Bachelor Thesis:

The European Union's Green Deal and the issue of Energy Poverty:

How affected actors in times of energy transition interplay and may be compensated.

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Abstract:

Energy poverty is an important issue, whose prominence is growing due to the worldwide push for an energy transition. Accordingly, the main research question of this project is "Which actors are expected to lose/ win in the energy transition and how does the EU intend to ensure compensation for losing actors within the framework of the European Green Deal?" To answer this research question, a generative research design, based on desk research, will be implemented. The core element of the proposed research is a secondary analysis of scientific literature, scientific journals, grey literature- policy papers of European governing bodies, think tanks, content of university classes. The contribution that the proposed thesis aims to make is to help clarify and extend current understanding of the complexity, refine knowledge of current and upcoming societal and political issues connected to the Energy Transition and its consequences, which are expected to dominate the policy arenas in the upcoming decades. Analysis shows that sectoral and regional effects of green energy technologies especially impact areas where fossil fuel related mining and quarrying is key and has an enhanced negative effect for lower skilled workers as for higher skilled workers. In the complex multi- level process many stakeholders are involved- EU, national governments, local and regional authorities, businesses, interest groups, individuals, consumers and households that have differing stakes at play. Individual actors could be faced with negative consequences of the energy transition as they are not strongly represented in the EU policy arena, are framed as dependents in a social construction by policy makers and are dominated by powerful economic forces and industries that push policies towards their interest like the car or coal sector. The EU´s action plan includes the Just Transition Mechanism that aims at compensation. The EU justifies its action via output legitimacy, to create good outcomes, but analysis shows that there is a lack of input and throughput legitimacy which potentially leads some actors voices to remain unheard and at the same time does not aim at framing losing actors of the energy transition in their policy papers in order to deter aimed at stakeholders. Whether the policy can contribute to a just transition, remains to be seen.

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I. Introduction and Research Question

The "European Green Deal" aims to transform the Union into a "modern, resource-efficient and competitive economy to fight Climate Change and environmental degrading" (European Commission A, 2020). This conversion from " fossil towards renewable energy sources with the goal for no net emissions of greenhouse gases by 2050 and an economic growth - decoupled from resource use" (European Commission A, 2020) - has important ramifications on both the political and social level. Whole branches, regions, sectors, companies, and individuals that are engaged in carbon-intensive industries stand to be directly or indirectly massively affected by the energy transition and therefore seek compensation from respective governmental bodies. The influence on the job market across a range of sectors, the rising divide between the rich and poor households, the loss of regional cultural history and identity, and the gap of opportunity due to educational background, exhibit solely a slice of significant questions the European Union has to face in the midst of the Energy Transition. These concerns are not detached from issues of legitimacy of actions taken by the European Union and complex interplay between involved actors shaped by the dynamics of power politics. More specifically, a crucial aspect of this research is its focus on **whether the European Union is a legitimate actor to take the leading role in matters of energy transitional processes** and, especially, to take the lead **when it comes to deciding how different actors will be compensated**.

"Energy Poverty" is not just a buzzword for the European Union, it is a defining issue of the near future. Figure 1 (taken from Bouzarovski et al 2020) displays an example on how energy poverty is distributed across Europe. It examines the issue of efficient energy housing, underpinning the issue of equity and Europe wide comprehensive access to adequate energy sources. It suggests that the impact of the energy transition will not be uniformly positive across Europe. Studies show that the salience of negative energy transition outcomes, regarding the potential harm to citizens on a variety of dimensions such as health, well- being, and societal belonging (Thomson, Snell & Bouzarovski, 2017). Already in 2009, the European Union articulated a need to address Energy Poverty in the Union with the adoption of its Energy Package (Bollino & Botti, 2017), and accordingly the Union's investment in Energy Poverty policies has grown significantly over the last decade (Bouzarovski et al 2017). In order to tackle the potential societal upheaval that may result from the energy transition, the European Union's Green Deal aims at offering a framework for a *just* transition and the compensation for affected actors. A just transition aims to ensure that the substantial benefits of a green economy transition are shared comprehensively and especially support those who stand to lose economically, healthwise, culturally – be they countries, regions, industries, communities, workers or consumers. In the eyes of the European Union " the Just Transition Mechanism (JTM) is a key tool to ensure that the transition towards a climate-

neutral economy happens in a fair way, leaving no one behind. It provides targeted support to help mobilise at least €150 billion over the period 2021-2027 in the most affected regions, to alleviate the socio-economic impact of the transition."

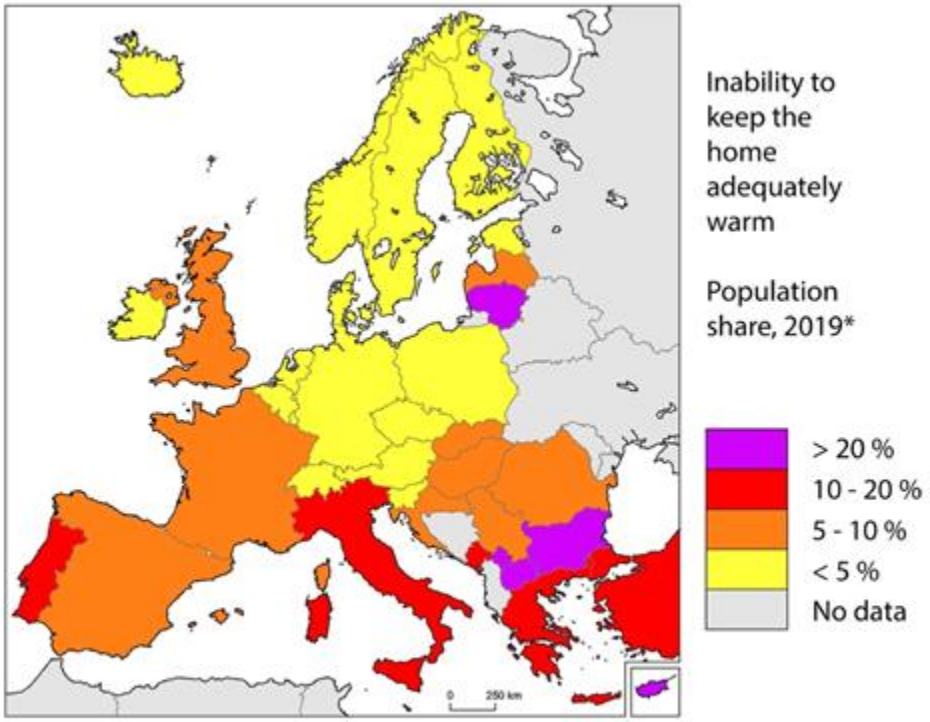


Figure 1. Spatial variation in energy poverty in terms of the inability to achieve adequate thermal comfort. Data source: EU-SILC survey. Map by Stefan Bouzarovski, outline map of European borders courtesy of http://www.hist-geo.co.uk/.
* Note: Kosovo, UK and Iceland data are from 2018.

Due to its importance and its highly ranked position on the EU Agenda (Bollino & Botti, 2017), Energy Poverty will be a priority across political venues based on its significance for individuals, companies and communities. Also those with political authority, in this case the EU, are concerned about the consequences of the energy transition for losing actors, during a moment of political change and an electoral will that is increasingly shifting towards green policies. Renewed sustainable regulatory alignments that synergize profit, people and planet become vital aspects to gain public recognition, votes and power for governing authorities. Nevertheless, the impacts on losing actors in the energy transition can be seen as possible "backfires of the voter ship towards the governing entity" (Boström, Jöhnsson, Lockie, Mol, Oosterveer, 2014). Thus, the focus on losers of the energy transition and therewith connected policies that display compensation for these actors is a possible way to reduce the hardship and raise ´´buy in´´ among those who stand to lose in the energy transition.

In recent times of "crisis"- such as the financial crisis, "refugee crisis", "Brexit" etc.- the European Union has fought for its own survival, power, political legitimacy and role in the political World order. The result is an overall progressing emphasis on social policies and values, "that aim to glue together the member states and its citizen" consequence in the Fund of the "Just Transition Mechanism" (Bieling & Lerch, 2012). The European Union wants to successfully lead in issues, which are not restricted by artificial borders. Human Rights and Digitization would be examples of such transnational problems - but especially the fight against global warming, environmental degrading, and a successful implementation of energy transition processes display a core of a new European Union identity. However, implementing environmental policies can generate pushback from unexpected places. One striking example is the Dutch Nitrogen Law which, in compliance with EU level priorities, tried to impose limits on Nitrogen production and sparked massive farmer´s protest (van der Ploeg, 2020). The blowback against the Dutch Nitrogen law shows how unpopular environmental reform can be when it fails to account for the needs and interests of all affected stakeholders.

Thus, the proposed thesis will examine energy poverty within the context of the energy transition and restricting regulations as well as envisaged goals of the European Union to compensate affected actors and occupy a key role in the process of the energy transition. Possible blindspots of compensation policies, the concept of mobilization of bias and the effects of relational dynamics between stakeholders at the EU level and its influence on power politics, justice, legitimacy and equity will be considered as well. Therefore, it will address the following research questions:

Which actors are expected to lose/ win in the energy transition and how does the EU intend to ensure compensation for losing actors within the framework of the European Green Deal?

To address this question, it is further broken down into the following subquestions:

Sub-question 1: Who are the different stakeholder groups in the EU policy arena on energy transitions and what is at stake for each of them ?

In answering this question the thesis will explore how power politics matter for these stakeholders, and how relational dynamics between these stakeholders at the EU level affect justice, legitimacy, and equity.

Sub-question 2: What are the different instruments/strategies/ policies for compensation being considered at the EU level?

Sub-question 3: Also, who is and isn't considered for compensation? Are there any blind spots and how does this affect justice, legitimacy, and equity?

In answering these questions the thesis will explore policy papers of the European Union that envisage stakeholder compensation and to what extent these policies are appropriate to tackle the issue of energy poverty, as well as critically reflect on whether there are actors which are possibly forgotten.

II. Background

According to Newell and Mulvaney (2013), the term "just transition" has been used most commonly in reference to the state. The implication being that the national government has a responsibility to ensure that the outcomes of the energy transition promote social and environmental justice. Instead, the European Union claims to promote a just transition through their overarching action plan of the European Green Deal including policy contents such as the "Circular Economy Industrial policy", the idea "From Farm to Fork", and especially the "Just Transition Mechanism."

However, the effectiveness of these measures cannot be taken for granted. It is important to critically examine if and how these measures and ideas are implemented, or whether multilevel frictions, shifts of interests through consequences of a global pandemic or such like cause policy failure, and consequence in a reality where people are "left behind", may it be obvious or fall under the radar.

At this point, it is important to consider the policy making context within which the EU operates. International governance is "multi-layered" and highly complex and policies produced "reflect a degree of legalization (including soft law) and have an "emphasis on socialization" (norms/ European mentality, mutual strategies) (Bieling, 2012). Governance is the institutionalized form of co-ordinated action that aims at the production of collectively binding agreements. Governance describes "the structures and processes by which societies share power, which shapes individual and collective actions" (Lebelet al 2006). It is a system where the development and implementation of policies is distributed to a wide variety of actors. The term must be distinguished from the term "Government", which emphasizes the role of the state in governing. Instead, governance includes more aspects, actors, venues etc. Increasingly,

policy making is pushed and made by non- governmental actors- citizens, NGO´s, corporations, private interest groups etc. Governance allows for the coordination of actors with different beliefs-"negotiated agreements". EU external actions are consequently based on the "acquis communautaire" and the system of governance aims at common goals through collective action. The EU strives for external governance with an emphasis on heterogeneity and not for enlargement and homogenization.

III. Theory and concepts:

Policymaking takes place within a subsystem. A subsystem consists of the range of actors, interests, and material resources that are implicated in the design, implementation, and evaluation of a policy. Energy extraction is fundamental for the functioning of a variety of industries in today's society. Due to the ubiquitous character of energy it is natural that there are manifold involved stakeholders with different premises, interests and outcomes in the green transition. A stakeholder as such is defined as any "naturally occurring entity that is affected by organizational or governmental performance" (Prell, 2009). That includes of course political entities such as the European Commission and national governments of member states on the one hand and for instance corporate identities, industries, interest groups of fossil based related sectors on the other hand. Additionally all individuals, the citizens, the people as consumers, which are the last instance of any product or process that involves energy extraction in some form are included. But, stakeholders may have conflicting preferences. For example, the frictions of involved actors from fossil- based systems of energy production and consumption- such as oil, natural gas and coal- and stakeholders involved and driving for renewable energy sources like wind and solar, as well as lithium- ion batteries, appear to be inevitable. Therefore, the impact of the energy transition will be different across stakeholder groups. But how can we describe these differences?

Triangle of Policy Actors

To answer this question, the proposed thesis deploys the theory about political actors outlined by Knoepfel, 2007 as a point of departure, (see Figure 6 below). Knoepfel and coauthor's (2007) *Triangle of Policy Actors* is useful for differentiating between, and examining connections among, different types of policy actors engaged in and/or affected by the environmental policy arena. An "issue," like the Energy Transition, can be defined as "a conflict between two or more identifiable groups over procedural or substantive matters relating to the distribution of positions or resources". The process is an important

aspect because in highly complex issue areas the tension between the expert's community and the political accountable community comes into play. Issues are the key components that need to be balanced within the Policy Making/ Decision Making process. When an issue makes it on the agenda and the decision making phase ensues, then the Triangle of Policy Actors becomes important. The Triangle is reflected in how questions of who takes action, who is the target of a decision, when the issue will be processed, how the issue needs to be dealt with, how the policy performance can be evaluated are answered. It takes a dialectical approach and links the answer to these questions to the question of who is governing. In other words, the Triangle looks at decision making in terms of the interplay between decision makers and a policy's stakeholders.

Knoepfel's theory explains the interplay of political administrative bodies on the one hand- so governmental bodies that have public authority- and on the other hand private and affected actors of a policy decision. These directly affected actors can be classified in two groups (Knoepfel, 2007). Firstly, there is the "Target Group". These are the actors which are addressed by a policy, because they are "considered to be the perpetrator of an issue and must change their behaviour" (Knill & Jale, 2020). In the context of this paper these are all "stakeholders and economic branches with a carbon intensive occupation" and thus with an impact of environmental pollution/ degradation within their working and production processes (Ingold, Lieberherr, Schläpfer, Steinmann & Zimmermann, 2017).

Figure 6: The Triangle of Policy Actors (Knoepfel et al., 2007)

Policies often include unintended effects and thus next to the directly affected actors which are deliberately aimed to be “winner or loser” of a policy instrument, there can also be indirect affected actors so called ´´Third Parties´´ (Ingold, Lieberherr, Schläpfer, Steinmann & Zimmermann, 2017). These Third Parties as well can be grouped in two categories. First the “winners”, who are indirectly affected actors that benefit from positive outcomes of a new policy without “investing any capacity/ performance in it, or are not prosecuted even though they are part of the target group" (Knill & Jale, 2020). This could be industries that are mainly or exclusively working with renewable energies. Winners may also be the “Group of Beneficiaries” (Knoepfel et al 2007), or actors that “suffer from the externalities” of the target group and are aimed to benefit from the implementation of a new policy (Knill & Jale, 2020). In the context of the energy transition in the upcoming decades these are the stakeholders that are not involved in carbon- intensive sectors, or are actively engaging in processes of renewable energies already or “consumers and citizens of particular regions” (Ingold, Lieberherr, Schläpfer, Steinmann & Zimmermann, 2017). Also future generations can be categorized as beneficiaries (Dorian, 2006).

Then there are also “losers”, which are the indirect affected actors that are negatively affected by a new policy, even though they have no “impact on the primordial problem” (Knoepfel, 2007). Examples here are households who live further away from city centers, are forced to commute and thus pay higher prices and suffer more due to a fuel tax, or poorer households who have higher energy bills in times where energy prices rise and they tend to live in less well isolated homes.

It is possible that an actor could be categorized in both groups at the same time. For example, large industries that are heavily reliant on fossil fuels may be considered both a Target and a Loser in the energy transition. The deciding factor then is the “perception of the political administrative body” which is responsible for the policy. (Knoepfel, 2007) Here, the European Union is the main political administrative body that works in tandem with other political administrative bodies in Europe. Political administrative bodies engage with other actor types through the design and implementation of policy instruments (Lascoumes and Legales, 2007). Behavioural assumptions about target populations drive the design of policies (Schneider and Ingram, 1993). Therefore, policies reflect the political administrative body’s perception of Targets and Winners/Losers. Accordingly, the thesis will examine the choices made by the political administrative body in terms of the political instruments they design and deploy (see subquestion 2). These types of choices have important impacts on EU **legitimacy**.

Legitimacy

In order to take actions European Governance needs to be legitimate and thus the complex matter of political legitimacy is an absolute key for the European Union. In order to "shed light on the intertwined strands of theory and to contribute on the controversial debate of EU legitimacy" author Wimmel (Wimmel, 2009) developed a "meta-theoretical framework that differentiates between particular concepts, namely objects, variables and standards of democratic legitimacy in the European multi-level system" (Wimmel, 2009). For the first category "concepts of legitimacy" Wimmel underpins that with " respect to the EU, three concepts of political legitimacy have been differentiated, by which certain legitimacy objects can be subjected to a critical evaluation, namely legality, acceptance/compliance and normative justification" (Wimmel, 2009). In other words these concepts contain a legal view on matters, a belief in legitimacy (Legitimitätsglaube), as well as subjective norms such as an understanding of democracy or substantive other goods such as individual freedom and social justice.

The legitimacy objects "indicate certain empirical entities that can be subjected to a normative evaluation, depending on which concept of legitimacy is chosen" (Wimmel, 2009).These are the political system of the EU, the EU institutions, and the EU policy decisions. The standards of legitimacy entail the "classic issue of what features distinguish legitimate political systems from other forms of governing, or when a political system can be said to be democratic" (Wimmel, 2009).

Lastly, the decisive variables of legitimacy are important. According to author Schmidt (Schmidt, 2013) the concept of legitimacy can be divided into three categories that interact with each other and precise and explain Wimmels variables of legitimacy.

Firstly, input legitimacy is "judged in terms of the EU's responsiveness to citizen concerns as a result of participation by the people" (Schmidt, 2013, 2). In other words, input legitimacy is "participation-oriented" (Schmidt, 2013, 5), with the "participation quality of the process leading to laws and rules" that are "ensured by the majoritarian institutions of electoral representation" (Schmidt, 2013, 4). Furthermore, does the input legitimacy depend on the "citizens expressing demands institutionally and deliberately through representative politics while providing constructive support via their sense of identity and community" (Schmidt, 2013, 7). Therefore, the input-oriented aspect of legitimization can be defined as the involvement of political participation by the people (Schmidt, 2013, 4). In the case of the energy transition that means a Network based governance process with open structures that include actors whether targets, losers, winners of a policy action being part at the decision making table. That means the

EU has a responsibility to institute participatory policy making processes via e.g. citizen assemblies, Co-design and Co- production processes etc. in order to strengthen its own legitimacy.

Output legitimacy is "judged in terms of the effectiveness of the EU's policy outcomes for the people" (Schmidt, 2013, 2). The output-oriented aspect of legitimization is, on the one hand, "centering on the ability of EU institutions to govern effectively for the people" (Schmidt, 2013, 4), on the other hand, evaluated in terms of the "problem-solving quality of the laws and rules" (Schmidt, 2013, 4), and thirdly, "performance-oriented" (Schmidt, 2013, 5). This means for the output legitimacy that it "requires policies to work effectively while resonating with citizens' values and identities" (Schmidt, 2013, 7).In the case of losing actors in the energy transition that would mean that policies such as the "Just Transition Mechanism" convincingly mitigate burdens of disadvantaged actors and offer and conduct retributive compensations.

Throughput legitimacy is "judged in terms of efficacy, accountability and transparency of the EU's governance processes along with their inclusiveness and openness to consultation with the people"(Schmidt, 2103, 2). The throughput legitimacy is the newest criterion for the democratic legitimacy evaluation and, in contrast to the input and output-oriented legitimacy, it opens the "black box of governance" (Schmidt, 2013, 2). This means that throughput-oriented legitimacy focuses on the "space between the political input and the policy output" (Schmidt, 2013, 5) and assesses the "quality of governance processes" (Schmidt, 2013, 5). It is evaluated "based on the interactions of all actors engaged in EU governance" and "encompasses the myriad ways in which the policy-making process work both institutionally and constructively to ensure the efficacy of EU governance, the accountability of those engaged in making the decisions, the transparency of the information and the inclusiveness and opened to 'civil society' " (Schmidt, 2013, 7). Throughput legitimacy is therefore "process-oriented" (Schmidt, 2013, 5). Constructive throughput refers to the "productive deliberative interrelationships among actors in the wide variety of throughput governance processes" (Schmidt, 2013, 17). Institutional throughput refers to the institutional frame of decision-making processes as a whole and, more specifically, to the "intermediation processes through which organized interest groups have a direct influence on policymaking" (Schmidt, 2013, 15) In the case of energy transition policymaking that prompts questions such as whether there are accountability mechanisms for the European Union, the designated leader in that matter, when losing actors are not appropriately protected and restricted in their opportunities.

Winners and Losers of the Energy Transition- Policy language

The second sub-question asks about the instruments and policies considered for compensation at EU level. To address this sub question I focus on policy language that can be found in policy documents of the JTM. More specifically, I look for indications on how winners and losers are described in these EU documents. The social construction framework (SCF) by Schneider and Ingram (1993) that identifies "the value judgements that policymakers express when justifying their agendas to legislatures and the public" and also " the enduring impact of these value-driven policies beyond the terms of single elections (and often long after they have left office)" is used. The SCF assumes that "Policymakers tend to make quick, biased, emotional judgements, and then back up their actions with selective facts to 'institutionalize' their understanding of a policy problem and its solution" These judgments lead to policy designs based on emotionally-driven thinking that often becomes routine -even hegemonic- and questioned rarely in government which consequently "has an impact on citizens and groups, who participate more or less in politics according to how they are characterized by government." This framework of analysis fits this research as it offers the possible simplistic procedure of categorizing involved actors in the energy transition and underpins the importance of power dynamics between the involved stakeholders and how such associated power politics shape policy outcomes. Especially, when a social attitude fosters little incentives for policymakers to intervene when it comes to Energy Poverty -if for example "most citizens assume that people in poverty deserve little government help, because they are largely responsible for their own fate",- losing actors could be forgotten. This thesis will critically reflect upon such issues and examine data from the EU under that light.

IV. Methods and Data

The thesis employs a generative research design. Essentially, generative research aims to shed light on a poorly understood social science problem by allowing researchers to develop a deeper understanding of research subjects, in order to generate an understanding of how to encourage needed behavioral changes. In the case of this thesis, a generative research design is applied to public administration, targets, winners and losers, because these are all actors who impact and are impacted by the energy transition. It is also used to examine how benefits and burdens are assigned to different actors in the language of European Union energy policies.

The thesis is based on an analysis of literature and other secondary sources, including grey literature- policy papers of European governing bodies, think tanks, and material collected in the course of participation in university classes. The bulk of the analysis is applied to data collected from

communications issued by the European Commission about their policy strategy papers and data concerning consequences of the energy transition in the upcoming decades. The European Green Deal and The Just Transition Mechanism are the key policy papers informing this thesis.

The examined variables of this paper are on the one hand *the potential influence of the energy transition on the labour market*- investigating this impact under the light of the third parameter sector, region, and job skill set. The "European Commission's report on Employment and Social Development in Europe" (Griffin, 2019) displays the foundation of Data concerning that issue. On the other hand *the issue of Energy Poverty through issues such as efficient energy housing* will be looked at, where authors like Bouzarovski contributed massively to the generation of scientific knowledge.

In order to make the legitimacy analysis more concrete an open coding approach for legitimacy examination was conducted. The different documents were examined under the light of Stakeholders, Winners/ Losers, Public Administration level (local, national, regional), Actions Impacts and Actions legitimacy. In order to categorize the variables of legitimacy elements of the documents that can be connected to "Input, Output, Throughput" were grouped from 0-5,5-10,10-15 in order to be able to systematically assess the focusses to reach a certain degree of legitimacy and the lacks of legitimate focus.

Document and Stakeholder Analysis

The data analysis as such combines document analysis with a stakeholder analysis. " Document analysis is a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material. Like other analytical methods in qualitative research, document analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge" (Corbin & Strauss, 2008; see also Rapley, 2007).

In order to generate an understanding of how to encourage needed behavioral changes a document analysis is a fitting approach to classify the aforementioned issues associated with energy transitional processes and possible solutions and a lack thereof for governmental authorities in this case the European Union.

The advantages of the document analysis are manifold. Such advantages are availability of documents, cost- effectiveness, documents are "unobtrusive", "non-reactive" and stable in their appearance, meaning the researcher is able to plan a research schedule in a solid way. In times of a global

pandemic and limited time and money resources for this research, thus, this is an efficient method that at the same time provides a broad coverage in order to generate knowledge on the matter of social consequences of the energy transition. Furthermore, a document analysis possibly ignites subsequent research that uses findings of the triangulation of the document analysis with other research approaches. Possible flaws of the document analysis could be a biased selectivity of the researcher and thus aligned procedures with individual normative beliefs or organisational agendas. That needs to be kept in mind and be questioned in the process of the research project. Overall, the advantages of a document analysis with its efficiency and cost- effectiveness clearly outweigh the disadvantages and fits the matter of the generative methodological approach of this scientific thesis.

The advantages of the used approach especially come into play with the combination of the stakeholder analysis. A stakeholder analysis displays an examination of dynamics of diverging actors that pressure the governing body and must be aligned towards a consensus. In the energy transition the clash of actors active in fossil based systems and renewable energies is inevitable and thus drives the EU in a variety of directions. The alignment of these actors and the balancing of benefitting and compromised actors in these circumstances are key for the European Union. With the stakeholder analysis an examination of factors and actors are explaining the state of affairs of the energy and sustainability transition and the power dynamics of involved actors that shape policy outcomes of tomorrow. A "power interest grid" as well as a "social network analysis" of stakeholders can be combined with the aforementioned theoretical frameworks of Knoepfel and Schmidt to understand stakeholders roles, influence and power hierarchy/ dynamics. Also elements of a factor analysis in the form of DPSIR (drivers, pressures, state, impact and response model of intervention) may be used in order to investigate causal process tracing and bridge elements of policy language analysis to the outcomes of policy papers.

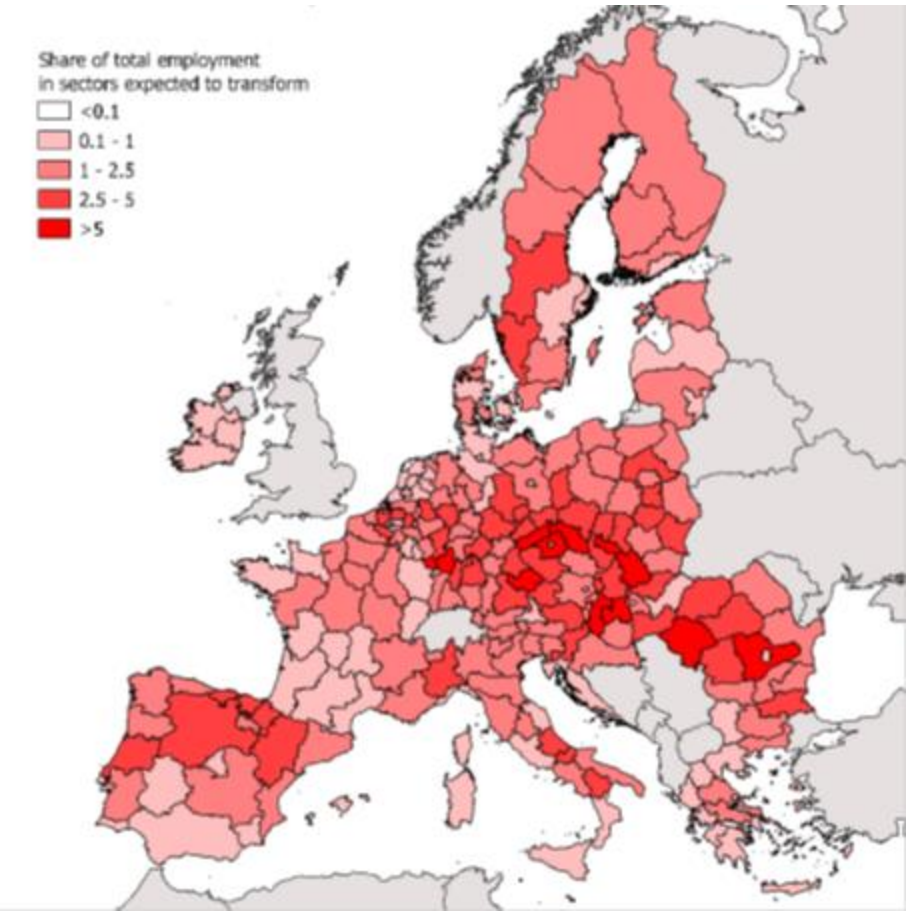
V. Analysis

The analysis section examines the workplace and home effects of the green transition. The mainstream element of energy poverty alludes to "energy affordability and thermal efficiency" (Bollino & Botti, 2017) as main aspects on the energy transition discussion and the chain effect of green growth. But also the secondary effects of workplace influence of the energy transition are important building blocks in energy poverty investigation as they can lead to potential poverty circumstances ignited by energy transitional effects. The European Union itself thus faces the challenge of synergizing environmental protection and social compensation.

A) Sectoral effects of the energy transition

Examining the winners and losers of the energy transition from a sectoral perspective a variety of aspects are striking. The European Commission's report on Employment and Social Development in Europe (Griffin, 2019) recognizes rather standardized fossil fuel- related mining and quarrying as the sector that will suffer from a huge fall in jobs. Additionally, the chemical, cement, steel and car manufacturing sectors require a huge transformation in order to keep up in being part of the low- carbon economy. The European Commission stated three different sectors it anticipates to reduce and four sectors it expected to transform as a result of the transition to a low-carbon economy. "The sectors expected to decline are: 1) mining of coal and lignite, 2) extraction of crude petroleum, and 3) natural gas, and mining support service activities. These account respectively for roughly 237 000, 55 000 and 46 000 jobs in the EU" (Griffin, 2019). The absolute majority, even probably all of these jobs will disappear during the energy transition, "putting workers in these sectors at a high risk of unemployment" (Griffin, 2019 & Cameron, 2020).

On the other side, the sectors expected to transform are: "1) the manufacture of chemicals and chemical products, 2) the manufacture of other non-metallic mineral products, 3) the manufacture of basic metals, and 4) the manufacture of motor vehicles, trailers and semi-trailers" (Griffin, 2019). While these sectors employ far more people than the sectors expected to decline – a combined 19 million jobs across Europe – not all of these jobs will disappear. Some will be transformed, giving workers the opportunity to transition and use their already acquired skills within their sector, they are already active in. This means these industries are a key actor pushing towards a slow or weakened green energy transition in order to prolong the disappearance of their industry or extend the timeframe to put the framework in place for a successful transformation towards green technologies.



Source: EC (2018)

The gross job losses and especially the "losses of low skilled jobs are a very significant docking point" for the "Just Transition Mechanism" (McCauley & Heffron, 2018). Nevertheless, in times of technological and behavioural change, which will both massively influence the European labour market in the coming years, it is difficult to estimate the gross job destruction resulting from the energy transition detached from these other influences. Moreover, it is not simply these sectors that stand to suffer but a whole range of services and industries that emerged to support these major industries. Michael Porter's cluster theory, for example, is an empirically validated theory which shows how in-put output relationships between firms give rise to a network of secondary industries which emerge to support primary ones, like mining and quarrying (Porter, 1998). These secondary sectors also stand to lose out in the transition to renewables. As was previously experienced during the decline of the steel industry in Pennsylvania, the restructuring of an industry can have a multiplier effect on surrounding industries and sectors (Beeson, 2004).

There will be industries which will be capable of adapting a less carbon intensive production and accordingly transform jobs internally rather than abolish them. Most studies focus on the net employment effect but it is even more crucial to assess the magnitude of gross job losses. It is important to underpin that the mechanism that connects the influence of implementation of renewable energy systems can show differing levels of connection and latency of employment effects which are a common theme across all literature in this field. The categories employed are direct, indirect and induced jobs. That means "the direct works are directly derived from the production of Renewable Energy Systems (RES), installation on-site, maintenance activities, and all activities related to management during the life cycle of the investment or policy studied" (Dell´Anna, 2021). Indirect effects include all secondary effects of changes in demands of affected industries, which means transformation in activities and production in up- stream sectors. The "supply of equipment, the extraction, and processing of raw materials, marketing, sale, and transport" of affiliated actors can be stated as examples (Dell´Anna, 2021). Lastly, the induced effect describes the overall impact on all economic sectors- the macroeconomic impacts- because there is an increase demand for consumer goods due to the income generated of the direct and indirect employment effects of renewable energy system usage (Griffin, 2019). Thus, looking at the sectoral effects according to Knoepfels above mentioned theory the EU reached a point to frame certain industries as perpetrator of environmental degrading and aiming at them with policies but the unintended effects of these regulations are in heavy danger to be not spotlighted can make affiliated actors the one that suffer more as they are overlooked.

Summing up, some sectors are expected to decline and lose jobs e.g. coal and lignite sector and some sectors are expected to transform and change the demand profile of jobs such as in the chemical production. That directly influences the decision making of political administrative entities in this case the EU as these different effects of an advanced implementation of green low carbon technologies require differing solutions of compensation and the hurdle of secondary or unintended effects for affiliated sectors display a danger.

B) Workforce skill level effects of the energy transition

Green transition policy papers such as the Green Deal aim at certain industries but will also have an impact on the labour situation by influencing the employment opportunities available for different skill levels of employees within those addressed sectors. Seemingly, there is a growing skill "polarisation between non- green jobs which will dissolve in the energy alteration and green jobs that will emerge" out of it (Griffin, 2019). Also in this case direct and indirect effects can be examined as an increase in investment in renewable energy industry and upstream industry thus leads to a displaced investment in

fossil based conventional technologies. Specifically, investments in RESs primarily create jobs for new junctions of engineering, operation and project managing, technical maintenance and services (Dell´Anna, 2021). An increase of wind energy usage creates a new need for wind energy engineers, wind energy operations managers, wind energy project managers and wind turbine service technicians. And these needs can be applied to all the variety of renewable energies. At the same time through the implementation of green policies workers in coal and mining experience job loss as coal mines are terminated step after step.

The literature observes that the creation and degradation of jobs is highly intertwined with skill level. As new technologies are a new and complex endeavour regarding their extraction, organization, distribution etc., there is an advanced need for highly educated, highly skilled personnel. That means a bigger use of renewable energy usage in industry attracts and needs a highly skilled workforce and thus plays a much bigger part than newly created jobs for low skilled personnel (Pereira & Silva, 2012). The demand for that is expected to rise after societal and industrial implementation of RESs is in an advanced progress and the creation of green infrastructure experiences a substructure for low qualified personnel. Looking at the degradation of jobs the events are expected the other way round, in the quarrying industry the lowest workers in the hierarchy are the first to lose jobs, while high skilled personnel potentially can transport their skillset from fossil to renewable energy extraction systems (Dell´Anna, 2021).

Across all sectors, the proportion of low-skilled positions available will decrease as non-green jobs are replaced by green jobs. These green jobs are expected to also partly pop up in a different place from where displaced jobs are lost. Nevertheless, the rate of medium and high-skilled engagement will increase, though to differing influences depending on the sector. The industries where there will be the largest increases in the quota of qualitative-skilled jobs are public administration, transport and construction. The biggest depletion in the proportion of available minor- skilled jobs is expected in mining and quarrying, social services, human health and retail trade. On the other hand, these sectors are also foreseen to experience the largest rise in the proportion of medium-skilled jobs available (Griffin, 2019). The energy transition and the including unknown obstacles and challenges do include a high average skill for green jobs. In times of rapid change the educational requirements and skills are at this point already higher for green- jobs than for non- green jobs and the gap between those two categories is expected to become even larger within the process of the energy transition. Those omissions of lower quality jobs, the replacement of low skill jobs by high skill jobs in certain sectors and the mismatches of skills in the intra relationship of green and non- green jobs, does show a high complexity for policies that aim at upskilling or reskilling. Thus, in the first place and by reason of these consequences, workers lose non- green jobs disproportionately high, due to the change towards green energy and “reskilling needs an

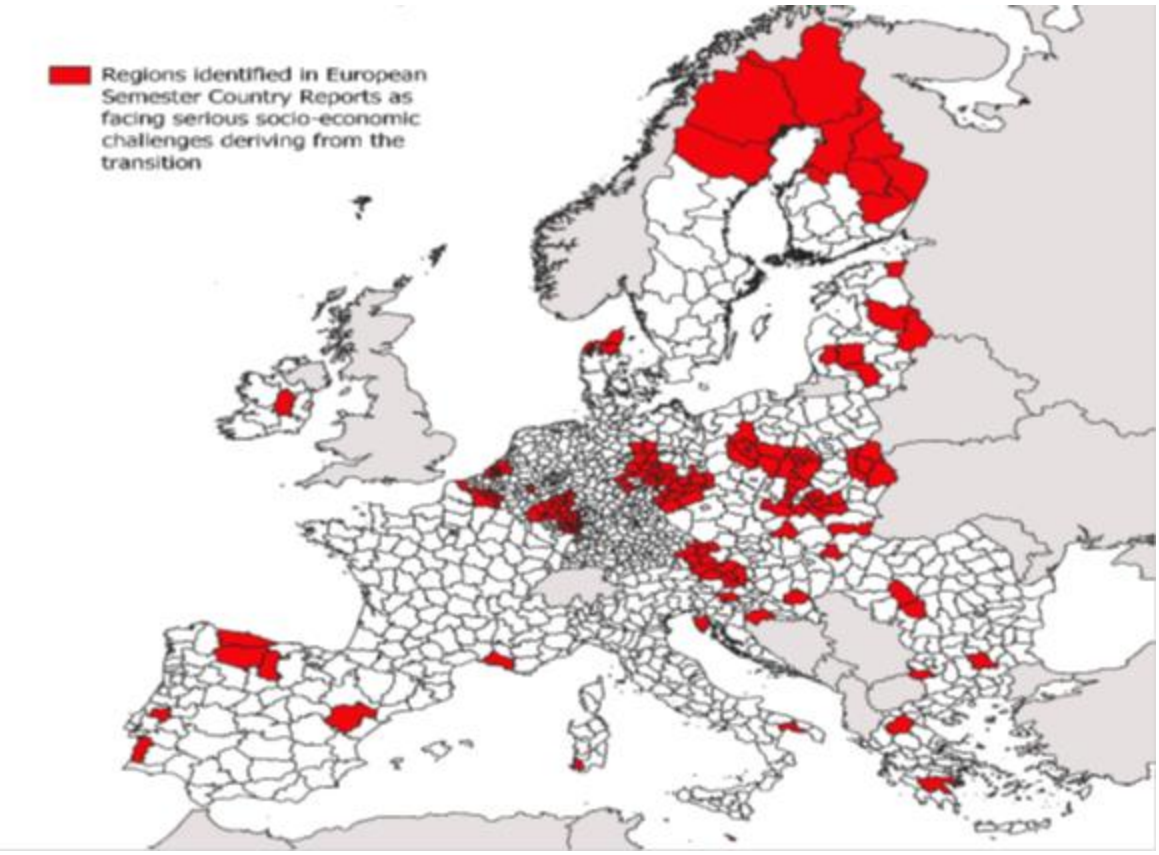
extended long time" (Cameron, Gregory, Mideos, Tagliapetra, 2020). Interestingly the policy language and social construction of responsible policy makers does not aim at different levels of skill and education within addressed sectors. Reskilling programmes must especially be utilized for the lower skilled personnel in order to be ready for a green future industry. The social construction displays a symbolic use of power in order to follow the will of the votership and address polluting industries but is in danger of forgetting the low skilled individuals that are the first to lose by changing from fossil to renewable energy use.

C) Regional effects of the energy transition

The analysis of influence per sector and skillevel leads to the crucial aspect of the energy transition which is that the declining or transforming sectors are "disproportionately distributed" across different geographic regions within the European Union (Hutchins& Sutherland, 2008). That means the implementation of sustainable policies will hit territories-that according to their economic growth and employment are heavily reliant on carbon- intensive sectors- much more in a negative way than other regions. That does not just include key drivers concerning economic growth of a region, but also a regional "social cultural identity of a particular region" and its citizens manifested in its history (Francis & Strachan, 2016).

Even though all EU regions will face the challenge of transitioning economies to a carbon neutral system, the most at risk of disruption concerning socio- economic aspects are the EU´s coal and lignite regions and more generic formulated- regions that are relying on fossil fuel extraction and production. (Griffin, 2019) Taking the severe example of the coal industry, the necessary full closure of the coal mining industry in order to fulfil sustainable goals of the EU, offers the following numbers. In "2018, there were still 207 coal-fired power plants spread across 21 Member States and 103 NUTS-2 regions, accounting for 15% of Europe's power generation capacity" (Cameron, Gregory, Mideos, Tagliapetra, 2020). Additionally, "128 coal mines were still being exploited in 12 Member States and 41 NUTS-2 regions" (Griffin, 2019).This industry provides "237 000 jobs, 185 000 of which are in coal mining". An additional "215 000 jobs are indirectly dependent on coal activities" (Griffin, 2019). Looking at the national level it is Poland- with for example the region of Silesia, which has the "highest proportion of employment in these sectors", that has the highest risk for job losses, followed by Germany, Romania, Bulgaria and Spain. Silesia could lose up to "40 000 jobs, which is about half of total employment" in the region (Griffin, 2019). Three other regions located in the Czech Republic, Romania and Bulgaria could each lose more than 10 000 jobs in the transition, roughly a third of total employment in each case (Cameron, Gregory, Mideos, Tagliapetra, 2020).

In sum, green transformation especially hits selective regional territories that are active in fossil related industries which defined these areas over a process of many decades. As already mentioned the secondary connected industries in these regions are therewith also compromised as they are reliable of the fossil energy extraction. At the same time these geographical territories naturally are the most harmed and attacked environments and thus future generations in these particular areas will benefit from looking at potential health issues due to a degraded environment, bad air etc. Local resistance to energy change that can be explained with inherent local identity needs to be addressed by looking at dependence, solidarity and justice with a particular region. Thus, the stakeholder dynamic of individuals, industries and political entities of a fossil fuel intensive region and the supranational entity of the EU and other drivers for green technological change needs to be addressed in a serious way. Such resistance identities need to change to "project identities" that receive political help and are framed as projects by policy makers using their policy language (Sanz- Hernandez, 2020). In order to resolve the adaptive dilemmas that particular regions- that base their identity on fossil energy systems- need to face in the energy transition, the EU needs to give a framework that also helps such regions to find an incremental process via local innovations, meaning bottom- up processes rather than top- down processes.



Source: European Semester country reports

D) Stakeholder Dynamics and Power politics

Political authorities often show the character to follow the will of the votership in order to remain in power. If a certain Zeitgeist- in this case a societal push towards green processes- clashes with working processes of key stakeholders, political authorities- in this case the EU- experience a dilemma to weigh and balance divergent driving forces. Industries that are economically powerful have the most political influences e.g. car industry or coal industry that were for instance able to delay exit from energy extraction through coal or the use of other fossil energies. In the multi-level policy arena, power politics matters. On the other hand, individuals that experience secondary or unintended effects of energy transitional policies are potentially not represented in the policy arena and thus invisible. With a lack of input and throughput legitimacy that the EU offers (and this thesis will come back later on that topic) individuals experience a hard time participating in governance processes of such a complex intertwined

policy matter. As Energy Poverty standards often centers around low energy performance of houses which could be increased while greening technologies, poor households suffer disproportionately and are affected in their physical and mental health (Bouzarovski, 2017). The European Parliament considers the "lack of energy efficiency as a key factor driving vulnerability to energy poverty, because of the potential disproportionality high loss of useful energy in households" and encourages to find a "common definition, that may help to standardizes policy and increase political visibility" (European Parliament, 2016).

Still, there is a danger of the EU operating in an inscrutable "blackbox" inaccessible for stakeholders that are not represented on a broader level and with economic power, for example these low efficient energy households. To foster a strong resilience within EU citizens who potentially lose in the process of the green transition, an opened up access to policy decision making process can be seen as crucial. While being dominated by capitalist forces, no matter if the driving stakeholders are pushing towards green or fossil based systems, the decision makers on EU level keep open ways out to push responsibility to other involved actors. This could be member states that are framed to be the responsible blocking actors of green or compensation policies as well as when it comes to distribution of compensations.

As the analysis shows directly addressed actors are at first sight defined in a clear way but secondary effects attack affiliated actors. The danger of the EU compensation programme thus is a wrong weighting of equity and disproportionate compensation of huge powerful actors while other actors in the energy transition are left behind. Compensations thus could actually make addressed losing actors end up as winning actors, if their political influence convinces political decision makers to do weak or "pseudo" green policies where big industries such as the coal industry, the car industry or the chemical industry are granted loopholes as they play a crucial political role with their economic power. Thus, the discussion about green policies is a highly neoliberal narrative. The danger of freeing corporations from responsibility and pushing it to the people, blaming individuals and governments is a big task for the EU. As regulations for corporations are necessary and at the same time an absence of discourse to punish and shut down businesses can be alleged, the question is whether the discourse and the policy creation is an inclusive process with fitting instruments to include all affected actors with fitting policy instruments or whether there are actors that are missing in the discourse. The next section will show how the EU aims to safeguard involved actors in the green transition, as people for example need financial support and not be burdened in the energy transition.

E) The Just Transition Mechanism

The Just Transition Mechanism is the key policy paper aiming at the compensation of losing actors in the energy transition and thus is a crucial aspect in EUs action plan of new green deal. The Just Transition Mechanism (JTM) consists of three pillars. First there is the "Just Transition Fund" that will be equipped with 40 billion. Then there is the dedicated scheme under "InvestEU" that consists of 1,8 billion". The third pillar is the "new loan facility leveraged by the European Investment bank" that enables the EIB to "lend 10 billion which is in turn expected to mobilize between €25 and €30 billion of public investments supporting the just transition objectives over the period 2021-2027" (European Commission B, 2020). Essentially, the EU is making use of financial instruments to stimulate member states to design and adopt policies that protect stakeholders who are vulnerable to job loss, economic marginalization, and energy poverty.

To access the various instruments under the JTM , the Member States of the European Union have to "prepare territorial just transition plans that cover up until 2030, that identifies the territories that should get the most support". The European Union warrants support for all member states, which "heavily focus on areas that are the most carbon- intensive or with the most people working in fossil fuels". Still, these "territorial just transition plans" need to comply with the "Triple Bottom Line" and need to balance Profit, People, and Planet in the best way possible (European Commission B, 2020). The EU outlines standards which Member States need to meet in order to avail of the financial incentives available through the JTM. These standards have various targets, namely vulnerable citizens, vulnerable territories (i.e. countries and regions), and vulnerable industries.

The first category of the JTM aims to protect "Member States and region with high dependence on fossil fuel and carbon- intensive industries" via "investing in renewable energy sources, improving digital connectivity, supporting the transition to low- carbon and climate- resilient activities, creating new jobs in the green economy, improving energy infrastructure- district heating and transportation networks, investing in public and sustainable transport, providing in technical assistance, and providing affordable loans to local public authorities" (European Commission B, 2020).

Furthermore, the JTM aims at the compensation for the "most vulnerable people and citizens" within the energy transition. It aims at the aspects "investing to fight energy poverty, improving energy- efficient housing, offering re- skilling opportunities, facilitating employment opportunities in new sectors and those in transition, facilitating access to affordable, clean and secure energy" (European Commission B,

2020). Above, this thesis already explores who these citizens may be, and what is at stake for them in the Energy Transition.

Additionally, the JTM aims to support "companies and sectors, active in or comprising carbon- intensive industries" via "providing easier access to loans and financial support, supporting the transition to low-carbon technologies and economic diversification based on climate- resilient investments and jobs, investing in the creation of new firms/ SMEs/ start-ups, investing in research and innovation activities, and creating attractive condition for public and private investors" (European Commission B, 2020).

F) Legitimacy and Policy Language

In order to categorize elements of legitimacy the analysis of this thesis deployed an open coding approach examining the communication of the Just Transition Mechanism under the light of the displayed focus of the EU. A compact version can be seen below. This section examines the intertwined character of EU legitimacy and the use of a social construction via policy language. The EU focus is on output legitimacy and individuals are framed as "dependent" on the authority and are mainly excluded from an input and throughput process in policy making.

Legitimacy	Count	Description
Input	0-5	Example: Dialogue in Policy Arena: "identification (by EU countries) of territories in need of funding will be carried out through a dialogue with the Commission" Missing: EU citizen assemblies
Output	More than 10	Example: facilitate reskilling opportunities, access to affordable clean energy, investments in new firms and research etc.
Throughput	0-5	Example: Just Transition Platform- EU countries can inform themselves- technical and advisory support. Lack of process insight for individuals and researchers

The analysis reveals several aspects about how the EU expresses their goals. First of all the policy **language used by the EU is heavily intertwined with the question of political responsibility, accountability and legitimacy**. With the JTM the EU advertises its compensation policy, underpinning that no one will be left behind. Overall the EU policies are cautious to frame stakeholders as losing actors as it offers a surface for attack. The addressed actors are constructed in a quite generic way. Providing "easier access to loans and financial support for companies active in carbon intensive industries" for example is not a very tangible promise as the question remains how much you need to be impacted by the transition and how important you as an actor need to be on the political landmark in order to enjoy such benefits as an easier access to financial support. After a long political and societal process, new environmental policies that aim at restrictions for perpetrators damaging environments became more salient to gather political support of citizens and strengthen legitimate actions in becoming greener for a political entity such as the EU. While such policies are addressing particular branches such as the coal and mining industry the compensation mechanisms mirror this trend and put focus on the compensation for these highly impacted industries. The social construction emphasizes investing in order to have the best outcome for big sectors, industries and companies active in fossil fuel related actions and eventually in the future also make them a winner of the transition. Real framed losers are mainly visible in research commissioned by the EU to be informed about the transition and to base their decisions on but the commission's communication is advertising a progress where potential hurdles seem to be veiled.

The used language and therewith the social construction is transported and exists in an extreme interplay with the question of EU legitimacy. The EU centers its entity as a legitimate leader on the output legitimacy. The social construction frames the addressed and affected companies, businesses and industries as "deserving" for compensation due to their economic contribution. The EU´s focus on output and performance oriented policies is a trend that academic literature generally pushes for and is visible within the JTM. The key on policy outcomes tend to be financial support but also offering frameworks for reskilling opportunities or support for research and start- ups are elements that can be placed at the end of a policy negotiating and finding process with a performance emphasis. The JTM does also aim at output legitimacy for individuals that lose due to energy transitional processes but the issue can be examined in the next step as an outcome of a policy needs input and a process to come to it. The JTM displays the democratic deficit of the European Union as there is a lack of input and throughput legitimacy. Even though elements of input legitimacy are expressed via the dialogue in the policy arena: "identification (by EU countries) of territories in need of funding will be carried out through a dialogue with the Commission" and elements of throughput legitimacy are expressed like the "Just Transition Platform" where EU countries can "inform themselves and have advisory support" (European Commission B,

2020), these participation and insight opportunities are given for the member states. The input and throughput that individuals- EU citizens- have, is strictly limited. There is no focus on participation and citizen assemblies and the access to valuable information in that complex matter also in order to examine the accountability of the EU is strictly limited as well. According the SCF the policy treats citizens as "dependents" who must be "saved" from negative energy policy effects (Schneider & Ingram, 1993). Citizens are categorized as low power actors who do not necessarily need to be heard. Thus, input legitimacy and giving voice to citizens is de-emphasized while output legitimacy and providing services is prioritized. Connecting that issue of a democratic deficit towards the output promises of the EU that aim to secure individuals that lose due to energy transitional effects, the question remains how such suffering individuals are represented in the policy negotiating process when they are not an individual of the economic and political powerful sectors and industries. These marginal voices are in risk to remain unheard and are in need of interest groups and a network mode of governance in order to have a chance to make their needs, worries and opinions heard. This social construction also fosters a path dependency that reinforces that dependent relationship for the citizens where the political authority functions as a "paternalistic" entity. Thus, traditional notions of political power are reinforced and creative and innovative policy processes are aggravated. As an additional obstacle the compensation process is heavily dependent on the political alignment of the nation states and their assessment of what affected actors need compensation. This multi- level progress entails the danger that the compensation is not comprehensively and consistently applied but rather that some actors depending on their local and national authorities disproportionality are compensated or are left behind as they are stamped as dependents and not as deserved actors. In the context of the JTM there are no framed "deviants" or "contenders"; because the policy is not about punishing people, it is about providing help. Still, these insights do explain political processes of the inherent question of politics "Who gets what, when and how?".

Overall, the lack of processes that can be categorized under Input and Throughput legitimacy provided by the EU could lead to imbalance of Investments as EU member states may decide and negotiate to support the big players, the huge organizations and industries that dominate the policy arena as well as the media and not the individuals. Output Legitimacy, as theories suggest, proves to have the highest emphasis for the EU, where success can only be measured at the end of a political process. Especially, in a long term upheaval and change of energy extraction, production and consumption that will dominate policy making in the next decades the issue of the democratic deficit of the European Union hinders that supranational entity to be a fully legitimate leader in the Energy Transition for all involved actors. Nevertheless, the severe cross border issue of environmental degradation, the comprehensive implementation of RES and its social consequences are tasks that are in need of the character of the European Union and its role as a

supranational entity. That cosmopolitan issue does spotlight the importance that the EU needs to open up their policy progress in order to gain input and throughput legitimacy and represent all affected actors to reach the goal of a just transition.

VI. Conclusion

Investigating the "Just Transition Mechanism" and answering the research question -"**Which actors are expected to lose/ win in the energy transition and how does the EU intend to ensure compensation for losing actors within the framework of the European Green Deal?**" it can be observed that there are a variety of direct and indirectly affected actors in the process of green technology implementation that in some way are losing and are in need of compensation. Answering sub question 1, Political authorities (supranational/ national/ local), business, industries, organizations, individuals, consumers, whole sectors and regions, and so on all play a part in the process of the energy transition and interplay with each other in order to negotiate policies for a just transition. The European Union does acknowledge the social implications of the energy transition and prepares measures to tackle these issues of upcoming decades. Answering sub question 2 - with the Just Transition Mechanism the EU has prepared a foundational plan that includes several instruments that envisage compensation of a variety of actors that must be categorized as losing stakeholders in the energy transition.

Persons will disproportionately be affected by the energy transition on the basis of their (1) the industrial sector where they work, (2) their skills, and (3) their location. Overall, fossil fuel- related mining and quarrying can be expected as the sector that will suffer most from a huge abbreviation in jobs. Regions that are reliant on these production methods will be losing actors in the energy transition and are identified as such by the European Union e.g. areas of Poland and Germany. Furthermore, it is expected that low skilled and educated personnel will suffer more because of the energy transition than high skilled and educated personnel in the group of non- green jobs as well as in the intra relationship of non- green and green jobs. The European Union aims at compensating those actors- sectors, branches, individuals with for example funding and financial support, reskilling opportunities, - whether these compensations will be realised in a successful way and to what extent which actor receives what amount of compensation remains to be seen. The danger is that power politics matter to a huge extent and that the big industries, corporations and organizations dominate the distribution of compensation as the political authorities weigh the economic challenges of big players higher while individuals and European citizens could be not represented well enough and fall under the radar as the European Union's depiction focuses on the policy outputs and bases its legitimacy on results rather than on input and throughput legitimacy.

In terms of legitimacy and under light of the theoretical frameworks by Wimmel and Schmidt this thesis finds the EU focus on output legitimacy and a lack of input and throughput legitimacy which is strenghtened via the social construction through the use of policy language of individuals as dependents actors and e.g. big companies as deserving actors of compensation. This social construction fosters path dependency for the dependent individuals and exacerbates overcoming the loop of being dependent on the political authority. If the European Union is formally and substantially acknowledged as a legitimate political actor that leads in that matter thus may be decided by the drivers with a lot of political influence, but could backfire in the will of the EU citizens. Even though this cross border issue does put the EU and its inherent nature in a spotlight, the complex multilevel entanglements, may it be about political, social, legal elements between the EU and its member states, complicates a leadership role for the EU.

As an example of a more hidden actor that loses due to the energy transition poorer households and unheard individuals must clearly be categorized. On the one hand the correlation of lower skilled jobs in the sectors and regions that will suffer more than their higher skilled jobs counterparts. Even within the set of the target group, there are clearly imbalances of consequences for the involved individuals, due to the implementation of policies and powerful stakeholders were able to push policies towards their favor and can be expected to do similar in the future. Unintended effects like corroborated efficient energy housing for poor households also play a key role when it comes to energy poverty and influences health and well- being and thus create a need for the EU to give these actors a stage in the policy making progress and improve EU citizens participation. Connected to subquestion 3, this could be a blindspot in reality and affect the justice and legitimacy of the just transition.

In order to dig into more detail examining the role of the European Union in energy transitional processes a follow up research that places the issue area in a global context would be a valuable addition. Due to the interdisciplinary character of the issue area, social science in many ways can contribute to creating academic and real world knowledge. The docking points between economics, law, political and environmental science also potentially build further bridges between these academic literatures as new dynamic insights of environmental science influences the political sphere to a huge extent. As the environmental as well as social issues connecting to change in order protect the environment does not stop at national borders, the issue of energy poverty does not stop at the borders of the European Union. Much more it can be expected that severe consequences are triggered in the global north but the repercussions can be examined in the global south. The discussion about EU legitimacy in the context of Global International Relations also potentially provides many additional and differing insights and possible interaction between the EU legitimacy in the context of its member states or in the context of a global interplay to find a solution to energy poverty.

For a continuing research agenda the EU responsibility and competency could be examined in the context of EU external international relations. Whether the EU is able to act unified in its external relations or whether member states do solo action as they are pushing in different directions as illustrated for the different effects of particular regions that are not proportionally balanced across Europe could be an exciting insight in the academic sphere. Due to the advanced importance of local innovations, a more detailed examination of local solutions that could comprehensively act as problem solvers on EU or global level when it comes to renewable energy use and compensation for losing actors and the opportunities or obstacles they offer, would be another valuable contribution that social science could make. The knowledge and global integration especially in scientific matters of environment and social issues is going to reshape the discipline of International Relations and could create new answers. This current study is limited looking at the European perspective and does not find an ultimate answer to the question of legitimacy of the European Union to be the leader in the social applications of the energy and a just transition and what is the "right" weighing of compensation for involved actors. But it spotlights the emerging issue of energy poverty and the societal impact it has/ will have. With interviews or in depth textual analysis of testimonies future research can examine more precisely the influence of a social construction and policy language on green policies of the EU and its impact on stakeholders.

Overall, the thesis finds that within the framework of EU Green Deal compensation for losing actors is envisaged but the social construction framing of affected individual actors and imbalances of the EUs political legitimate leadership could lead to failures when the goal is a full just transition. The JTM entails a broad perspective and many good ideas but also some questionable aspects remain such as the dealings with companies that are already today actively engaging or pushing for processes with renewable energies, based on environmental values, and therefore possibly hazard economic consequences. The Fund does not include a reward system for these companies and sectors that are actively drivers of the energy transition and possibly ahead of their time. Instead, industries such as coal and quarry industry, that tend to have huge lobbies on a variety of political venues and thus political influence, seem to be assured for a glib compensation in the next decades.

As the energy transition displays a fluid and dynamic process with many turnarounds or developments which are not foreseeable today the question remains, whether the apparatus of the European Union is capable and flexible enough to include tangible policies for surprising energy developments. Not solely the scaling and methodology of how to assess how far regions, sectors, and individuals are in need of compensation due to a heavy negligence in the process of energy transition is very important, also the awareness to protect marginalized voices and open up neoliberal processes. Whether the "Just Transition Mechanism" will fulfil its ambitions completely and strengthen the European Union's role as a leader in

social matters of the energy transition in times of massive upheaval and in interaction with a variety of actors, or whether it is going to fail in the complex fight for compensation and won't live up to its expectations, remains to be seen.

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