentives, and the rent-seeking mentality of the government.

2.6. A Critical Look at Turkey's Energy Policies at the Agent Level

Tansel (2020:800), in the article “The Shape of 'Rising Powers' to Come? The Antinomies of Growth and Neoliberal Development in Turkey”, shows how the incumbent government's understanding of the political economy influences the relationship between the economy and the environment. According to Tansel (2020), the growth strategy of the state is leading to the weakening of environmental regulations. In particular, privatization is a major tool for the AKP's neoliberalism. Privatization is not new for Turkey, but under the AKP government, the scope of

privatization has been extensive. According to a report by the Prime Ministry Privatization Administration, the aims of privatization are listed as:

1. To reduce the influence of the public sector on the market,
2. To redefine major areas of the economy
3. To create a fertile ground to support private sector activities

In light of these motivations, the country has undergone extensive privatization. Also, Tansel (2020) shows that in the OECD's privatization report in 2009, Turkey is the fifth country in the "privatization Top 10" (Tansel, 2020:802).

In contrast with the theoretical aims of privatization, the Turkish government's influence on the economy did not decrease. The state only withdrew from some sectors, such as forest production, cement, and petroleum distribution. With deepening privatization, some negative consequences have occurred in the areas of employment conditions and the environment. Tansel argues that the major neoliberal mentality of the Turkish government, which is based on growth, paved the way for the deregulation of environmental protection.

There is growing unemployment. In this regard, in light of Tansel's (2020) analysis, Turkey's understanding of economic growth, which serves its rising power status, has failed, and to prove this, we need to look at the rising unemployment rates. This shows that the current government legitimizes some economic and political programs with neoliberalism (Tansel, 2020:806). As a part of this broad picture, the weakening of environmental regulations and bringing the coal sector to the fore are in the process of obtaining a continuous financial flow with privatization, taking strength from the understanding of growth that ignores social and environmental effects to elevate the state to the status of rising powers. In this case, it directly guides environmental policies and indirectly energy policies.

Following this with the analysis of Şahin (2018), which focuses on the agent level at that time, the main era of this study focuses on the energy transition in the case of Turkey, Poland, and Germany. From the critical lens of Turkey's case, the author defines the current situation of Turkey's energy transition period. In Turkey, the usage of renewable energy in energy production is growing because of hydropower and

wind. But on the other hand, the national government aims to increase the usage of national resources such as coal. To explain this situation, the main argument of the incumbent government is to decrease energy import dependency. In the energy production process, coal and natural gas represent a huge proportion. In parallel, an energy deficit still exists. To replace these, wind or solar power could be equivalent, but Turkey's official energy strategy does not prioritize decreasing fossil fuels. To show evidence, according to the government, coal subsidies are not compatible with the major objectives of international trends. The national government is providing support for the coal industry through incentives, transfer payments provided by the Treasury, R&D supports, exploration subsidies, and guarantees in both investment and purchasing (Şahin, 2018:37). Under these circumstances, experts clearly state that the country has no common points with the global trend or development because Turkey's energy outlook seems to be dependent on fossil-fuels. A contradiction exists between the global trend and Turkey's energy strategy. Some key points explain why Turkey has contradictions in the energy transition process. Importantly, economic, scientific, and technological circumstances are significant determiners, however the political decisions of the national government are much more significant than these other factors.

Also, the issue is relatively related to energy security. In the case of Turkey, the Turkish government has some concerns about energy importation, so to decrease energy dependency, the solution must come from the use of domestic resources. But, the incremental increase in population and economic growth, parallel with huge amounts of energy consumption, are triggering the increases in energy demand. Secondly, another barrier is the perception that renewable energy sources have low capacity.

In conclusion, economic constraints, particularly the need for financing, political decisions, population expansion, and economic growth, can be summed up as the main barriers to switching to a low-carbon energy system, as noted by experts. According to experts in the energy industry, there are only two actors, the government and the private sector, who are significant in defining policy. Additionally, experts state that the position of politicians “as the main players in the process of formulating energy regulations [is motivated by] their concern for votes serving as their primary driving force” (Şahin, 2018:38). To sum up, in Turkey, despite an increase in new

renewable energy production such as wind and solar (excluding conventional hydropower), there is no firm low-carbon transition policy in place. Turkey's energy policies are aimed at closing the current deficit with energy produced domestically and reducing the country's reliance on energy imports. The strategic goals are to meet rapid increases in energy demand by building new power plants and to ensure supply security through resource diversity. Turkey's current energy policy is based on increasing domestic lignite consumption, which is justified by using arguments of energy independence and cheap energy.

As a result, Turkey continues to build new coal-fired power plants, ignoring the fact that, like Poland, these power plants will extend carbon lock-in by 40 to 60 years (Şahin, 2018:40). And Şahin (2018) concludes the main obstacles in front of Turkey are the national government's policy preferences. According to the study's consequences, the government prefers coal because of the common perception of domestic resources, and coal will decrease energy importation. Also, coal is used by the incumbent government as a tool. In this regard, phasing out coal does not conform with domestic and national developmentalist ideologies. The influence of developmentalist ideology is paving the way towards a stronger motivation for economic growth as usual. And finally, this ideology is creating many questions and obstacles for low-carbon policy in Turkey.

In the case of Turkey's failures in energy transition at the agent level from other perspectives, a paradox can be detected between the economic and environmental policies (Adaman et al., 2010). To explain the failures of Turkey, the major argument concerns the political economy of the government. The critical definition of neoliberal developmentalism was argued by Adaman, Arsel, and Akbulut (2015). Despite strategic initiatives taken and the existence of a set of legal regulations, Turkey has failed environmental policies because of its inability to act on its own decisions and the inability to use natural resources effectively. In Turkish politics, the major aim is the cultivation of an economy which is on a par with that of Western developed and industrialized economies. From the 1920s to the late 1970s, the powerful legacy of the Ottoman Empire based on the developmental state model turned into “advanced civilizations.” In this sense, “growth fetishism” plays a strategic role which promotes the idea that merely economic growth provides a national development. Since the Ottoman Empire, Turkey has had a tradition of a strong state. Every aspect of the state

is aware of its responsibilities, such as the critical situation of environmental problems (Adaman et al. 2010:329). For the last 50 years, Turkey has seen a growing population and increased industrialization and urbanization. Every year, the country experiences several types of environmental degradation. For instance, Turkey is now considered to be a water-poor country, in addition to on-going soil degradation and loss of biodiversity. However, the government has tendencies that remain unresponsive to the different types of issues within society as a result of prioritizing economic development (Adaman et al., 2015; İşeri and Uygurtürk, 2021). Since the beginning of the 1980s, Turkey has faced several economic and political changes, referring to the process of major transformations. Developmentalism faced times of crisis in the 1980s because of high inflation rates, high trade deficits, and unemployment. At the same time, the era of developmentalism experienced political crises. With the increasing effectiveness of the neoliberal economy in international markets, the government decided to be part of the global market through foreign direct investments and production focused on exports rather than import-substitution-industrialization. Thus, powerful and ambitious neoliberalism and export-oriented industrialization programs were implemented by the prime minister Turgut Özal in 1983 (Arsel et al., 2015:7). The sudden increase of new market conditions has paved the way for a top-down technocratic approach as Zengin and Ongur (2019) stated before.

In the book of Akbulut, Adaman, and Arsel (2017), titled *Neoliberal Turkey and its Discontents*, the AKP's understanding of neoliberal developmentalism relies on the "politics of serving," as explained by Hande Paker. The meaning of politics of serving is the comparison between current governance and previous periods - thus showing the inabilities of previous rules. In the construction of hegemony, infrastructure and megaprojects are used by the AKP to show its well-implemented policies and positive gains of projects for economic growth, such as hydroelectric dams. The AKP's power in the creation of infrastructure embodies the neoliberal economy through the corporatization of state services. Despite the sovereign approach being neoliberalism, the forceful implementation of megaprojects and their practices is a sign which indicates that the newly emergent approach is Turkey's own, unique version (Paker, 2017).

In addition to all these claims to explain the current dynamics in Turkey, Adaman, Akbulut, and Arsel assert that the incumbent government uses a combination

of “authoritarianism,” “extractivism” and “neoliberal developmentalism.” These approaches that in tandem with one another provide the best combination for the state. With the rise of authoritarian populism, neoliberalism and the crisis it caused fell under heavy criticism by populist leaders. Leaders who come to power and/or want to maintain their hegemony have generally promoted an illusion of “economic growth” by means of extractivism, which is based on infrastructure construction (Adaman et al., 2019:6). From oil to minerals, ‘agro-extractivism’ becomes a means of accumulation for a new regime where novel alliances exist among the state and corporate actors that are generally state-owned and accelerate the process through material concessions.

In their eyes, this approach makes it possible to boost economic growth rapidly and at the same time create employment. Indeed, the intervention of the state in the populist guise of extractivism does not imply neoliberalism as a consequence because it has a more “developmental” outlook. This approach takes advantage of neoliberalism’s logic of economic calculations, as well as utilizing the notion that rapid economic growth represents a clear solution for all social ills.

In other words, developmentalism is placed on top of neoliberal macroeconomics, which only feeds on rapid economic growth. With this understanding of developmentalism, the state absorbs other existing problems, protects its power, and legitimizes its activities. In this way, neoliberal developmentalism enables the use of state power for all action. However, policy areas from environmental policies to democracy are sacrificed and ignored just to achieve economic growth.

In response to these issues, politicians have supported some statements prioritizing the high growth rates over environmental concerns - citing national interests by the government. A similar phenomenon happened during the Kyoto Protocol process. The Turkish government's long-lasting resistance against signing the protocol occurred due to the government's statements, which were based on national interest. The AKP's major aspiration for development embodies patronage-based reciprocity rather than sustainable and rational objectives. Environmental problems are disregarded or sacrificed for rapid economic growth in this respect. The existence of deep patronage practices could lead to increasing climate change and environmental problems.

A chapter by İşeri (2023) underlines the path-dependency of "carbon lock-in" mentioned above. In carbon dependent developing countries undergoing the renewable energy transition process, a problematic energy trilemma is occurring that includes energy security, energy equity, and environmental sustainability (İşeri, 2023:1). In this regard, Turkey, which has a growing population and energy demand, receives 87% of its total energy through imports. However, when we look at renewable energy development, Turkey is in a good position in terms of installed power capacity. However, it still does not have a large share in meeting the energy supply because of government subsidies for the coal industry, which lead to Turkey's energy profile becoming even more carbon-intense (İşeri, 2023:2). To explain the incumbent government's policy choice, İşeri (2023) suggests analyzing the general structure of the political economy of Turkey. First, continual growth fetishism was embraced by the Turkish policymakers from the foundation years in order to catch up with Western countries and industrialized economies. This mentality has led to strong state-interventionism in the economy. According to the time and context, the approach based on state-interventionism has succeeded, but at times it has also failed. From the point of view of the economic model, Turkey had a sort of mixed economy with a state-controlled economy, liberalization-, and neoliberal setting. However, significant change happened in the 2000s with the liberalization of the energy sector through support by the IMF and the European Union. During this period, positive developments happened, and the national government took critical steps to pave the way for the improvement of the RES. For instance, The Enactment of the Electricity Market Law (EML) no.4628 in 2001 and EML no. 6446 in 2003 seemed to be positive steps. However, after 2015 there were breaks within the institutional structure of the incumbent government.

With some political changes, Turkey remained in a position of "two steps forward and one step back" in the energy sector. For instance, The Electrical Energy Market and Supply Security Strategy Document (2009) claimed that the country aims to increase the share of renewable energy by 30 % in the energy production process by 2023. But in a seemingly contradictory fashion, the national government also prioritized its commitment to fossil fuels to meet the energy demand and decrease imported energy dependency. There was already a contradiction or inconsistency because it was not possible to feed coal and focus on renewable energy at the same

time. The privileges and investments provided by the government to the coal sector continued, and the subsidies continued. İşeri and Günay (2017) exemplified that privilege with the declaration by the Energy Ministry of 2021 being 'the year of coal'. After this, according to Acar and Yeldan (2016), Turkey's ten-year development plans, known as strategy documents of the Ministry of Energy and Natural Resources (MENR), prioritize coal mining and coal-fired electricity generation. The most significant measures are investment guarantees, easy access to loans, and tax exemptions for the coal industry (Acar and Yeldan, 2016: 2). Looking at the essence of the matter, the following point is emphasized. Although Turkey is both a favorable country for renewable energy and has come a long way in certain decision-making procedures, it also supports fossil fuels in a way that is inconsistent with these developments. The reason for this comes from the understanding of the path dependency approach that has existed throughout history. This mentality has caused the country to strive for constant economic development, and all their policy choices are centered around this. Rather than being evaluated as completely unsuccessful, Turkey seems unable to achieve efficiency and sustainable development. At the agent level, the reason Turkey lags behind other countries is the effect of economic policies on energy policies.

İşeri and Uygurtürk (2021) also analyze Turkey's energy governance as an upper-middle-income developing country. According to their arguments, energy governance has powerful linkages with the energy transition process of the countries. In particular in developing countries, due to the understanding of emerging economies, this perspective creates an obstacle for the transition because of the growing population and the meeting of energy demand in a cheap way through fossil fuels. In upper-middle-income developing countries, according to conventional understanding of the neoliberal developmentalist approach, Turkey could protect its energy security in three different ways;

1) the use domestic resources (hydro, renewables, and coal), in addition to nuclear energy and progress in energy efficiency

2) market liberalization of the energy sector

3) the use of energy diplomacy to become a regional energy hub through pipeline politics (an ambitious position of the incumbent government).

But, these three points lead to the emergence of contradictions and negative outcomes on the country's energy governance (İşeri and Uygurtürk, 2021:33). To explain these contradictions, first of all, Turkey still has not decreased the degree to which it is a carbon-intensive economy within the standards of OECD countries because Turkey has no powerful plan and has not realistically intended nationally determined contributions (INDCs) as set out in the Paris Conference (COP 21).

Another significant point is the improvement of renewable energy rates to meet growing energy demands. Excluding hydropower capacity in generating electricity, renewables have a low level of participation in the big picture. The final issue is Turkey's energy production, but the level of production is at only 25-30 % of the total. So, it shows the country's dependency on imported energy such as oil, natural gas, and coal. İşeri and Uygurtürk (2021) continue by touching upon Turkey's ambitious role in the process of becoming a regional energy hub. But, the government has some difficulties due to limited suppliers because of its limited energy storage capacity. The incumbent government's aggressive energy diplomacy in the Eastern Mediterranean is triggering a problem between Turkey and the European Union.

As alluded to above, some issues relate to problems at the structural level such as in Turkey's position in the power spectrum within the world system. For instance, the title of the developing country is also highly related to the structural part of the issue. But, at the national level, the understanding of neoliberal developmentalism and the coercive attitudes of the AKP government in energy diplomacy is paving the way for a move away from the European Union's perspective on the renewable energy transition. The article is critical of both the concept of energy security and energy diplomacy in Turkey, which depends on the country's transit country status according to the developing tensions or developments in the Middle East, Europe, and the Eastern Mediterranean. Another part of the analysis concerns energy sustainability or energy equity through the critical lenses of the neoliberal developmentalist outlook of the economic growth model. As the thesis mentioned before, Turkish policymakers' "growth fetishism" is negatively affecting the country's energy transition future. The mixture of rapid economic growth, top-down modernization, and classical developmentalism create fertile ground to legitimize the incumbent government's policy choices through weakening of neoliberal part of practices- particularly within the relationship between energy and construction sectors which is the major

locomotive of the country's carbon-intensive economic growth (İşeri and Uygurtük, 2021:10-11).

Within this context, the various reasons and circumstances discussed above can serve as a response to why Turkey has a low level of development in the energy governance process in comparison to international trends. Moreover, the results also show that the political-economic approach to neoliberal developmentalism is creating contradictions and obstacles. In this case, it becomes one of the most important influencing factors at the national level. As seen in the literature, states follow different paths in the energy transformation process. There are sometimes structural obstacles in front of some states in this process. Another essential pillar of this process is the policies followed by the governments. In this context, while there are some structural problems in Turkey, the effects of economic policies and the political economy at the national level negatively correlates with international trends in environmental and energy policies. Although developmentalism is discussed in connection with neoliberalism, deep patronage, path dependency, or neoliberal developmentalism, the main problem is that the government's economic policies are focused only on rapid growth. As discussed in the section covering the conceptual framework, this thesis will contribute to the current literature and an emerging issue with the critical lens of neoliberal developmentalism while answering why Turkey, as a developing country, lags in the decarbonization process compared to other countries from an economic perspective.

CHAPTER 3. METHODOLOGY

The research design is based on a case study on Turkey's decarbonization. Furthermore, it is comprised of a blueprint for collecting, measuring, and analyzing data. The overall strategy was chosen to integrate the different components of the study coherently and logically to address the research problem in the most effective manner.

3.1. Research Design

The thesis starts with the introduction chapter. The first chapter explains the general framework, research question and the significance of the research. First, problems are shown and highlighted to indicate why this chosen research question is significant. Following this, some existing issues are discussed briefly in order to highlight relevant background information. In this respect, specifically, this thesis introduction responds to why Turkey's weak development in the decarbonization process and energy transition process is an important matter.

In chapter 1, the conceptual framework section provides a critical lens to understand how the economic policies of the national governments affect the other policy areas, such as energy policies and climate change policies. Firstly, the significant components of neoliberalism and developmentalism are analyzed to show differences among these two approaches, which come from two different views of economic growth. Within the two economic approaches, neoliberal developmentalism is receiving more attention in the literature. In light of this, developmentalism and neoliberalism and their main principles are explained. According to time and economic context, common economic tendencies in the world have changed during the mentioned period from developmentalism to liberalism and then again from neo-developmentalism to neoliberalism. There are several concepts that are used to define the mix of these two economic approaches, and neoliberal developmentalism is chosen for critical analysis of the decarbonization process. After the historical background and explanation of developments in these two approaches, the end of the conceptual framework section proposes that a solution could be green capitalism. This approach is also widely discussed in the literature as a result of much criticism of Eco-Marxism.

In chapter 2, the literature review presents how other related sources address similar research questions. While there are studies that analyze decarbonization, energy transition, and renewable energy policies at the national level/agent level, there are also arguments that deal with them at the structure level. From general to specific, this thesis is concerned with the national level and presents relevant academic resources and reports in search of answers.

The current chapter on methodology includes the flow of the thesis parts and its contents. This section describes the research design and conveys what is discussed in the relevant sections, as well as how this design contributes to the thesis. Accordingly, the case study method is explained along with the importance of sample selection. The subsequent section discusses why Turkey is an excellent example of analysis brought to the fore. That section is then followed by an explanation of how data was collected and chosen to support and test the hypothesis; in addition to both qualitative and quantitative research traditions, a mixed research method is employed, which includes both of these two research methods. This study utilizes both primary and secondary sources. While looking at the reports from the government's relevant units, such as the Ministry of Energy and Natural Resources, reports on the coal industry were obtained from institutions such as Turkish Coal Enterprises. In addition, reports from leading non-governmental organizations working on decarbonization, energy transition, renewable energy, and its effects on employment are key data sources. In addition, academic articles and books in the relevant literature inform the critical approach of the thesis.

This thesis then continues with a chapter of analysis of the data. In chapter 4, first of all, historical developments provide insight into the degree to which Turkey has participated in international developments, agreements and conferences concerning climate change. In the following pages, the related chapters analyze Turkey's increasing carbon emission rates from the 1990s to the present. Then, questions are raised concerning how Turkey's ongoing energy policies are contrary to the international trend. Despite the approval of the Paris Agreement in the Grand National Assembly of Turkey, this thesis argues that a clear roadmap for exit from carbon has not yet been drawn. This is supported by analysis of the government's legal, financial and social incentives to the coal sector as well as. by examining Turkey's foreign dependency on energy and looking at the economic effects of imports. Last

section of chapter four discusses the weakness or uncertainties of Renewable Energy Cooperatives, which are significant facilitators in the transition to renewable energy.

The thesis discusses with the coal industry that the interest in renewable energy is low, and the interest in the mining sector is high, in a way that serves the economic growth model embraced by the incumbent government, contrary to or inconsistent with these developments. The analysis primarily tests the hypothesis in this relevant section. The conclusions section of the thesis touches on the general framework, consequences and briefly highlights the critical points of the research. Finally, the contribution of this thesis to the literature and possible areas of research interests are stated.

3.2. Case Study Method and Case Selection: Turkey

The case study method, a research strategy, takes many forms. Generally, it is used when answering research questions such as "how" or "why" to gather information on individuals, groups, and organizations especially as the data relates to social and political issues. The case study is a joint research strategy in sociology, psychology, social work, and political science. In particular, the case study method is also used in the economics of a specific sector, region, or country. The main objective of the case study is to understand complex social phenomena. Thus, researchers employ the case study method to focus on real world events such as individual life-cycles, organizational- managerial processes, and international relations. Analyzes are made based on selected samples and inferences (Yin, 2009).

To provide a general framework, cases must be selected self-consciously. Much of the most substantial qualitative work in IR pays close attention to the reasons for studying cases (Bennett and Elman, 2007).

In this study, Turkey is selected as the specific case of analysis of the decarbonization process in developing countries. To respond to why Turkey was selected as a case, the country has several factors to analyze. First, Turkey has a growing population, typical of a developing country. With the current status being middle-income and defined as a developing country, such economies typically experience rapid economic growth. And parallel to with this, Turkey has the world's 21st largest economy based on annual GDP (IMF, 2022). This situation triggers the country's desire for rapid economic growth. At the same time, the growing population also affects the energy demand. The country's energy consumption has increased by

32.1% in the last ten years. Following this, energy production was 44.7%. While 27.6% of our total energy supply was based on domestic production in 2018. This percentage increased in 2019 to make up 31.04% of the total energy supply. However, despite this increase, energy demand is mostly met by imported energy (Turkish Coal Enterprises Coal Sector report (2020). As mentioned above in the introduction, Turkey's foreign dependency in primary energy has been increasing over the years and recently, it has reached almost 70.0% in 2020 (IEA, 2021b). Considering these data, for a developing country that is a net energy importer, the issue of energy is of great importance (Hale, 2022: 453). From an economic perspective, Turkey's economy, which is based on high energy and carbon intensity, is exposed to global energy supply and price instability. At the same time, this is creating a problem in the context of global and regional decarbonization efforts (World Bank Official Website). While Turkey meets energy demands, it provides incentives to fossil fuels despite the capacity for renewable energy. In order to reduce foreign dependency, Turkey is a favorable country for using renewable energy resources (Ayanoğlu, 2018: 75-77). It has a suitable geography, especially for solar, wind, and hydro energy; apart from that, geothermal and biomass are renewable energy sources that are also suitable for use in. [Turkey] (SHURA, 2018: 95-99). On the other hand, it is a country with low reserves of fossil fuels, aside from lignite.

GHG emissions and climate change have a serious impact on the global economy. Therefore, there is a need to control atmospheric emissions of greenhouse gasses, among others, and substances in Turkey. Although energy is essential to economic and social development and improved quality of life in all countries, the world's energy is currently produced and consumed in ways that could not be sustained if technology remained constant and overall quantities were to decrease substantially. To analyze the case of Turkey, *renewable energy sources in Turkey for climate change mitigation and energy sustainability* (2012), written by S. Keles and S. Bilgen, examines global energy consumption, renewable energy, and climate change in general and further explores these topics in Turkey in particular. The article provides insights into renewable energy utilization for climate change mitigation and energy sustainability in Turkey. The renewable energy supply in Turkey is dominated by hydropower, and biomass. However, "environmental and scarcity-of-supply concerns have led to a decline in biomass use, mainly for residential heating" (Keles and Bilgen,

2012:5199). Policymakers and investors worldwide increasingly recognize electricity's pivotal role in improving living standards and sustaining economic growth. Therefore, electricity supply infrastructures in many developing countries are being rapidly expanded.

If Turkey, as a country with a high population, uses only traditional energy sources, it may not have enough energy capacity for its population. According to Keles and Bilgen (2012), renewable energy is the key to solving Turkey's energy-related challenges. "There is a growing concern that sustainable development may be compromised unless measures are taken to balance economic and environmental outcomes. Since the early 1980s, Turkish energy policy has concentrated on market liberalization to stimulate investment in response to increasing internal energy demand" (Keles and Bilgen, 2012:5200). In Turkey, the need to control atmospheric emissions of greenhouse and other gasses will increasingly need to be based on efficiency in energy production and consumption.

Since renewables provide an excellent opportunity to mitigate greenhouse gas, they are considered one of the best solutions for Turkey's clean and sustainable energy future. As electricity has become the fastest-growing end-use of energy, hydroelectric power's technical, economic, and environmental benefits make it an important contributor to the future world energy mix. In Turkey, the role of hydropower in electricity generation is substantially greater than any other renewable energy technology. However, Turkey uses energy sources inefficiently and consumes more energy to produce a product in comparison to other nations. Energy production from renewables should be improved in Turkey to reduce dependency on energy imports, environmental pollution and increase the country's development by increasing the country's economic standing. Moreover, energy policies of the Turkish government should support domestic renewable energy sources and use power plants efficiently.

Although there have been positive achievements in renewable energy development and manufacturing in Turkey over the past decade, it is believed that Turkey does not use its renewable energy sources efficiently and should promote new technologies and use all its renewable energy potential. Also, the governments should support utilizing renewables effectively to diminish the global climate change issue. (Keles and Bilgen, 2012:5205).

From 2002, the share of renewable electricity production increased. Despite hydroelectric having a huge proportion within the process of electricity production, renewable energy was unable to meet energy demand. Since 2010, the varieties of renewable energy sources have been expanding with solar and wind energy taking larger shares. The diversification of renewable resources is vital for the energy transition and security. In 2002, renewable energy sources' share in nominal power was almost 0. But recently in 2021, this rate increased to 23%. Following this, as of the end of 2021, the share of renewable energy resources in Turkey's total nominal power reached 54%, while the share of renewable resources in production was 36%. Within this rate, 17% was provided as non-hydroelectric resources (SHURA, 2022:19). Moreover, due to the effects of the droughts, renewable energy's share in electricity production declined from 42% to 36 %, in line with the drop in the hydroelectric resources., While the country's preference for diversification of energy resources is meaningful, renewable resources and particularly the effective usage of their capacity is critical to meeting energy demand. As of the end of 2021, the 2023 target set in 2014 for solar and geothermal energy installed power was exceeded (geothermal installed power was 1.7 GW, solar energy installed power was at the level of 7.8 GW). At the same time, hydroelectric energy has 90% of the target, and wind has 50% of its target energy capacity. However, announcing different targets at frequent intervals reduces the directionality of the targets. Starting next year, it is expected that more ambitious targets will be set in renewable energy to renew the 2030 National Declaration of Contribution (NDC) within the scope of the Paris Climate Agreement. Although the share of renewable energy has increased, it is vital to continue renewable energy investments without slowing down to reach the 2053 net zero CO2 target. As in the past few years, renewable energy will be used by energy investors, industrialists, and other large consumers in line with decarbonization targets (SHURA, 2022:28-30). In the present case, Turkey has sufficient capacity in terms of renewable energy sources. The national government is fed from all sources resulting in a diversified energy supply. As mentioned above, the important thing is that the investments are sustainable and uninterrupted. According to international agreements, it must be effective in its commitments to 2053. However, although Turkey is included in the UNFCCC, Kyoto, and Paris Agreement, it could not make considerable progress.

In contrast to the roadmap drawn in this process, the nation continues to depend on fossil fuels. Recently, one of the most important outcomes of Glasgow- COP 26 - emphasized increasing national government efforts and strengthening plans on Nationally Determined Contributions (NDCs'). COP26, which was held with the participation of all-party countries (197 countries) within the scope of the principle of 'common but differentiated responsibility', focused on four main objectives: *combating climate change, reducing greenhouse gasses, adaptation, finance and cooperation*. In order to achieve these goals, recommendations were made to all party countries on the preparation of action plans and the creation of data and information systems until 2030 (Demir, 2022:163). These targets, which were determined by taking the Paris Agreement to a further point, aim to make it possible to reach the global net zero by 2030 and keep global warming at 1.5 degrees. To reach this goal, first and foremost on the agenda is the "phase-out-of coal" (Depledge et. al., 2022). In the meantime, incentives and government subsidies for fossil fuels also were deemed inefficient. Although it is stated as such, some countries (developing countries, e.g. China, India, Iran) are targeting this as a gradual exit from coal - *phase down* - instead of coal exit due to their national conditions (Depledge et. al., 2022:149). Turkey, as a developing country and signatory to the Paris Climate Agreement before COP 26, announced its 'net zero emissions' target as 2053. In this context, Turkey will prepare a roadmap for COP 27 in 2022 and update its NDC. As a party to the Paris Climate Agreement, Turkey has accepted all obligations and responsibilities regarding the fight against climate change (Demir, 2022). In this context, it was emphasized that a roadmap should be drawn for the exit from coal, albeit gradually, to comply with international agreements.

At the same time, as mentioned in the introduction, the EU has put forward the Green Deal as a sustainable economic development model. Although it has not been implemented yet, a financial burden will soon be imposed in the form of carbon regulation at the border for imports into the EU, which could have a substantial impact on Turkey. The European Union has a 41.3% share of Turkey's exports with 93 billion dollars in 2021, and it ranks first in total exports (Turkish Ministry of Commerce Official Website, 2022). Because of Turkey's status as a developing country with renewable energy resources, being a party to international agreements, and close economic relations with the EU, Turkey was chosen as an example to analyze why it

performed weakly in the carbon exit process. Against this backdrop of the international political environment, Turkey's plan for development aims to have a renewable energy alternative and simultaneously begin the carbon exit process. The support and incentives given to fossil fuels create an inconsistency between Turkey's economic policies, energy transition, and climate policies. In light of such cases, it seems appropriate to analyze why some countries– for this thesis's purposes Turkey- lag behind others in the energy transition and decarbonization process of developing countries.

3.3. Data Collection

Firstly, to provide historical developments about Turkey's participation in the UNFCCC and Kyoto Protocol, data was collected from the official documents of the Turkish government published by the Ministry of Foreign Affairs, Ministry of Environment and Urbanization, and several academic articles. Turhan (2016) and Türkeş (2018) highlighted Turkey's Annex Problem as an obstacle for the national government.

Other important sources of data are official government documents, NGO reports, and academic articles related to the coal industry in Turkey. The mining and in particular coal sector were chosen specifically because they were identified as prominent sectors in line with the concept of neoliberal developmentalism, as examined in the conceptual framework section. Such sources assisted in testing the hypothesis that the incumbent governments' secession from the international commitments is due to conflicts between the Turkish government's neoliberal developmental economic approach and decarbonization. The 11th Development Plan published in 2019 by the Presidency of the Republic of Turkey outlines the primary policy objectives for 2019-2023. In particular, chapter 2.2.3.6. Energy and 2.2.3.7. Mining provide the national government's specified policies and determines the government's mining policy decisions. This development plan shows the government's overall energy plan, including renewable energy and fossil fuels. The WWF and SEFIA (2022) report, titled *Overcome the Contradiction: Turkey's Green Revolution and New Coal Investment Plans,* presents the contradictions between net zero targets and Turkey's plans, which demonstrate a continued dependence on fossil fuel

resources. Furthermore, this report underlines Turkey's continuing support for the coal industry as a major factor.

To support this argument, incentives and financial support mechanisms were discussed. Subsidies to Coal and Renewable Energy in Turkey, which GSI and IISD prepared in 2015 also, GSI (2015) report, coal report of the IPC in 2016, and Acar and Yeldan's (2016) article were used to specify what kind of incentives were provided, how much money was allocated, how the incentives were classified and prioritized for the coal industry. At the same time, GSI's (2015) subsidies for the coal industry in Turkey and Ozkaynak's (2020) academic article also contributed to the weakening of the environmental legislation for coal-fired power plants. These sources build the ground legislative part of the incentives. Incentives are not limited to only economics and government bureaucracy. Turkey Coal Enterprises' 2020 Coal Sector report was used as a means to distribute coal to low-income families, an example of social incentives.

From TKI's action reports in 2018 and 2020, TTK's coal industry benefited from introducing Turkey's import tariff rates on coal and the import-export imbalance in 2018. In parallel with this, to analyze the economic effects of this imbalance and to reveal the economic loss of Turkey, the Turkish Coal Enterprises Coal Sector report (2020) was analyzed through comparison with import-export rates and account deficits over the years. Consequently, benefits are listed based on the UNDP and ILO 2020 report, named *Social Impact of Climate Change and Green Economy Policies in Turkey*, to touch upon green employment and the economic impacts of the low carbon economy rather than fossil fuels.

In particular, primary sources and data of relevant authorities were used to collect data. Besides the reports and official statements of government authorities which are published on their official websites, secondary resources to discuss the Turkish government's (AKP) economic policies, critical academic articles related to Turkey's climate change policies, renewable energy policies, the political economy of the energy strategies.

CHAPTER 4. ANALYSIS

4.1. Turkey's Involvement in International Agreements on Climate Change

Like other countries in the OECD, Turkey signed the Paris agreement as well as having already become part of other international agreements on climate change, such as the Kyoto conference. This section provides a brief historical perspective on Turkey's involvement in international agreements, preparation of the national strategic plan, and Turkey's preparation of reports regarding the agreements.

4.1.1. UNFCCC and Turkey's Annex Problem

From a historical perspective, according to Turhan (2016), in 1992, when the United Nations invited countries to impel the UNFCCC program, many countries agreed to the proposals set forth at this environmental conference, including Turkey and European Union countries. The conference's primary aim was to reduce carbon emission rates (GHG) at the global level through cooperation and collective action among the partner countries. With the idea of sharing responsibilities on climate change policies, states agreed to oblige the international commitments and follow their national development policies and interests. In this respect, countries were divided into Annex I and Annex II parts according to their responsibilities. Annex I countries, consisting of OECD and the European Union, were responsible for reducing carbon emissions rates and reporting their progress. The stipulations for Annex II countries concerned their development and at the same time their countries' improvements.

Under these circumstances, while Annex II countries were decreasing their carbon emissions, these developed countries were encouraged to provide technical and financial assistance to developing countries for further improvement of climate change policy. Against this backdrop, Turkey held a special status as a result of Turkey's unique circumstances. Turkey was accepted as a developed country, but Turkey had different conditions than the Annex I countries. In fact, Turkey was a part of both Annex I and II parties, but the country's obligatory commitments to carbon emissions were under the same limitations as those of Annex I countries.

National climate change efforts began in Turkey in 1991-1992 in cooperation with international work and efforts undertaken by the UN Intergovernmental Negotiation Committee (INC). Although Turkey joined the international process in time, no real progress was made. Turkey objected to the Rio Convention's initial listing in the annexes of the UNFCCC, also known as the Framework Convention. Moreover, Turkey requested to be removed from the UNFCCC's annexes (Annex I and Annex II), which categorize the industrialized OECD members and transitional economies with carbon-intensive needs. However, this decision did not receive support and went unapproved. Thus, "Turkey adopted a different approach at the UN Climate Change Conference in The Hague (the Sixth Conference of the Parties) in November 2000: there, Turkey proposed to be considered—as was the case for certain formerly socialist states in eastern Europe after the dissolution of the Union of Soviet Socialist Republics (USSR)—a country to be granted "special circumstances" (Türkeş, 2017:135). Turkey's much-debated "special circumstances" were summarized in the Marrakesh outcomes to invite the Parties to recognize the special circumstances of Turkey. These unique circumstances place Turkey in a situation different from that of other Parties included in Annex I to the Convention.

4.1.2. Next Step: Kyoto Protocol

Following this, The Republic of Turkey's Ministry of Foreign Affairs (MFA) clarified that the Turkish government entered into force the UNFCCC in 2004, and then the process continued with the Kyoto Protocol. The Kyoto Protocol's major aim was to consolidate the strength of UNFCCC commitments on climate change policies. According to the Kyoto Protocol, participant countries had to reduce carbon emission rates within a specific period, including between 2009 and 2012. In this respect, the Turkish government decided to adopt climate change policies to achieve low-carbon emission rates. Revision of climate and energy policies were implemented by the government.

Turkey ratified the Kyoto Protocol on August 29, 2009, but only after acknowledging that it would have no binding emissions reduction targets, which received some opposition in the parliament. As it was not included in the protocol's annexes, Turkey undertook no emissions reduction nor any stabilizing commitments regarding a particular period. Therefore, Turkey was subject only to the general

principles and provisions of the Kyoto Protocol (Türkeş, 2017:136). What climate justice means to Turkey has been controversial as Turkey has not managed to demonstrate a thorough understanding of issues related to global climate change beyond its merely technical aspects. The Turkish delegation attending the UNFCCC meetings did include any real experts. This business-as-usual attitude risks making Turkey further isolate itself and withdraw into its shell in international climate change negotiations (Türkeş, 2017:138).

4.2. Analysis of the Paris Agreement Under "A System of Common but Differentiated Responsibilities"

Despite Turkey's commendable initiative to join the Paris Agreement, Mazlum (2017) argues that the government is non-compliant in its reporting obligations. It continues to face this criticism because of its lack of transparency in carbon emission reporting and delays in submitting reports to the UNFCCC. In addition, it is also criticized for not following the UNFCCC reporting guidelines.

According to the arguments made by the Turkish negotiator, one reason for the non-compliance of the Turkish government to ratify the protocols' annexes was disagreement with the classification system used in the Paris Agreement which puts forth common but differentiated responsibilities, where each country needs to contribute in line with what they could deliver. Turkey was listed among developed nations at the onset of joining the Paris Agreement, which meant that it could not receive aid. One example of the impact of its classification is that Turkey is ineligible to access GCF funds for huge, billion-dollar projects, which other countries in different partitions may receive. This impedes Turkey' ability to participate in regional projects aimed at mitigating climate change. In addition, since the country is considered a developed nation, it is not granted access to the multilateral bank loans that it needs, according to the Turkish government.

Furthermore, climate negotiations entail more than simple mandates by the Ministry of Environment and Urbanization: it is about "Turkey," as argued by the negotiator of the Paris Agreement. The Turkish representative highlighted that the ministry of finance and Treasury is also involved in the negotiations. As such, this presents a conflict of interest between the ministries whereby one ministry's goal is to reduce carbon emissions while the other is to develop and improve the economy based

on the neoliberal developmental model, which is currently focused on the extraction of fossil fuels - considered retrogressive as far as the Paris agreement is concerned.

4.3. Turkey Ratifies the Paris Agreement

Despite all of this, in October 2021 after a six-year delay, Parliament approved the Paris Climate Agreement, in a positive development with the potential to reverse prior trends. The Agreement identifies the year 2053 as the target for greenhouse gas net-zero emissions. According to the official website of the Republic of Turkey's Ministry of Energy and Natural Resources, under the chapter of the Paris Agreement (PA), the national position is presented as compatible with international agreements. The Agreement has a long-term goal of keeping global warming well below 2°C compared to the pre-industrial revolution and even limiting it to 1.5°C. This target requires fossil fuels to be gradually reduced and that focus be directed towards renewable energy. The Paris Agreement, to which the President stated that Turkey would be a party, was approved by the Parliament on 6 October 2021, following the constructive steps to be taken and within the framework of our national contribution statement. This decision was published in the Official Gazette dated 7 October 2021. In addition, it has been stated that the carbon neutral target will lead to radical changes in investment, production, and employment policies, and this process will be approved as one of the main elements of the 2053 vision (Official website of MENR).

On the other hand, in addition to entering and making commitments to the Paris Agreement, the official website of the Ministry of Foreign Affairs of the Republic of Turkey underlines some issues while addressing the Paris Agreement. According to the Ministry of Foreign Affairs, the most distinctive feature of the Paris Agreement, compared to the UNFCCC, is that it envisages a system based on the contributions of all countries highlighted. The Agreement is based on the classification of developed/developing countries in the fight against climate change and the understanding that all countries assume responsibility under the principle of "common but differentiated responsibilities and relative capabilities." No criteria have been determined for classifying developed/developing countries, but no differentiation was made. The resulting blurry distinction creates a dilemma in the Paris Agreement, one which directly affects Turkey's situation.

4.4. Determining the Contradictions of Turkey's National Plan

In line with carbon-focused growth targets, according to 2013 reports based on GHG rates, Turkey's carbon emission rates have increased since the 1990s. In particular, after the 1990s, Turkey's greenhouse gas emissions rose as total GHG emissions reached 459.1 MtCO2eq in 2013. To clarify Turkey's incremental increase in GHG, since the 1990s, the total greenhouse gas emission rate increased to 110.4% in 2013. The graphics below show a steady increase over the years both for per capita and annual emissions. (Turhan et al., 2016). The per capita emission rate has increased from 3.96 to 6.04.

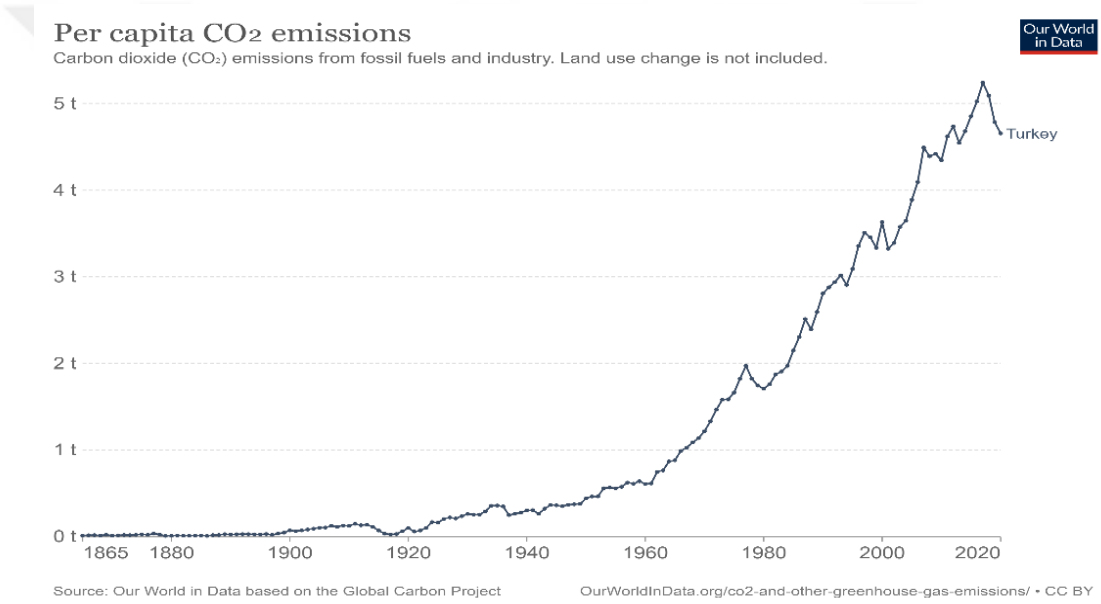

Figure 1. Increase in carbon emission rates per capita between 1865 and 2020 in Turkey. Source: Hannah Ritchie, Max Roser, and Pablo Rosado (2020) - "CO_2 and Greenhouse Gas Emissions". *Published online at OurWorldInData.org.* Retrieved from: 'https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions' [Online Resource]

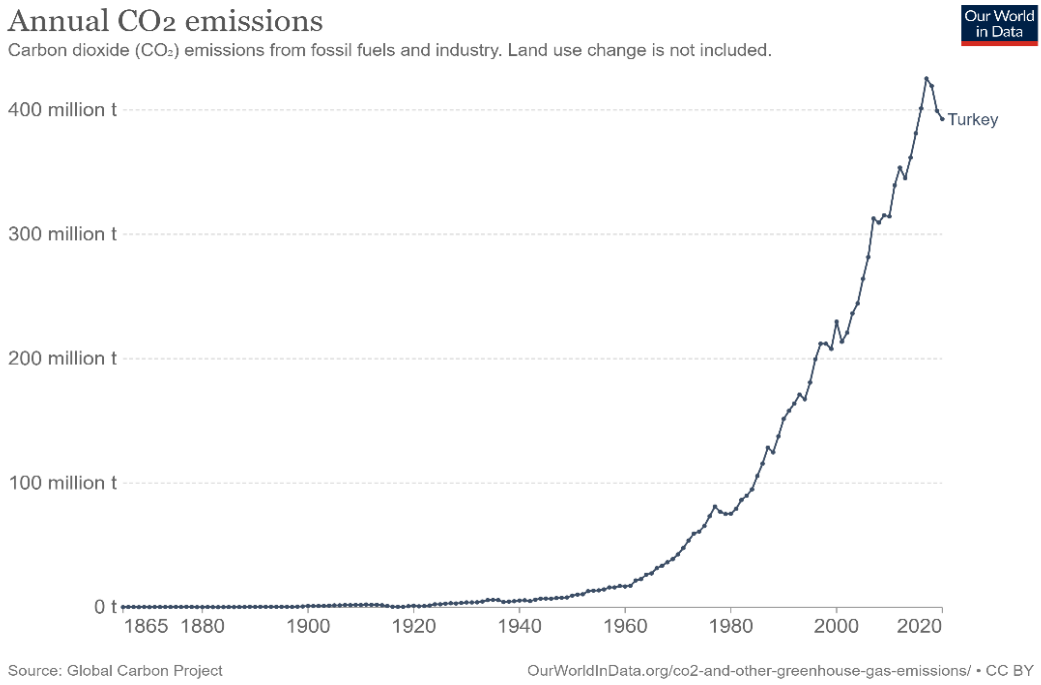

Figure 2. Increase in annual carbon emission rates between 1865 and 2020 in Turkey. Source: Hannah Ritchie, Max Roser, and Pablo Rosado (2020) - "CO_2 and Greenhouse Gas Emissions". *Published online at OurWorldInData.org*. Retrieved from: 'https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions' [Online Resource]

Despite increased emissions, the incumbent government's major motivation is to provide much more economic development with low-technology infrastructure, which includes the coal industry, which is cheap and based on natural resources exploitation (Turhan et al., 2016). In 2008, when the international economic crisis hit, the Western-led economic model started to lose its dominant influence on international markets. Instead the rising global South appeared as a power against the Western sphere of influence on the international economy, and a neoliberal developmentalist economic model was supported by China and the Russian Federation. The AKP government, and particularly Erdoğan's position as a political leader, has played a pioneering role in the neoliberal developmental model's adaptation in Turkey's energy policies. Most particularly, with the victory of AKP in the 2011 national elections, the incumbent government was able to consolidate its power on the national economy through the neoliberal developmentalist approach adopted. But due to a traditional understanding of Turkish state, which is aimed at catching up the West, continues through the incumbent government's developmentalist logic. The projection of this approach over the economic trajectory of the country is widely seen in the energy,

mining and construction sectors. In particularly within these sectors, the role of the state is clear and visible. This underlines how the political-economic structure of a country transforms or affects energy policies. Adaman and Akbulut (2021) explain it as follows; these sectors provide fertile ground for the state's developmental practices through government's support and through the weakening of the environmental legislation in pursuit of extractivism. In respond to this, extractive processes focus on specific areas such as energy-transport-construction trilemma.

These extractive processes, on the other hand, have quite negative effects on and costs for the environment, but these are sacrificed for the sake of economic growth. Beyond that, minerals, including coal, play a vital role due to the relatively low-cost investment required. Hence the incumbent government has recently prioritized the extraction of domestic coal. Incentives in the coal sector have been strengthened. In the process of development, these sectors mentioned above are playing major roles. The attractive appeal of their development disregards socio-economic inequalities within the society and results in invisible environmental costs and destruction. The developmentalist projects are able to create employment opportunities, which symbolizes the economic growth but only for the short-term. About such projects, Adaman and Akbulut (2021) emphasized that all of these projects work in parallel with the political interest of the government to create materialist privileges with an activated populist discourse. These sectors - especially the coal sector - are kept in the center due to their cheap and basic technological nature. Against this background, the authors analyze the current political-economic structure which is known as neoliberalism but based on authoritarianism, developmentalism, and populism, and how the political-economic structure reflects itself in energy and environmental policies in Turkey. As a result, this economic growth model acts as a lever for short-term growth/job creation. In terms of the purpose of this thesis, mining and coal projects will be discussed below through analysis of coal and mining sectors' reports.

There is a lack of cohesion and even conflict between the incumbent government economic policies and environmentalist reforms including renewable energy adoption. Although these policy areas are interconnected, neoliberal developmentalism and climate change policies do not necessarily share target objectives. When Turkey's energy policies were reversed, changes became unavoidable in accordance with the logic of neoliberal developmentalism. Thus, the

Turkish government has redefined the state's climate change policies. As one of the major principles of neoliberal developmentalism, the state believes that the superiority of rapid economic growth is the best solution to improve the country (Adaman et al., 2019). From a broad perspective, the state always needs rapid economic growth under the control of the government. Under the influence of that perspective, the Turkish government's agenda or center of attention has given priority to economic growth rather than global climate change policies.

According to the incumbent government's perspective, to achieve rapid economic growth, economic policies are the top priority of the government. Energy production supports economic growth and thirdly, national energy production provides significantly more economic growth than relying on foreign energy sources. As a consequence, Turkey's economic growth is extremely dependent on the high-carbon, emission-intensive model because of the low cost and low-technological requirements, and the fact that coal is a national resource. Indeed, the national government has supported the coal industry as a major tool for economic growth in spite of international agreements, (Şahin,2016). Under these circumstances, the national government emphasizes the significance of the coal industry on the GDP, and defines coal as a national resource. In order to further assert the necessity of fossil fuels, its supporters emphasize the importance of energy security and avoiding dependency on foreign countries: domestic energy resources would fuel the country's economic growth. The AKP government’s argument is designed to legitimize its own policy preferences. Currently, Turkey's 11th Development Plan covering 2019 to 2023 was published in 2019 by the Presidency of Strategy and Budget. The Competitive Production and Productivity chapter, 2.2.3.6. Energy and 2.2.3.7. Mining are of significant importance.

According to article 485, the major aim specified is that the energy supply will be made sustainable, qualified, and continually available. In the following article, 486 describes the goal of an energy market that is transparent, predictable, and based on long and medium-term plans which consider sustainability. Even so, in the same document, article 487.1 set forth policy for the Afşin-B Thermal Reactor. 488, 488.1, 488.2, 488.3, and 488.4 articles are also related to the nuclear power plant, its improvement, and R&D on that area. Furthermore, article 489.3 states that research and development projects on clean coal technologies would be supported (The

Presidency of Strategy and Budget, 2019:120). Of course, plans are not limited to these resources. Renewable energy has been brought to the agenda, and article 491 outlines the proposals for increased use of renewable energy in electricity production, and states that the necessary planning and investments will be made for this. The TurkStream project, which has been on the agenda recently, is also referred to. It is stated in article 495.1 that the Land Section-1 Natural Gas Pipeline will be completed as a national goal. These proposals are clear indications that many measures have been taken to diversify the country's energy mix.

However, the mining section stands in contradiction. It is noteworthy that there is a tendency to increase mining rather than to work on increasing renewable energy and gradually reducing mining. For instance, several facilities are planned for the mining sector, and encouraging decisions are targeted. There are two specific policy goals of consequence, which are 500.2 and 501. Article 500 states the efficiency of the bureaucratic structure will be ensured in the permit processes, and investment security will be increased. Article 500.1 continues by referring to the following: infrastructure will be created to carry out the permit, license, and license transactions in mining activities in the electronic environment. These two decisions incentivize coal production by using government resources to facilitate growth in the sector that will provide incentives for mining and companies serving and providing the coal industry additional financial security. In this context, article 500.2 states that; by simplifying the permit formalities to ensure investment security, investment processes will be accelerated, and administrative burdens on the investor will be reduced.

In addition to this, as an example of a significant contradiction, article 501 clearly states that; the enlargement of firm and enterprise scales will be encouraged (the Presidency of Strategy and Budget, 2019:122). This indicates that studies and developments related to mining and fossils will continue to grow, which does not seem to be in line with the decarbonization trend. In the next section, the analysis will show why Turkey is lagging behind the current development trend by showing its support and investments in the case of the coal industry.

4.5. Turkey’s Dependency on Fossil Fuels: Coal Industry

To begin with, despite Turkey signing the Paris agreement, studies show that the country has not made any policy changes regarding coal consumption. This is

evident in the strategies and actions that Turkey has adopted, such as the increase in coal investments and the current incentives for investors through the provision of subsidies, tax waivers, energy regulation waivers, and in prominence of fossil fuels.

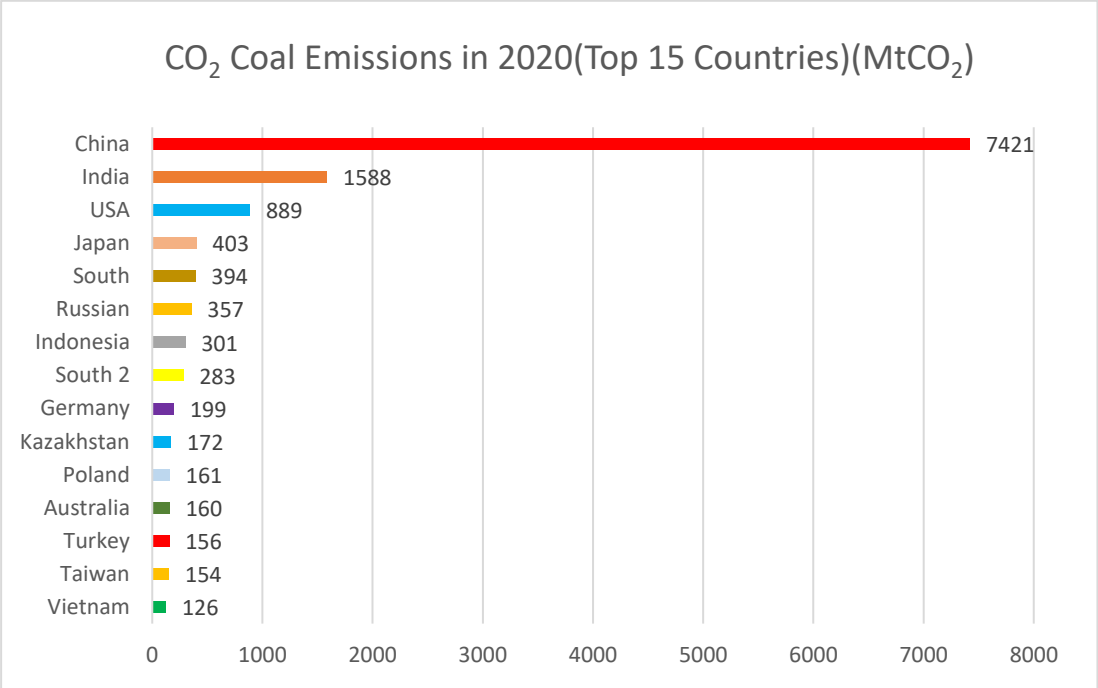

Figure 3. Turkey's place in the top 15 in coal consumption in 2020. Data collected from: Global Climate Project. Retrieved from: https://www.globalcarbonproject.org/

Although the accelerated "exit coal" agenda is promising, it is clear that the realizations are not at the speed required by the climate targets. It is reported that the coal demand in the 2019-2020 period was lower than expected, but that coal-based electricity production reached a historically high level in 2021 with the increasing electricity demand and the crisis in the natural gas market (WWF and SEFIA, 2022:11). The coal agenda also is likewise damaging in Turkey. Under this outlook, as stated in the IEA report, while global coal exit should be achieved by 2040 to achieve the net-zero target, Turkey does not have such a plan. According to the WWF and SEFIA report (2022), although Turkey, which is not in any of the coal-focused alliances formed during COP26, has committed to exiting inefficient fossil fuel incentives as a G20 and OECD member, 16% of GDP is spent on these incentives for this resource. Even though the Ministry of Energy continues its policies toward domestic coal use assuaging concern by pointing to the clean technologies expected to emerge in the future, the various negative effects on the speed of development and

costs of these technologies prevent Turkey from progressing in line with net-zero targets.

Under these circumstances, Turkey, which has ratified the Paris Agreement and set a net-zero target for 2053, is hesitant about exiting coal. One of the most significant goals in the energy transition process is to get out of coal globally. In line with the global net-zero targets, it is considered appropriate to cancel new coal projects as of today and exit from coal investments by 2040. In addition, many new alliances are emerging on national and international platforms to terminate coal financing. In this direction, new trends affect investment plans for new mining site development or power plant construction and cause the cancellation of new projects. Unfortunately, such policies contradict Turkey's targeted Green Revolution framework. A coherent policy framework will only be possible if Turkey cancels plans for new coal-fired power plants and plans to close down existing power plants. However, Turkey still encourages the coal industry with numerous support mechanisms and incentives (WWF and SEFIA, 2022:27).

4.5.1. Incentives and Financial Support

Firstly, coal investments are encouraged in Turkey within the framework of the new investment system that entered into force in 2012 (Acar & Yeldan, 2016). This encouragement is either through subsidies or tax and environmental legislation exemptions given to coal investors to incentivize them to invest in coal mining and production to sustain the insatiable energy demand in the country. According to Aşıcı (2015), Turkey supports coal Research and Development (R&D) costs and provides investment, price, and purchase guarantees. Research also shows that coal is supported by excluding such investments from environmental legislation, thereby making it easy for companies to mine and produce coal without the fear of breaking environmental laws in the Paris Agreement, to which Turkey is a party. In a nutshell, these exemptions in implementing Environmental Impact Assessment (EIA) qualify as incentives.

As a result of the incentives given to investors by the government, the production of coal has rapidly increased in recent years, and the state also gives support for mineral exploration according to the 2010-2014 strategic plan of the Ministry of Energy and Natural Resources. According to the same study by Aşıcı (2015), the author reported that the public expenditure made for coal-fired electric power plants

was allocated TRY 28 million, a very big amount considering the size of the Turkish economy.

According to the GSI (2015) report on renewable energy and coal incentives, fossil fuels were more supported than renewables. First, incentives are divided into four categories: income and price support; tax exemptions; the supply of goods and services below market value; direct or indirect transfer of funds and debts as categorized. The Turkish government prioritizes energy security as an important aim for its strategy in the energy sector. In order to reduce foreign dependence on natural gas and oil, coal, renewable energy, and to some extent, nuclear energy have been determined as priority areas. But, renewable energy remains in the background next to the priority status given to coal.

The energy strategy is heavily focused on the use of domestic coal resources while renewable energy targets have remained limited (GSI, 2015:6). For the producer of coal, one of the most significant supports is the financial aid to the hard coal industry which is transferred from the government treasury. These transfers range from 260 million USD to 300 million USD annually. Other incentives include costs of research and development activities, improvement support, state support for mineral exploration, and public spending on coal-fired power plants. The government support of the fossil industry's costs in the area of research and development, according to IEA, in 2009 was 2.6 million Turkish Liras. Secondly, the government opened the fund for improvement support. Most significantly, the state's support for mineral exploration; based on the 2010-2014 Strategic Plan of the Ministry of Energy and Natural Resources, was a budget for coal, oil, and gas exploration between 2010-2014 ranged from 35 million to 51 million TL (approximately 23-34 million USD) at the time of the plan.

Other aids are available besides budget support. For instance, one of them is an investment guarantee. This guarantee is applied to coal power plants with an operational life of 15-20 years (e.g., Çayırhan and İskenderun thermal power plants). According to Çelikkaya (2017), instead of coal, renewable energy is seen as an incentive in successful countries with feed-in tariffs, such as Germany, Portugal, and Denmark, with a tariff guarantee covering a long period of 15-25 years.

Other significant incentives are the price and purchase guarantees. The long-term electricity purchase model and the tender system have been developed to provide concessions to electricity generation projects with long lead times for coal power plants. In particular, power plants based on Build-Operate-Transfer and Build-Own-Operate models enter into long-term electricity purchase agreements to sell electricity to the public (GSI, 2015:9). More significantly, as mentioned above, it was subsidized in April 2012 with the New Investment Incentive System method. This method covers four plans:

(1) General Investment Incentive Plan

(2) Regional Investment Incentive Plan

(3) Large-Scale Investment Incentive Plan

(4) Strategic Investment Incentive Plan

In this context, coal exploration, production, and coal investments in fuel-fired power plants are subsidized under the Regional Investment Incentive Plan and are subject to high incentive rates, referred to as "priority investments." These incentives are defined as customs tax exemption, VAT exemption, tax reduction, social security premium support (employer's share), land allocation, and interest support, with their conditions and rates varying according to the region. Forty-six power plants had the right to benefit from the capacity mechanism. Coal thermal power plants constitute 22 of these 46 power plants (TSKB, 2021:14). Again, coal power plants are supported through capacity mechanisms by means of government incentives.

4.5.2. Weakening of Environmental Legislation for Coal-Fired Power Plants

Another issue is the exemption from environmental legislation. There are many examples of inadequate environmental legislation and non-compliance with existing legislation and standards. For instance, a recent report by the Ministry of Environment and Urbanization, the EIA report, claims that more than 40 coal-fired power plants and their associated facilities between 1999 and January 30, 2015 (GSI, 2015:10) were affected by these inadequacies and exemptions. In parallel with these, to build an energy infrastructure some procedures of the legislation and judiciary were bypassed. In particular, Article 125, as a critical amendment closely related to the energy infrastructure building, refers to removing all types of judiciary barriers for

investments for the public interest. The weakness of the land expropriations and the Environmental Impact Assessment is one of the most significant examples. These two decisions are extremely critical because they provide a fertile ground for non-sustainable and expensive energy investments (Ozkaynak et al., 2020:12). In addition to this, in the case of land allocation, Turkey is also one of the major countries in coal expansion, in fact, after China and India, Turkey is third (Ozkaynak et al., 2020:12).

No coal projects have been approved, whose EIA report has been rejected. Another exemption is provided to coal power plants in the process of privatization under the framework of Electricity Market Law No. 6446. Under the provision Article 8 of the Law, these power plants were given a legal deadline until the end of 2018 to comply with the requirements of the environmental legislation, and it was stated that this period could be extended until 2021.

4.5.3. Social Support Mechanisms: Coal Distribution to Low Income Families

From a different point of view, coal distribution to low-income families is a type of coal incentive provided to consumers in Turkey under the Family and Social Policies. This practice provides coal aid to families in need for heating purposes. It is a social aid project carried out in mining by the Ministry of Energy and Natural Resources in line with the Decisions of the Council of Ministers starting in 2003 and continuing until, and then finally it became a Presidential Decision in 2019. The report claimed that domestic and national coal resources had been evaluated as having distributed 30 million tons of coal in the 17 years since 2003. More than 2 million households have benefited from the program since its inception.

In 2020, with Presidential Decree No. 1949, approximately 1.6 million tons of coal, 650 thousand tons from the quarries of the Turkish Coal Enterprises, and 950 thousand tons from the subsidiaries and Rodovans companies were distributed to 2 million families (Turkish Coal Enterprises, 2020: 83). The years with the highest coal distribution were 2016 and 2018. 2015 is also a significant year because rates increased after the signing of the Paris Agreement. This program is a social incentive, unlike all other incentives and initiatives Turkey has provided for the coal sector. The program demonstrates that the use of fossil fuels is encouraged. This section claims that the incentives and other government mechanisms are not limited to economic or

bureaucratic support. Thus, this assistance is not in line with the policies determined to embrace decarbonization.

4.5.4. Foreign Dependency in Coal

Turkey's unsubstantial effort in the Paris Agreement in its national energy strategy and action plan can be attributed to its ever-growing energy demand. A study by Sahin (2016) shows that Turkey is estimated to derive 88% of its total energy generation and nearly 70% of its electricity generation from fossil fuels and aims to increase the usage of coal, primarily domestic coal. Indeed, coal is still at the core of Turkey's official energy policies due to the perception that it is a low-cost resource and its compatibility with the country's fast-paced economic development targets. This attitude disregards the global consensus that coal is the most polluting energy source in terms of carbon dioxide, which is chiefly responsible for causing climate change, and particulate matter emissions, which negatively affect the environment.

Furthermore, the goal of energy policy in Turkey is to increase the usage targets and the share of domestic and imported coal (Şahin,2016). To this end, more coal-powered plants based on domestic and imported coal have been planned. This clearly shows a lack of political will to embrace the international agreements because using coal creates serious problems regarding climate change, environmental and human health, work safety, and sustainable energy policy. This indicates that Turkey's discourse on climate change is all talk with no action, and thus breaches international agreements.

According to the Istanbul Policy Center (IPC) coal report in 2016, the Turkish government is supporting the coal industry and its investments through prioritization of state-led projects in coal mining. IPC's reports emphasize that the AKP government is highly focused on the coal industry facilities. For that reason, investments were conceptualized under the framework of the New Investment Incentives System in 2012. At the same time, the government is supporting the Research and Development area. Under this policy, the government is financing the research and development costs for the fossil fuel sector: the report highlighted that according to the International Energy Agency (IEA), in 2009, the AKP government spent TRY 2.6 million on the coal industry for research and development.

Continuing assistance and subsidies for the coal industry under the national government's economic growth policies contradict the government's own arguments. First of all, according to Turhan (2016), coal is not a national resource. Turkey's primary energy sources are arising from oil, natural gas, and coal. Only 45% of coal is sourced domestically. This means that substantial amounts of coal are imported from foreign countries. This is a fact that indicates the government's talking points on energy security are just a myth because Turkey is highly dependent on imported resources. Secondly, coal is not actually a domestic resource because states cannot provide enough production.

Turkey Hard Coal Imports Balance Consumption and Production (thousand tons) data for 2013- 2018.

Year	**Production**	**Import**
2013	1.915	28.200
2014	1.788	27.015
2015	1.434	31.494
2016	1.315	34.880
2017	1.234	36.632
2018	1.101	37.083

Table 4. Turkey's coal data. Data were obtained from the Turkey Hard Coal Authority coal report in 2018.

According to Table 4 from the Turkey Hard Coal Authority (TTK) report in 2018, the amount of coal imports is much higher than the country's production. Moreover, while the production rate is decreasing, the import rate is increasing day by day. So, we cannot argue that coal is a national resource to provide economic growth since import rates and thus foreign dependency is increasing every day. Therefore, the argument put forth by the government and enacted in its policies do not stand on a reliable, solid foundation.

4.5.5. Negative Economic Impacts of Coal Imports

To support this, according to the Coal (Lignite) Sector report published by the Ministry of Energy and Natural Resources and Turkish Coal Enterprises in 2020, the energy consumption of the country has increased by 32.1% in the last ten years, and the energy production has been 44.7%. While 27.6% of our total energy supply was based on domestic production in 2018, it increased to 31.04% of the total energy supply in 2019. However, the significant point is that the share of domestic coal

production meets energy consumption here. A look at the coal import rate reveals a critical picture. The import numbers for coal during a recent four-year period are as follows; 39.08 million tons in 2017, 39.14 million tons in 2018 38.79 million tons in 2019, and 39.38 million in 2020 (Turkish Coal Enterprises, 2020:34). These values show that coal imports have essentially increased every year.

The increase in coal imports directly contributes to the current account deficit. Coal imports, which crossed the threshold of 1 billion dollars for the first time in 2004, exceeded 2 billion dollars in 2006, 3 billion dollars in 2008, and 4 billion dollars in 2011. Coal imports in 2012 totaled approximately 4.6 billion dollars. Increasing imports creates an invoice that Turkey has to pay. While the 2019 bill reached approximately 4 billion USD, the 2020 bill was approximately 3.5 billion USD due to the slightly falling coal prices. Looking at the 2020 coal consumption rate, the domestic coal consumption rate was 1.08 Mt, on the other hand, 38.72 million tons of coal were imported (Turkish Coal Enterprises, 2020:36). This coal sector report, which also includes the Ministry of Energy and Natural Resources, highlights the fact that the dependence on coal is increasing along with increasing import rates, while at the same time it reveals the inadequacy of coal, which is defined as a domestic resource.

The most striking section in the report is 4.9.1 Sectoral Trend Determinations under the heading 4.9 Sector Analysis and Targets. Firstly, the activities in the energy sector have shifted from the public to the private sector with great momentum in recent years; the stated objectives are liberalization, efficiency, increased competition, and cheap energy production. In pursuit of these aims, two strategies have been employed especially in recent years. The first is the privatization of coal-based thermal power plants. The second is the transfer of non-production fields to the private sector by means of license transfer. Thus, the share of the private sector in production has started to increase. And in return for this, the fossil fuel industry has not reduced foreign energy dependence and thereby has not improved energy security.

4.6. Greener Solution: CO BENEFITS

In the pursuit of energy independence, there are other potential domestic energy sources, which are more environmentally sustainable and in agreement with international trends. With the decrease in renewable energy costs, the use of wind and solar energy in primary energy production in the country have increased considerably.

However, the use of imported resources has continued to increase at the same pace due to high energy demand. In addition to oil and natural gas, the demand for imported coal increases energy costs by creating larger current account deficits. Finally, they brought the problems to the fore by categorizing the findings as political and economic. From a political point of view, the main consensus is that domestic coal is to be supported, and various incentives are still offered. From an economic point of view, the fact that coal production costs have started to increase in recent years is a problem (Turkish Coal Enterprises, 2020:53).

As Acar and Yeldan (2016) stated, there is a green way to solve this problem. Coal subsidies could be transferred to renewable energy. This situation would provide gains for Turkey in numerous areas. Along with reducing GHG emissions, increasing renewable energy sources is another way to contribute to a just transition.

There are other benefits as well. Increasing domestic energy production improves the security of supply. It supports the economy by creating domestic economic activity in energy-generating sectors and value chains for production, including manufacturing and high-value-added services. Diversifying the energy supply makes the country's energy system more reliable and resilient against external factors such as climate change and fossil fuel prices. The increase in the share of renewable energies and the decrease in the dependence on fossil fuels also reduce the dependence on imports.

It will be a win-win situation, and so Turkey has a possibility to gain in many areas at the same time if it chooses the greener way instead of brown (UNDP and ILO, 2022:15). One of the most common methods for this is renewable energy cooperatives. This is because renewable energy sources provide energy production through local sources and respond to energy demand. Additionally, they directly support low carbon emission centered sustainable energy policies since the use of sources with high carbon emissions in energy production is reduced. Apart from the field of environmental and climate policies, they support the development of citizens in society and the increase of their standards in the social field. From another perspective, RES allows citizens to participate directly in the decision-making process in energy management and policies (Evrensel and İşeri, 2021:115-137).

Transitioning to a green economy with sustainable development and local and renewable energy sources is the ultimate goal that most states endeavor to achieve. Developed nations, such as Germany, England, Denmark, Canada, America, and Japan, have also started to support renewable energy resources and investments after the recent nuclear energy disaster. However, the development of RES is slow in Turkey. In order to remove the obstacles to RES in Turkey, it is necessary to increase the financial aid and incentives to this industry.

Additionally, improvements in the legal understanding of cooperatives and electricity market legislation need to be made. In the long term, responding to climate change requires a plan that covers many more sectors, has enhanced state-society interactions, and goes beyond narrow-group interests to include all individuals in society (Arsel and Adaman, 2022). In addition to these, if "good governance" principles are applied, as well as increasing the cooperation between state-local governments-cooperatives, Turkey will also gain significant advantages from the sustainable energy transformation and RES (Evrensel and İşeri, 2021:115-137).

CONCLUSION

The renewable energy transition process has been brought to the forefront by the growing amount of academic literature, increased attention to energy governance, and focus on decarbonization. Since the 1990s, carbon emission rates have been increasing. This situation is directly triggering environmental degradation and climate change. At the international level, for instance, in the case of the Paris Agreement, countries try to cooperate through transparent commitments to one another. However, the existence of high carbon is not limited to only push factors. This transition also has a major influence on the global economy and indeed each individual nation which chooses to undertake this transition. When the European Union implemented the Green Deal, sustainability in the economy was highlighted. Although border carbon adjustment has not yet been implemented, once it comes into force, all countries with EU trade relations will be affected economically.

Energy has always been a critical area of public policy in both developing and developed countries. Sound energy policy turns the wheel of the economy and paves the way for development. In this regard, responding to the increasing energy demand is one of the essential things that countries aim for in energy governance. Not being able to respond to the energy demand of a nation creates a threat to those countries' national security. For these reasons, developed and developing countries are motivated to participate in the increasing international trend and sustainable development by making their economies compatible and integrated with the new system. In addition, they will be able to reduce foreign dependency by diversifying energy and thereby improve their energy security. In fact, under the critical lens of Ünver (2017), the new Green Capitalist Revolution will happen with the leadership of China and the European Union. Some critics, particularly from the Eco-Marxist approach, argue that the rebirth of categories of states into "green developed" or "green undeveloped" will occur. Suppose this happens just like in the example of the Industrial Revolution that took place before. In that case, countries should start the necessary initiatives to keep up with the transformation as soon as possible. The issue is not a simple or easy task for national governments. Most recently, global climate change policy and the energy transition process have improved relatively according to states' material capabilities

and economic-politic policy preferences. As mentioned earlier in this study, the International Energy Agency has presented a roadmap. Accordingly, the transformation process can be completed in a shorter time for developed countries, and developing countries will take a little longer to exit carbon. The reason for this is directly related to the difficulties and capacities of developing countries in accordance with their status in the power spectrum. In this regard, some countries are seeing great improvements, and some countries are lagging behind others. The main objective of this thesis is to analyze why some countries have weak progress. Within this context, the research question arises from why Turkey has made weak progress in decarbonization. Turkey, classified as an upper-middle-income developing country, depends on imported fossil resources to meet its energy needs. Despite the capacity and diversity of renewable energy sources, its dependence on fossil fuels continues. As revealed in the study, there are some contradictions in Turkey's decarbonization policies.

One of the main reasons for this inconsistency is the neoliberal developmentalist economic model adopted by the national government. This economic growth model aims for rapid economic growth by utilizing cheap energy and low-technology resources. With the use of the case study method, both qualitative and quantitative data were used and include official reports as primary sources and academic articles and books as secondary. This thesis examined government reports on Turkey's coal sector, development plans, public support provided to the coal sector, financial losses caused by imported coal, and its adverse economic effects. In addition, the reports on sustainable development and green employment provided by non-state institutions were analyzed, and Turkey's long-term gains were examined.

One consequence of this analysis is that although Turkey has signed many international agreements on reducing carbon emissions, such as the UNFCCC, Kyoto, and Paris Agreement, to alleviate the global temperature rise and reduce greenhouse gasses in the atmosphere, it has not reduced its dependence on fossil fuels in its energy supply. In particular, analysis of the coal industry shows that Turkey continues to use fossil fuels, and the government continues to pave the way for the coal industry with various incentives and government support. The main incentives include the funds transferred from the state Treasury for Research and Development, incentives and tax exemptions for the energy producers.

Undoubtedly, all the steps involved in energy transition do not take place in an environment independent from the political economy of energy. Turkey's move towards a new economic model based on neoliberal developmentalism has created a new vision for the state's energy transition policies. In a country with high-carbon, emission-intensive economic growth in the coal industry, conflicts will arise between the decarbonization policies, NDCs submitted by the government, and the government's actions, like in Turkey. Under the influence of neoliberal developmentalism's economic vision, the AKP government has prioritized national energy sources for economic growth over the renewable energy industry; even so, coal is not a national energy source. In this respect, analysis shows that the AKP government has preferred rapid economic growth, which targets short-term grains rather than sustainable economic development through the energy transition process.

In addition, the nationally determined contributions (INDCs) targeted at the Paris Conference (COP 21), to which Turkey is a party, are far from the expectations according to the analyses. This results from Turkey's neoliberal developmentalist approach, which claims that coal is a cheap, domestic resource. This approach has been criticized for not being compliant with the international agreements Turkey is a party to because of the higher environmental costs of the approach due to coal mining and exploitation which cause high CO2 emissions.

Against this backdrop, neoliberal developmentalism in Turkey constitutes one of the significant obstacles to climate change policies and the renewable energy transformation process. In contrast, states should be able to organize the neoliberal market in a greener way, such as by the use of market incentives. That is, if the incumbent government in Turkey adopts an economic growth approach of this manner, substantial gains could be provided from following this developing international approach.

Although green capitalism has created a suitable environment for this transformation economically, this thesis only examined the political economy of energy policies based in developing countries. This thesis contributes to the existing literature with its discussion and use of a conceptual framework on a newly emerging neoliberal developmentalism. The difficulties that Turkey has experienced so far, generally at the structural level, have been studied in depth. However, this study analyzed a developing theory and rapid growth approaches of developing countries

such as Turkey. A general framework is presented for analyzing the decarbonization processes of developing countries through the example of Turkey.

There are many conditions, situations, and determinants that affect the progress of countries. And while there are many policy areas to be examined in this process as well, the two major pillars of interests and analysis are the structural level and the agent level, as identified in this study. The key concept here is that looking at the agent level in future studies in this research area will complement those studies at the structural level and lay the groundwork for further studies by forming the basis for research examining other areas. For the limitations of the research, the analysis has included only the coal industry and its practices. Further research could also be supported by fieldwork (e.g. interviews with the workers in the mine to analyze employment's sustainability, and quality). In addition to this, the selected case is an energy importing and non-European Union member country. More recently, the Fuel Report published by the International Energy Agency in February 2022, puts forward the adverse impacts of the Russia-Ukraine War on international energy security. According to the IEA News (24 May 2022), The European Commission and the International Energy Agency are claiming to help EU countries reduce their reliance on Russian fossil fuels. Through strengthening investments in low-carbon energy resources, dependency will be decreased. Future research could highlight similarities and differences with comparative case study methods of a European Union member state and a non-member country in light of the new political environment.

Apart from economics, it may be possible to research other areas of interest with this conceptual framework and look for relations with different interdisciplinary fields, such as the level of democracy, the effectiveness of NGOs, and the role of the media.

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