Bachelor thesis

A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?

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Submission Date: 29/06/2022
Total word count: 11905 words

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Abstract

This thesis analyses the indicators of trusting interstate relationships in the context of the discourse on the use of nuclear energy between Germany and France. As the European Commission recently published the Complementary Climate Delegated Act, categorizing nuclear energy as climate-neutral energy source, discussions on that topic arose especially between Germany and France. By applying a measurement for trusting interstate relationships onto this discourse, a better understanding on how the trusting interstate relationship between Germany and France can be affected by conflicting positions on the use of nuclear energy will be developed. The research question: *A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?* is answered by using desk research and a liberal approach of a content analysis. Generally, this thesis takes on a qualitative deductive approach and answers the research question in a multi-level and multi-measurement analysis. As this thesis includes very recent developments concerning the use of nuclear energy in the future, the findings gathered provided some essential insights on how the trusting interstate relationship of Germany and France is affected by the conflicting positions and that much of the data can rather be found on the global- / as well as the EU-level. Further research can use this thesis to elaborate more on the measurement of trusting interstate relationships in a globalised setting.

Keywords: Nuclear energy, Green New Deal, France, Germany, trusting interstate relationship, content analysis, desk research,

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List of abbreviations

GER – Germany

FR – France

OECD/NEA – Organisation for European Economic Co-operation/ Nuclear Energy Agency

IAEA – International Atomic Energy Agency

EU – European Union

EURATOM – European Atomic Energy Community

ECURIE – European Community Urgent Radiological Information Exchange

1. Introduction

"Gas and nuclear activities selected are in line with the EU's climate and environmental objectives and will allow us to accelerate the shift from more polluting activities, such as coal generation, towards a climate-neutral future, mostly based on renewable energy sources." (European Commission, 2022, p.1).

This quote, published in the press release of the European Commission, has brought up a new foundation to the existing discourse in Europe about the use of nuclear energy in the future. Whilst Germany finalizes the shutdown of all nuclear power plants in the country at the end of the year 2022, other countries such as France published a construction plan for at least six new reactors for nuclear power plants, resulting in increased energy production. Furthermore, the initial quote is a significant part of the newly released Complementary Climate Delegated Act published by the European Commission as a part of the Green New Deal to achieve the goal of a climate-neutral Europe by 2050.

However, nuclear power has always been highly discussed and can impact trusting relationships in international relations[1].

Germany and France have been two very close cooperation partners in various sectors, such as the EU energy and environment sector for decades. As a result, both countries took over an important and influential position internationally, especially in achieving the Green New Deal goals from the European Union.

However, both countries have very different viewpoints on nuclear energy production in the future. And while the planning and use of a nuclear power plant stay within the national borders of one country, the impact in case of a nuclear accident will not, raising concerns, especially in areas close to the national borders. History has proven that a nuclear accident has a tremendous and lengthy impact on not only one country but whole continents can be affected by such accidents. The nuclear power plants in Fukushima and Chernobyl are two examples that show how significant the impact can be and the possible danger that stands behind nuclear energy.

The impact of nuclear energy in a positive and a negative sense is a highly analysed topic, and there are still discussions about the advantages and disadvantages of this energy source. While some researchers argue that the use of nuclear energy carries too many risks, such as radiation during nuclear accidents, the location and impact of nuclear waste or the level of CO2 emissions (Dickel/Warode, 2021), others argue that nuclear energy, in a secure environment is one of the cleanest and most reliable sources of energy compared to other forms of energy production and contributes to a low emission environment and therefore a continuation of the civilization (Comby, 2003).

Also, the international effect of nuclear energy is a highly debated topic, especially within international cooperation and security agreements. In the past years, much work was done regarding improving international regulations on nuclear power and installations to make them less susceptible to environmental catastrophes. For example, the International Atomic Energy Agency is an intergovernmental forum for technical and scientific cooperation in the field of

[1] International relations – manner in which two or more states interact with each other

nuclear energy that tries to improve peace and security in the world while working on the United Nation's Sustainable Development Goals (IAEA, 2022). Another essential actor, especially in the European context, is the European Union. By setting standards and developing a legal framework for the use of nuclear energy, the EU tries to maintain a secure environment while keeping up with a sufficient energy production.
However, while the EU and the IAEA can set standards and regulations for nuclear energy, each country can still decide whether it supports or declines this use of power, which can affect bilateral[2] and international[3] cooperation. What is mainly discussed in research is the role of nuclear power in cooperation and the extent to which nuclear energy is sustainable or not. At the same time, the extent to which nuclear power can affect trust in international relations is an area that did not find much attention but has become increasingly important. The contrast between Germany, with its nuclear exit in 2022 and France, with a recently published plan to construct more nuclear power plants, can show how difficult the use of nuclear power can become from a cross-border perspective. The missing inclusion of trust in international relations in existing literature can be explained by the missing conceptualisation and operationalisation of this concept and its measurement. It is a relatively new concept that has become increasingly important in recent years, but specific standards on what it exactly means and what affects trust in international relations are still missing, making research on that topic very difficult and therefore resulting in a significant knowledge gap.

This thesis analyses the concept of trust in international relations regarding the nuclear discourse[4] between Germany and France. It has not found much attention in current research due to the previously discussed reason for missing trust standards in international relations. However, a combination with current legal frameworks on nuclear energy as well as recent developments in that area and the application of indicators of trusting interstate[5] relationships using the methods desk research and content analysis is research that has not been done before. Therefore, it can provide some significant insights on the Franco-German trusting interstate relationship. In the future, the findings of this thesis can be used to further investigate trusting interstate relationships in other settings than the nuclear sector. However, with this research, implications for future developments in the nuclear sector and trust-building processes can be made to improve a trusting interstate relationship.

[2] Bilateral – involving two countries
[3] International - worldwide
[4] Nuclear discourse – Conflicting positions on the use of nuclear energy
[5] Interstate – relation between two or more states (or countries)

1.1 Research Question

As the previous discussion indicates, this thesis focuses on the measurement of trusting interstate relationships in the setting of the Franco-German nuclear discourse. The combination of the measurement of trusting interstate relationships and the nuclear discourse is expected to be an excellent example of applying theoretical knowledge in an empirical setting.
The research question is, therefore:

A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?

Aiming to answer this research question, three sub-questions are composed:

1. *How can trust in international relations be defined and measured?*
2. *Where can the different indicators of trusting interstate relationships be found?*
3. *What implications can be made regarding the current positions of Germany and France on the future of nuclear energy?*

Those sub-questions are developed to provide a step-by-step solution to the overall research question. All of which contain a different focus that will be analysed individually, but their solution will represent the conclusion of this thesis. While the first sub-question will be answered in the theoretical framework, the second and the third sub-questions will be answered in the analysis using a desk research and content analysis. Generally, a qualitative deductive approach is applied in this thesis.

2. Theoretical framework

As the fundamental concept underlying this thesis consists of the analysis of trust in international relations and consequently how indicators of trusting interstate relationships can be detected in the Franco-German discourse on nuclear energy, the theoretical framework embraces a structure beginning with general implications of trust and how it can be defined. Then trust particularly in the context of international relations is looked at and finally a framework is developed on how trust or trusting interstate relationships can be measured. This framework is then used in the analysis to detect whether the indicators of a trusting interstate relationship can be found and what implications can be made.

2.1 Defining trust

Trust, especially in international nuclear decision-making, has become a highly relevant concept. Modern theorists underline the importance of trust for the functioning of modern societies. Reducing complexity positively influences political, social and economic relations worldwide (Meyer, 2021). Trust, as such, can be defined as "an attitude involving a willingness to place the fate of one's interest under the control of others." (Hoffmann, 2002, p.376). The basis of this willingness is the belief in the refrainment of the potential trustee from using its discretion to damage the interests of the trustor. However, there is always a level of uncertainty connected to this belief.

Many researchers describe trust as a multidimensional construct based on different elements that influence trust to become essential (Metlay, 1999; Peters et al., 1997; Johnson, 1999; Mayer et al., 1995; Levine/Renn, 1991).

Mayer et al. (1995), for example, underline the importance of 'Ability', 'Integrity', and 'Benevolence' as components of trust, while according to Peters et al. (1997), the three dimensions of 'Knowledge and expertise', 'Concern and care' and 'Openness and honesty are essential. Furthermore, Levine and Renn (1991) propose five important dimensions of trust, namely 'Faith', 'Fairness', 'Competence', 'Consistency' and 'Objectivity', while Metley (1999) focuses on the 'active' and the 'competence' component only. Lastly, Johnson (1999) proposes three dimensions of trust, which he names 'Consensual values', 'Competence' and 'Care'.

Another distinction of trust that can be made is the 'interpersonal', 'institutional' and 'ideological' forms of trust (Meyer, 2021). The main focus of this distinction lies in the different relationships of trustors and trustees in these forms. For example, when one talks about interpersonal trust, usually a particular relation of one individual to another person or group in which often a face-to-face, therefore more intimate, interaction is involved (Meyer, 2021). On the other hand, institutional trust focuses on citizens' trust in different institutions (can be private and public), for example, the Parliament, private companies or the general functioning of democracy in a system (Kestilä-Kekkonen and Söderlund, 2016). Ideological trust refers to trust in higher institutions, namely the state as a whole, in which a direct connection to norms and values can be made (Tait, 2011). Ideology can be seen as an interpretation of reality and means-ends relationships concerning "wider abstract systems and ideas" (Tait, 2011, p.160). Namely, economic growth models or the legitimacy of a government. It is less drawn from the knowledge and previous evidence. It, therefore, "transcends information" (Tait, 2011, p.160)

but from one's individual (or an institutions) place in the social structures (Lehtonen et al., 2021, Tait, 2011)
Based on this short review of existing literature on trust in a general sense, one can already see the complexity that is included in the concept of trust and the variety of factors that can possibly influence it. Furthermore, all forms and dimensions of trust contain a specific interrelation and can usually not be clearly distinguished from each other.

2.2 Trust in International Relations

Especially in the last decades, trust has also become an essential concept in international relations. It is said that trust is a necessary precondition that contributes to peace and prosperity in the world (Hoffman, 2006). Trust in the setting of international relations is often referred to as a:

> "(…) *generalized belief about whether most foreign countries behave in accordance with normative expectations regarding the conduct of nations. Citizens with high levels of international trust see the realm of world affairs as a friendly environment where trust and cooperation among nations are the norms; in contrast, citizens with low levels of international trust see the same realm as a hostile environment where all nations strive against one another for advantage and readily defect from cooperative efforts. Put another way, international trust is a standing decision to give other nations the benefit of the doubt, an assumption that most countries are of goodwill and benign intentions."*
> *(Brewer et al. 2004, p.96)*

This quote underlines the complexity of trust in the international sphere, as it includes trust between individual leaders of a nation, trust between entire nations, and trust coming from citizens of a nation to another nation (Booth and Wheeler, 2008)
From an international point of view, different elements that influence trust can be outlined. Some are very similar to the elements influencing trust as a general concept, and some differences exist due to the international perspective. In international relations, trust can often be based on previous experience and a certain level of familiarity (Luhmann, 1979). Therefore, a historical background perspective is included in the assessment of trust. Furthermore, what is very important is the element of risk perception for trusting someone else. For example, when countries enter international agreements, such as the Nuclear Non-Proliferation treaty, they risk not being able to defend themselves with nuclear weapons if other countries break this agreement (Ruzicka and Wheeler, 2010). This perception of risk mainly includes confidence in the competence and the reliability of other countries to ensure safety and can be based upon various factors such as previous experience (Mogensen, 2015). Other essential factors that become increasingly important when discussing trust in international relations are the level of self-interest when entering cooperation and the level of consensual values and motives within the cooperation (Hoffmann, 2002). Self-interest is highly related to the level of openness or willingness towards collective action or cooperation. Therefore, it can be assumed that if the level of self-interest is high, the level of willingness is very high as well. Therefore, all the

elements are expected to influence the trusting relationship between the countries positively. Some other elements that influence trust in international relations are namely language (Jaansoo, 2019), culture (European Commission, 2015), communication tools (Feiock, 2007), transparency of information (Gulati and Singh, 1998), network fragmentation (Marin, 2011), the role of citizens (Mogensen, 2015) and the environment (Brewer at al., 2004). These elements are highly interrelated and cannot be clearly distinguished from each other. Furthermore, each can consist of a different priority depending on the context of the problem or situation to be analysed.

While the elements influencing trust, in general, are described as comprehensive concepts, only some of them apply to the concept of trust in international relations. Namely, consensual values, competence or faith in competence are elements of relatively high importance in the international context, while care and fairness, for example, are not mentioned in literature on that topic. Furthermore, elements such as risk perception, self-interest, shared history, or previous experience can mainly be found in the literature on trust in international relations, and therefore, for further analysis in this thesis, those elements are more relevant. The previous distinction between interpersonal, institutional, and ideological trust underlines different types of trust that can also be found in international relations that underline the complexity of trust even in international relations. While interpersonal trust can be seen in the trusting relationship between two national leaders, for example, institutional and ideological trust can be found in the relationship from one nation as a whole to another; it can therefore include entire systems and the norms and values they reflect. In the next part of the theoretical framework, namely the measurement of trust, the interpersonal, institutional, and ideological perspectives can be found as well, as the centre of the analysis will include national and international policy papers, as well as individual statements of decision-makers regarding the nuclear discussions of entire countries. Furthermore, concerning the scope of this research, the main influencing elements that are included in the measurement of trust in international relations are namely, risk perception, self-interest, consensual values, and willingness, as the literature on which the measurement of trust in international relations is based on, mainly includes those elements.

2.3 Measurement of trust in international relations

The following section consists of the measurement of trust in international relations. A method of measuring trust from this perspective can be done by using specific indicators for trusting interstate relationships, namely discretion-granting policies and decision-making data, oversight indicators and rule indicators. Those types of measurements are described in the next section, as well as some assumptions that must be made to understand the concept of trusting interstate relationships generally.

2.3.1 Basic assumptions of trust in international relations

Concerning the measurement of trust in international relations, the Hoffmann (2002) article will mainly be used to build the theoretical framework for this study. Hoffmann focuses his research on the detection of trusting interstate relationships and how they emerge. In addition, some

basic assumptions about trusting relationships are being made before the measurement is explained, providing a closer understanding of the concept of trust in international relations and how the measurement is developed.

The first assumption Hoffmann (2002) made is that trust can be referred to as an attitude that involves a certain willingness to place the interest of one state under the power of another and that this delegation of interest will not be used to harm one another. This assumption, therefore, refers to the level of openness towards a trusting relationship and the faith in the other nation to do good.

Hoffmann (2002) assumes that trusting relationships can be seen as behavioural manifestations of trust in which discretion over interests is granted based on the judgement that the other party does not harm this interest. Therefore, an assessment of the probability that the counterpart will perform in a certain way that also affects one's actions is included in this assumption (Gambetta, 2000).

The third assumption is that trust and trusting relationships can vary in intensity and scope. Intensity describes the level of discretion granted to the trustee over their interests (Hoffmann, 2002). Moreover, the scope describes the extent to which a trusting relationship can appear between the counterparts. While some researchers argue that trust is always conditional (Hardin, 1998), others argue that trust can be a general concept covering all interactions between each other (Hoffmann, 2002).

Fourth, a trusting relationship involves predictions about risks and the future actions of the counterparts; due to the discretion that is being granted, the trustor can never be entirely sure about the future; therefore, the risk perception is being included in the trusting relationship (Hoffmann, 2002). This inclusion also involves assessing to what extent one can depend on the trustee and the probability that their trust-granting will be respected and honoured (Hoffmann, 2002). It is expected that individual actors use specific estimates to assess the level of risk that comes with the trusting relationship, and if these estimates are faulty or non-sufficient, the risk of the betrayal of their interest is higher. It is argued that this risk can be overcome by increasing access to available and reliable information about one another and a shared understanding (Bianco, 1994).

2.3.2 Three measurements of trusting interstate relationships

The three measurements for trusting interstate relationships will be discussed in the next part. These are based on the previously described assumptions on trusting relationships and their main elements. However, this measurement does not involve every element influencing trust in international relations; it instead shows, based on the previously discussed assumptions, how a trusting interstate relationship can be measured empirically. The elements influencing trust in international relations can also be included as underlying factors that can shape the trusting relationship.

2.3.3 First measurement: Discretion-granting policies and decision-making data

The first level of measurement proposed by Hoffmann (2002) is *'Discretion-granting Policies and Decision-making Data'.*

Based on the assessment of the trustworthiness of the counterparts and, therefore, the development of a particular vulnerability to their actions, two crucial elements of measurement will be included:

"(1) identifying policies that grant other states discretion over outcomes previously controlled by the first and

(2) demonstrating that the leaders responsible for enacting such policies did so at least in part because they believed that their counterparts were trustworthy."
(Hoffmann, 2002, p.385)

A possible example of those discretion-granting policies can be the decision made by the member states of the European Community in 1986 to resign from their individual votes to begin a system of Qualified Majority Voting (Hoffmann, 2002, p.385). Resulting from this, the pace and form of the future of European integration was no longer a decision all members had to agree on, but only the qualified majority. However, one must underline the fact that by discretion-granting policies, the shift from something controlled by oneself to something controlled by something or someone else is meant, therefore, not only the recognition of the authority of states (Hoffmann, 2002). Also, in other literature is trust often connected to the granting of discretion or leeway, to grant someone the freedom to act in a particular way and therefore to delegate the power previously owned by oneself to the counterpart (Bianco, 1994). The next step to measuring the trusting relationship is understanding the motives and background information that drove the policy decision. This involves the individual attitudes of the involved decision-makers to understand their positions. Some links towards the historical records and information can be made here, as well as concerns about traditional political issues and/or prosperity and security can be relevant in this context (Hoffmann, 2002). In addition, the previously discussed elements influencing trust in international relations can become quite crucial for this measurement, as they also influence an actor's perception of the trustworthiness of the counterpart, such as culture, communication, citizens, or environment.
However, essential to be mentioned here is that if there is no information about the actors' positions to be found, that does not necessarily mean that no trusting relationship exists. It can often simply mean that trust operates in this relationship as an "unacknowledged background condition" (Hoffmann, 2002, p.387) in which the faith in each other does not need to be recorded. A possible alternative to analysing the trusting relationship would be detecting a friendship, as trust is intuitively involved in friendships (Wieselquist et al., 1999).

2.3.4 Second measurement: Oversight indicators

The second measurement of trusting relationships, namely *"Oversight indicators"*, builds on the discretion-granting policies and the decision-making data. The focus in this part is set on the various mechanisms used by states to supervise the discretion granted (Hoffmann, 2002). The existence and the number of such mechanisms can be used to evaluate the trusting relationship between two states, and it is expected that the higher the number of such oversight mechanisms, the lower the trust within the trusting relationship. This can be explained by the

condition that if the counterparty is not perceived as trustworthy, the desire to monitor it increases (Witt et al., 2021). Hoffmann (2002) distinguishes two types of oversight mechanisms, namely "(…) either oversight occurs before decisions are implemented ('before-the-fact oversight) or oversight takes place after decisions are implemented and their consequences known ('after-the-fact' oversight)." (Hoffmann, 2002, p.388).

By comparing both mechanisms, it is argued that before-the-fact oversight can be seen as more direct and centralized than after-the-fact oversight because it requires more active intervention by monitors (McCubbins and Schwarz, 1984). Common examples of both mechanisms are namely 'police controls' and 'fire alarms' (McCubbins and Schwarz, 1984). While the aim of police control monitoring of an actor's activities is to prevent specific outcomes (therefore a proactive mechanism), in fire alarm oversight, third parties that report specific results of activities are involved who then will be able to develop sanctions regarding the actors whose behaviour was faulty (therefore a reactive mechanism) (Hoffmann, 2002).

Police patrol mechanisms can be found, for example, in the International Atomic Energy Agency (IAEA), which uses such before-the-fact oversight mechanisms to detect countries that try to develop nuclear weapons illegally. In addition, after-the-fact oversight mechanisms can be found, for example, in the United Nations Human Rights Council, in which victims of abuse of human rights can address their suffering and sanctions will be applied to the abusers (Hoffmann, 2002).

Furthermore, other forms of oversight exist, such as protests, in which groups try to influence the authority's decision-making to get a particular beneficial outcome. Nevertheless, the after-the-fact oversight is generally a cheaper and more effective method to uncover rule violations. Therefore, rational actors use it more often (Hoffmann, 2002). The reason for that is that usually, for after-the-fact oversight, third parties will carry the costs, and the scope of the fire alarms can be considerable. Therefore, many instances can be reached. The type of oversight is hence also preferred by politicians who can take credit for detecting the misconduct without using much money and resources (McCubbins and Schwarz, 1984). On the other hand, before-the-fact oversight must be developed and financed by the actors in the agreement and can therefore be very restricted.

However, when states are concerned with the exercise of discretion of their counterparts, mostly before-the-fact oversight is preferred because the options of exercising their discretion in a harmful way will be limited; therefore, the opportunities disappear. On the other hand, when actors believe their interests will not be violated, they prefer the after-the-fact oversight mechanism.

This indication also includes the assumption that oversight mechanisms occur when certain agreements cannot be entirely monitored and that all agreements at least contain the possibility of oversight and sanctioning in the case of violation (Hoffmann, 2002).

To conclude the part on the second measurement of trusting relationships in international relations, one must understand that the mere presence of oversight mechanisms is not the main issue, but the question of what kind of oversight mechanisms is being used is of primary importance. "Using the principle that where there is more discretion there is more trust, after-the-fact oversight is more consistent with trusting relationships than before-the-fact oversight, *ceteris paribus*." (Hoffmann, 2002, p.391).

2.3.5 Third measurement: Rule indicators

The third type of measurement includes certain types of rules that are included in written agreements by the actors. This type of measurement intends to analyse how the rules vary and to what extent freedom in decision-making is provided (Hoffmann, 2002). The more leeway will be given, the higher the trust in the relationship is expected. Generally, it is argued that certain types of constraints, such as rules and regulations, are very relevant for the indication of trust in international relations, as they show the extent to which one can trust others and one can be perceived as trustworthy (Gambetta, 2000).

Generally, two types of agreements can be chosen, either framework-oriented agreements or statue-oriented agreements. An essential part of framework-oriented agreements is constitutive rules that clarify rights, procedures, basic structures, and institutional forms (Hoffmann, 2002). In addition, those rules can develop and shape particular legitimate behaviour between two actors.

On the other hand, statute-oriented agreements are described as being dominated by codes that put constraints on the actions of the actors in certain circumstances (Hoffmann, 2002). Therefore, those agreements overtake a regulative nature concerning certain conditions, while a constitutive nature dominates in framework-oriented agreements.

Looking at the vital factor of discretion-granting, one can say that in framework-oriented agreements, actors are given more freedom "(…) because the rules they depend on define modes of interaction without specifying when these modes must be employed or to what end." (Hoffmann, 2002, p.391). On the other hand, in statute-oriented agreements, specific orders are developed that define not only the mode of behaviour but also the situations in which this behaviour is rightful (or not). Therefore, one can assume that framework-oriented agreements grant more discretion and are more coherent to trusting relationships.

The main intention of using different types of agreements to determine a trusting interstate relationship is the necessity of recording the state's political and organisational activities so that important decision-makers who did not participate in the negotiations can read, evaluate and ratify the agreement (Putnam, 1988). Furthermore, written agreements are significant when it comes to the people who must implement the rules, which are usually not the ones that decide on them; therefore, recordings of such agreements are of highly important when it comes to the organisational structure of a state.

Some authors might disagree with including written agreements in the measurement of trusting relationships for reasons such as a different interpretation of what written agreements tend to reflect; some argue that they show suspicious behaviour instead of indicating trust (Baier, 1986). However, for the analysis in this research, the third measurement of rule indicators following Hoffmann will be included. Although it is to say that the mere presence of a written agreement does not indicate a trusting interstate relationship, the importance lies in the rules that are applied that states use for organising the agreements to determine whether the relationship could be trustful or distrustful (Hoffmann, 2002). As previously mentioned, a more trusting relationship can be indicated if there is an increased use of constitutive rules. Conversely, less trust can be indicated if there are more regulative rules.

Measurement	Type	Description/Criteria
Discretion-granting policies and Decision-making Data	Discretion-granting policies	Policies that grant other states discretion over outcomes previously controlled by the first
	Decision-making Data	Assessment of the decision-makers' individual position towards the trustworthiness of the other
Oversight Indicators	Before-the-fact oversight	Mechanisms that include proactive and preventive measures before a violation occurs (police patrol)
	After-the-fact oversight	Reactive method of oversight that takes place after a decision was implemented and the consequences of violation are known (fire alarm)
Rule Indicators	Framework-oriented agreement	Constitutive rules that clarify rights, procedures, basic structures, and institutional forms
	Statute-oriented agreement	Dominated by codes that put constraints on the actions of the actors in certain circumstances

Figure 1: Indicators for trusting interstate relationships derived from the theoretical framework

2.4 Concluding remarks

Concluding the theoretical framework one can see that trust in general is a very complex concept with various elements influencing it. By analysing trust in international relations, one can see that some elements of trust in a general sense comply with the elements influencing trust in international relations. However, some elements are more relevant than others, always depending on the context. The second part of the theoretical framework deals with the way trust in international relations can be measured and what basic assumptions exist. By explaining the framework following Hoffmann (2002), three different measurement mechanisms are introduced that will be used in the analysis to assess the trusting relationship between Germany and France based on the recent developments in the nuclear discourse. This multi-measure strategy does not explicitly distinguish between different dimensions and elements of trust, however some components are an important factor in the measurement, such as risk-perception and self-interest and willingness. The three dimensions (interpersonal, institutional, and ideological) are also a part of the measurement, as trust will be measured in different ways with different sources. Derived from the literature used in the theoretical framework, Figure (1) was developed, in which all, for the further analysis relevant, measurements and definitions are summarised.

3. Methodology

To address the research question: *A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?* Two methods of research will be applied—the desk research method and content analysis. The first steps toward the research question's solution are, to begin with, the collection of secondary data from various databases for policy documents, strategy papers, international treaties and individual statements made by important decision-makers, both internationally and nationally (GER/FR). Secondary data is used as it provides sufficient information for the analysis because the focus is set on current legal frameworks and their background information. Therefore, the collection of primary data is not necessary. Secondly, the content analysis method is applied to the gathered secondary data. The method of content analysis was chosen as it opens the potential to provide some essential insights into the discourse on nuclear energy and the individual positions of Germany and France. "A governments knowledge about political developments in foreign countries often relies on communications in the form of diplomatic correspondence, foreign broadcasts, journalistic accounts in the domestic press, or speeches made by political leaders not necessarily intended to reveal these developments." (Krippendorff, 1989, p.405). This indicates that, especially for analysis in international relations, content analysis can reveal tremendously essential insights into political affairs, mainly as this thesis adopts a qualitative deductive approach. Therefore, this analysis method is expected to provide the most relevant results compared to other methods, as the analysis of trusting interstate relationship indicators in the discourse on nuclear energy between Germany and France is the centre of this thesis.

3.1 Data Collection

The data used for the content analysis on the nuclear discourse regarding trusting interstate relationship indicators are gathered from policy documents from 1964 until 2022. The wide range of publication dates can be explained by the fact that nowadays still, many of the legal frameworks regarding nuclear energy are based on conventions and treaties from 1964 onwards, especially regarding nuclear safety and radiation protection of civilization and the environment. The data sources are mainly databases from international (global) organisations (OECD/NEA/IAEA), the European Union, or national databases such as provided by individual ministries. Generally, the data is searched for using the following criteria:

(1) Legal framework of which GER and FR are part of.
(2) Data that is still active, therefore not outdated.
(3) Data that provides insights on the nuclear discourse (such as nuclear safety) or
(4) Data that provides insights on the Green New Deal regarding renewable energies.
(5) Data that includes rules, regulations, and implications on oversight mechanisms or
(6) Data that at least includes strategies on rules, regulations, and implications on oversight mechanisms
(7) National Data that provides insights on individual decision-makers positions and plans (Data from national ministries of economic activities or the government itself)

It is not required for the data to fulfil all the criteria altogether. However, either insights on the nuclear discourse or the Green New Deal must be given. Furthermore, the reliability of the data must be given. Therefore, only official political databases were used as a tool to search for the data. Namely, databases from the OECD/NEA, the IAEA, the EU or the national ministries in Germany and France are used. In addition to that, national newspaper articles are included as well to provide a suitable analysis of individual statements made by decision-makers. Once an adequate amount of data was collected, the software ATLAS.ti is used to merge it and to conduct the analysis. As this software is developed for qualitative Data analyses, it is the most suitable for visualizing and providing an overview of all data and the analysis findings.

3.2 Method of Data Analysis

As shortly described in the research design section, this research uses a multi-level and multi-measurement approach to conduct the content analysis. However, a more liberal approach to the content analysis is chosen in this thesis, as the criteria for each of the measurements do not fit into a classical coding scheme using certain words as codes. Liberal in this context means that the content analysis is applied by using the criteria gathered in Figure (1) from the theoretical framework and use the software ATLAS.ti to search the secondary data gathered for each of the criteria. ATLAS.ti is used at it provides the possibility to carry out a liberal content analysis without the classical understanding of coding. Findings in the data were "coded" according to the type of measurement to which the data fit. Therefore, at the end implications can be made about how often a certain criterion appears or not.

As the analysis begins with the third type of measurement, namely rule indicators, the following criteria are used to detect either the framework-oriented agreement type of rule indicator or the statute-oriented agreement type:

Framework-oriented agreement: Constitutive rules that clarify rights, procedures, basic structures, and institutional forms,
Statue-oriented agreement: dominated by codes that put constraints on the actions of the actors in certain circumstances

This criterion is applied to the data collected for the global[6]-level analysis, the EU[7]-level analysis and the bilateral[8]-level analysis to detect and categorize the rule indicators in the multi-level structure.

The second type of measurement is analysed in a very similar matter. The oversight indicators, namely the Before-the-Fact and After-the-Fact oversight mechanisms, are assessed by using the following criteria:

[6] Global-level analysis – concerning data collected from international organizations worldwide
[7] EU-level analysis – concerning data collected from the European Union
[8] Bilateral-level analysis – concerning data concerning GER and FR only

Before-the-Fact oversight: Mechanisms that include proactive and preventive measures before a violation occurs (police patrol)
After-the-fact oversight: Reactive method of oversight that takes place after a decision was implemented and the consequences of violation are known (fire alarm)

Again, this criterion is analysed in a multi-level approach to detect the different oversight mechanisms applied to Germany and France. A difference to the rule indicator measurement is the use of additional data, not only policy documents but also documents such as strategy papers.

Lastly, the first type of measurement differs the most from the other two measurements, as it includes different data and does not entirely focus on searching for criteria. However, the definition of discretion-granting policies and decision-making data gives some insights into the structure of the analysis of this measurement.

Discretion-Granting Policies: Policies that grant other states discretion over outcomes previously controlled by the first
Decision-Making Data: Assessment of the decision-makers individual position towards the trustworthiness of the other

However, as the nuclear discourse between Germany and France is an extraordinary context to analyse, the first measurement, especially the decision-making data section, is modified to the following criteria:
Why or WHY NOT does the decision-maker believe that discretion over a particular outcome should be granted?
This modification widens the criteria to analyse the existence of discretion-granting policies and (in the absence of discretion granting) what the motives are not to grant discretion to the counterpart. Therefore, this type of measurement is mainly focused on the search for arguments and information on the decision-making process rather than the mere identification of specific indicators.

The analysis structure aims to provide an overall picture of the discourse on nuclear energy. By beginning with the third and the second type of measurement, the general indicators that can be found in the current legal framework are outlined and provide insights on how the trusting interstate relationship currently looks like regarding rules and oversight. Based on this broad overview of current rule and oversight indicators for the trusting interstate relationship, a more specific and current perspective is added in the first type of measurement, as it analyses where and how currently discretion is being granted and what role and motives Germany and France have. After that, all findings collected from different measurements and the different levels are used to provide a general picture of the trusting interstate relationship of Germany and France in the nuclear sector.

4. Empirics

In the following part, the findings of the analysis will be discussed. Beforehand, it is essential to underline that the analysis was conducted in two steps. Firstly, the data used for the analysis was divided into three levels: global, EU and bilateral. This step was done because both Germany and France are members of international groups and agreements concerning international nuclear safety and liability. Therefore, it is also essential to include such data in the analysis because some insights on oversight and rule indicators can be given. The bilateral level data will then be used to look more in detail at the French-German trusting interstate relationship in the nuclear sector, especially regarding the first type of measurement, namely Decision-Making Data, to understand specific backgrounds and recent positions towards the nuclear discourse.
To provide a clear analytical picture going from broad to specific data, the analysis will begin with discussing the findings from the third type of measurement, namely the rule indicators. After that, the analysis will continue with the second type of measurement, the oversight indicators, as they are more specific findings from the data. The last part is the first type of measurement, which will include the findings of discretion-granting policies and their background. The measurement indicators are divided into sub-groups, starting from the global data to EU data and then the bilateral data.

4.1 Measurement three: Rule indicators

The rule indicators, or more concrete the indicators of framework-oriented agreements and statute-oriented agreements, were used to show what the legal framework looks like and what characteristics the rules and codes in the various agreements consist of. The criteria "agreement with constitutive rules that clarify rights, procedures, basic structures, and institutional forms" was used to look for data indicating a framework-oriented agreement. For the statute-oriented agreement, the criteria "agreement dominated by codes that put constraints on the actions of the actors in certain circumstances" was used to see whether more defined codes were used or not.

4.1.1 Global level analysis

The analysis of the global level data resulted in findings of framework-oriented agreements only. As the global level data consists of policy documents provided by the OECD/NEA and the IAEA, applying more strict statutes can become difficult due to many members with different legal systems.
The OECD/NEA discourse clearly indicated the type of agreement used in this context, namely the framework-oriented agreement. The Paris Convention and the Brussels Supplementary Convention indicate the use of constitutive and basic rules and rights that leave the agreeing parties with the option to decide how the rule will be implemented in national law. A significant indicator for the framework-oriented agreement in the Paris Convention can be found at the beginning of the protocol: "*CONVINCED of the need for unifying the basic rule applying in the various countries to the liability incurred for such damage, whilst leaving these countries free to take, on a national basis, any additional measures which they deem appropriate; (…).*" (Paris Convention, 1982, p.8).

Furthermore, the Brussels Supplementary Convention builds up on the rules developed in the Paris Convention, therefore following the similar principle of providing a general structure and rules for which the method of implementation is up to each member state, including Germany and France. Another indicator for framework-oriented agreements found in the Paris Convention is the clarification of general concepts such as "nuclear incident ", "nuclear installation", or "radioactive products and waste" (Paris Convention, 1982, p.9). This general clarification of certain words resulted in a unified system of definitions and characteristics adopted by all member states, indicating a framework-oriented agreement as general structures and vocabulary are being clarified and unified.

The IAEA global level data provides similar results to the OECD/NEA data. Generally, the IAEA Safety Principles and the Convention on Nuclear Safety provide the member states with a framework-oriented agreement stating general rules, obligations and standards regarding the safety of nuclear installations and nuclear radiation. However, the exact implementation of this convention and safety principles are recommended but are not mandatory to be adapted precisely. For example, the Convention on Nuclear Safety states in Article 4: "Each Contracting Party shall take, within the framework of its national law, the legislative, regulatory and administrative measures and other steps necessary for implementing its obligations under this Convention." (IAEA, 1994, p.3). Therefore, similar to the OECD/NEA discourse, general rules and principles are clarified. However, the method of implementation and specific circumstances are responsible to the member states. Another example indicating a framework-oriented agreement rather than a statute-oriented agreement is the decision to develop a regulatory body in each contracting state, which is responsible for implementing the recommended framework. However, it is mentioned that the "appropriate steps" (IAEA, 1994, p.4) must be taken, but the steps are not defined.

4.1.2 EU-level analysis

The analysis of the EU-level data, namely the relevant EU Directives under the EURATOM treaty, the strategic plan for the European Commission provided by the Directorate-General for Energy and the Complementary Delegated Regulation, brought up some significant results as well.
Similar to the findings of the global-level data, the EU Directives brought up findings of framework-oriented agreements only. As EU Directives are designed as legal acts with a certain amount of leeway, therefore usually clearly defined regarding their result but without instructing the method of achieving this result.
Exemplary for the indication of framework-oriented agreements in the EU Directives is the objective of the Directive 2009/71/EURATOM, as it aims
"(a) to establish a Community framework in order to maintain and promote the continuous improvement of nuclear safety and its regulation; (…)" (Council Directive, 2009, p.3). General obligations are addressed to the member states to fulfil the requirements listed in the Directives, such as developing a national framework for the safety of nuclear installations and all parties involved in the process. As the 2014/87/EURATOM Council Directive is an amendment of the 2009/71/EURATOM Directive, it builds up upon the rules and structures developed in the

former but also includes more general obligations regarding the establishment of a national framework for the safety of nuclear installations. As both Directives share many similarities and share the objective to develop general obligations for the member states and their nuclear installations, the framework-oriented agreement indicator is clearly detectable.
Another indicator for a framework-oriented agreement can be found in the Council Directive 2013/59/EURATOM, which formulates basic standards for nuclear safety regarding the health of individuals and the public and the protection of ionising radiation (Council Directive, 2013, p.6). Again, constitutive rules are set in the agreement indicating how the national law must be adapted; however, the implications are formulated broadly so that all member states can adapt the rules to their national law.
The EURATOM treaty is essential to be mentioned in the context of the EU Directives for nuclear energy. The treaty is the base of all the EU Directives included in the analysis. However, as the directives are the applied legislation of the EURATOM treaty, they are more relevant for detecting rule indicators than the EURATOM treaty itself.

4.1.3 Bilateral level analysis

In the bilateral level analysis, not much data regarding the rule indicators in the Franco-German nuclear discourse was to be found, as all the agreements directly related to nuclear energy concern either the global-level or the EU-level of analysis. However, the Aachen treaty following the Elysée treaty, and the Franco-German Declaration of Berlin are essential to be mentioned in the bilateral context.
Both the Aachen treaty and the Franco-German Declaration of Berlin are clear indicators of the framework-oriented agreement.
Beginning with the Aachen treaty (2019), it must be underlined that both countries agreed to agree on cooperation in many different areas, including sustainable development, economic affairs, climate, and European matters. This treaty aims to strengthen bilateral cooperation and to signalise openness toward new cooperation projects in the future. The broad nature of this treaty clearly indicates its framework-oriented approach. As this treaty does not directly concern the regulation of nuclear energy, however, the goals of the Franco-German cooperation in the energy transition as well as the cooperation in the context of the European Union, those parts were the ones most significant for the analysis. The objective of this treaty concerning the energy transition is to push forward the energy infrastructure, renewable energies and energy efficiency; however, in the treaty, it is not mentioned how exactly this objective will be met. Therefore, this clearly indicates a framework-oriented agreement rather than a statute-oriented agreement.
Furthermore, the Franco-German Declaration of Berlin assumes a similar nature to the Aachen treaty. The declaration is a document following the Aachen treaty. The declaration discusses more concrete projects and goals that Germany and France want to achieve, especially regarding the implementation of measures of the Green New Deal of the European Union. Similar to the Aachen treaty, no clear indication of nuclear regulations in Germany and France is made in this declaration, however, shared procedures and rules are set, for example, to support the appropriate adjustment of energy policy goals in the direction of more renewable and low-carbon sources (Bundesregierung, 2021, p.7). This example also shows that although this

declaration deals with more concrete projects and goals, it can still be categorised as more framework-oriented rather than statute-oriented, as it does not clearly state how each relevant actor should act in certain circumstances. However, it is still too broadly defined to be categorised as a statute-oriented agreement.

4.1.4 Rule indicators and trusting interstate relationships

As the analysis of the rule indicators resulted in findings of framework-oriented agreements only, an apparent positive effect on the trusting interstate relationship of Germany and France can be detected. Primarily regarding topics such as nuclear safety and radiation protection, most data was found in the global-/ and EU-level analysis rather than the bilateral analysis. However, the bilateral-level analysis resulted in findings on the cooperative use of renewable energies and the general aim to fulfil the Green New Deal. Also, indicators of framework-oriented agreements were found in the bilateral-level analysis. Therefore, a positive effect on the trusting interstate relationship between Germany and France is expected.

4.2 Measurement two: Oversight indicators

The second level of measurement is the Oversight indicators. The Oversight Indicators are divided into *before-the-fact oversight* mechanisms and *after-the-fact oversight* mechanisms. They are used to see the extent to which one country supervises and controls the other. The criteria used to detect before-the-fact oversight were "mechanisms that include proactive and preventive measures before a violation occurs", and the criteria used for the indication of after-the-fact oversight mechanisms is "reactive method of oversight that takes place after a decision was implemented and the consequences of violation are known".
The same structure as in measurement three is used for this analysis. Therefore, a division into the global-level, EU-level, and bilateral-level analysis points out multi-level differences in oversight mechanisms.

4.2.1 Global-level analysis

The international level analysis for oversight mechanisms resulted in findings mainly indicating the greater use of before-The-Fact mechanisms rather than after-the-fact. As the legal instruments on the global level are, as previously mentioned, very limited, those limitations were also found in the analysis of oversight indicators. The OECD/NEA data provided very little information regarding oversight mechanisms. However, one prominent finding in this data is the obligation to hold meetings regularly after a certain amount of time after implementing the conventions. Those meetings are used to assess the actions of the member states regarding implementing the rules agreed upon in the convention. Those meetings are held before a possible violation happens so that one can classify them as a before-the-Fact oversight mechanism.
Concerning the IAEA discourse, clear indicators of the before-the-Fact mechanisms are identified. A crucial issue in the IAEA is safety assessments of nuclear installations, their operation, and the radiation risk (IAEA, 2006, p.9). The oversight mechanisms described in the

Convention on Nuclear safety are the reporting obligation of implementation reviews of each member state and their participation in review meetings in which the reports will be discussed and improved. Exemplary for that is the Article 20 in the Convention on Nuclear safety states: "1. The Contracting Parties shall hold meetings (hereinafter referred to as "review meetings") for the purpose of reviewing the reports submitted pursuant to Article 5 in accordance with the procedures adopted under Article 22." (IAEA, 1994, p.8)
Both oversight mechanisms provided by the IAEA are proactive methods to prevent nuclear accidents by assessing the review reports. Therefore, the analysis of IAEA and OECD/NEA data led to the findings of before-the-fact oversight mechanisms, namely the reporting obligation and the participation in meetings for all members.

4.2.2 EU-level analysis

The EU-level analysis led to findings of both, before-the-fact and after-the-fact oversight mechanisms.
The findings from the analysis of the EU Directives are very similar to those gathered in the IAEA data. The reporting obligation of the implementation status of the Directives is one of the most significant findings in the data. As the Council Directive from 2009 and 2014 are similar in their content, their oversight mechanisms are almost identical. The member states are obliged to develop peer review reports on their safety assessment of their nuclear installations and develop emergency response mechanisms in each member state. Furthermore, it is underlined that those review reports are supposed to be evaluated by other member states as well as by the Commission itself. In addition to that, a periodic time frame is set; namely, at least every ten years, a self-assessment is supposed to be made and reported to the Commission (Council Directive, 2014, p.6). Moreover, the member states are obliged to maintain close communication with the Commission on the central provision of their national legal frameworks. The aim of this obligation is the constant monitoring of each member state and their arrangements of national law following the Directives.

In addition to the previously mentioned before-the-fact oversight mechanisms used on the EU-level, the after-the-fact oversight mechanisms can also be found. For example, the Strategy paper from the European Commission provides some insights on the future plans of the Commission regarding nuclear safety within the European Union. Especially concerning projects such as ECURIE (European Community Urgent Radiological Information Exchange), the Commission plans to improve nuclear information exchange in emergencies. ECURIE is exemplary for an after-the-fact oversight mechanism, as it provides a system that member states can use in case nuclear safety cannot be maintained to inform other member states and the European Commission on time to apply security mechanisms. The objective of ECURIE is the following:
"1 . When a Member State decides to take measures as referred to in Article 1, that Member State shall :
(a) forthwith notify the Commission and those Member States which are, or are likely to be, affected of such measures and the reasons for taking them ;

(b) promptly provide the Commission and those Member States which are, or are likely to be, affected with available information relevant to minimising the foreseen radiological consequences, if any, in those States."
(Council Decision, 1987, Article 2)

4.2.3 Bilateral level analysis

The analysis of the bilateral level data resulted in findings of very few oversight indicators, as most data explicitly refers to EU-level regulations on nuclear energy. However, some indications of broad oversight agreements were found. As the Aachen treaty underlines the importance of Franco-German cooperation in many policy areas, it also underlines the importance of regular consultations on various levels, especially before meetings regarding the European Union, to develop a common position. Furthermore, the treaty obliges Germany and France (the responsible people) to monitor the implementation of the common agenda in the other country and evaluate, based on the monitoring, the common agenda and elaborate on improvements to the agenda. Therefore, equal to the findings of the international and the EU-level analysis, before-the-fact oversight mechanisms in the form of obligatory meetings and review of the implementation of the common agenda were found, however, in a broad sense and not explicitly related to a common nuclear energy agenda.

4.2.4 Oversight indicators and trusting interstate relationships

The previous findings provide mixed results of oversight mechanisms as indicators for the trusting interstate relationship of Germany and France. On the global-level, mainly before-the-fact oversight mechanisms can be detected. As before-the-fact oversight mechanisms indicate a rather negative trusting interstate relationship, one can assume that the reporting, reviewing and meetings regularly indicate a rather negative classification of the trusting interstate relationship globally. However, on the EU-level, both before-/ and after-the-fact mechanisms were detected. Therefore, mixed implications about trusting interstate relationships can be made. For example, using the ECURIE mechanism in an emergency can indicate that the trusting interstate relationship is relatively positive. However, as the reporting, reviewing, and meeting up are mainly proactive oversight mechanisms, no clear implication on the trusting interstate relationship can be made. The bilateral level analysis provided rather few findings on oversight mechanisms. Therefore, one can generally say that the oversight indicators do not provide precise results on the trusting interstate relationship of Germany and France.

4.3 Measurement one: Discretion-granting policies and decision-making data

As already indicated in the methodology part, the first type of measurement, namely discretion-granting policies and decision-making data, is supposed to show where and how policies in which one country grants the other one discretion over a particular outcome that was previously controlled by the first, can be found and what the motives behind such decisions are, was modified. As measurements two and three indicate, much information on rules and oversight

mechanisms on nuclear energy can be found on the global and the EU-level instead of the bilateral one. Therefore, in order to give insights into the motives and positions of Germany and France but connect it to the data gathered on the global and EU-level, the criteria for the first measurement were changed to:

(1) Policies that grant other states discretion over outcomes previously controlled by the first,

(2) Why or WHY NOT does the decision-maker believe that discretion over a particular outcome should be granted?

As the EU-level data becomes more crucial for the analysis of this measurement due to recent developments in the decision-making process on nuclear energy within the EU, this part of the analysis is divided into EU-level discretion-granting policies and Franco-German discourse.

4.3.1 EU-Level discretion-granting policies

The previously discussed global, EU-level and bilateral data findings already provided some significant insights into the legal structure surrounding Germany and France. Both countries are part of multi-level cooperations, such as the IAEA, the OECD/NEA or the EU (or EURATOM) community. However, this legal structure of nuclear energy is not a usual one in which one state (or organisation) decides upon a particular outcome, and the other state(s) must follow this decision immediately. As the rule and oversight indicators on the EU-level show, discretion over policies and outcomes, especially in the nuclear sector, is still to a great extent left to the member states. As the Council Directives, for example, show, the decisions that are made regarding the use and the security of nuclear installations are mainly general principles that are used to shape the structure of policies regarding nuclear energy. However, the responsibility of implementing and shaping these regulations is left to the member states. Therefore, based on this short evaluation, one can assume that entire discretion-granting over policy outcomes can hardly be found.
Generally, one can say that both Germany and France granted discretion to the European Union (or instead European Commission) to collectively decide on topics such as security guidelines for nuclear installations, common standards for the protection from nuclear radiation and mechanisms in case of a nuclear accident for example. Furthermore, both countries granted the EU discretion to assess the use of nuclear energy in each country and to change and make improvements in case of grievances. However, the exact structure of those changes and recommendations is still left to the member states.
As this measurement is the one that includes the most recent data and publications on the topic of nuclear energy, especially concerning decision-making data of Germany and France that will be analysed in the second part, the taxonomy Complementary Climate Delegated Act presented by the European Commission is highly relevant. As part of the Green New Deal transition of the European Union, the taxonomy was published intending to categorise particular gas and nuclear energy as carbon-neutral sources of energy, therefore, declaring them to be in accordance with the EU's climate objectives (European Commission, 2022). However, the analysis of this taxonomy concerning the criteria of discretion-granting policies led to the result

that no discretion was granted to the member states as the decision to use nuclear energy remains unchanged in the competence of the member states. However, what becomes very important is the decision made by the member states to grant the European Commission discretion over the decision to declare what energy source can be categorised as carbon-neutral and what energy source cannot. Therefore, when changing the perspective on who grants whom discretion, the Complementary Climate Delegated Act is a policy for which the member states, including Germany and France, granted the European Commission the discretion to decide upon the categorisation of carbon-neutral energy sources that stand in accordance with the Green New Deal of the European Union.

4.3.2 Franco-German Discourse

The last section will provide the findings gathered from the modified criteria for Decision-Making Data. As discussed in theory, mainly individual statements and assessments of the Franco-German positions on *Why or WHY NOT does the decision-maker believe that discretion over a particular outcome should be granted?* regarding the use of nuclear energy. The previous sections included the general legal framework and the evaluation of rule and oversight indicators in current law and regulations to measure the trusting interstate relationship. The EU level discretion-granting policies section then built up on that analysis by including the current discourse on the use of nuclear energy, namely the Complementary Climate Delegated Act of the European Commission, and the categorisation as discretion-granting policy in which discretion was granted from the member states to the European Commission. However, what becomes very important in this context are the possible *reasons why discretion (or no discretion) should (or should not) be granted* and the motives of Germany and France.

Beginning with the findings gathered from the analysis of individual statements from German politicians on the topic of nuclear energy in France and the taxonomy from the European Commission, one can see a very unfavourable position towards both nuclear energy in France and the Complementary Climate Delegated Act.

Beginning with the official statement made by the German Government on the Complementary Climate Delegated Act, it becomes clear that the Government agrees to the general agenda of the transition toward a European climate-neutral, sustainable, and clean economy. Therefore, the overall goal of increasing energy efficiency through renewable energy is supported in the German position. However, a strongly negative position toward including nuclear energy in this agenda can be revealed. It is argued that the Government does not want to declare nuclear energy as sustainable due to the many risks the use bears. Namely, the risk of nuclear accidents with tremendous far-reaching consequences for humans and the environment, as well as the high costs of this source of energy and the problems regarding the solution of the repository for nuclear waste, are arguments used by the German Government against the decision from the Commission (BMF, 2022).

The German position towards the use of nuclear energy in France is very similar. Statements made by the German Vice-Chancellor and the Ministry of Foreign Affairs also indicate an unfavourable position. The Vice-Chancellor underlines that the increasing use of nuclear energy, an old-fashioned, too costly and too lengthy process, will not grant France a competitive advantage in the energy sector (Merkur.de, 2022). Furthermore, it is being criticised that the

existing nuclear power plants in France show many defects and that France does not provide an excellent plan to dispose of radioactive waste.
Therefore, one can see that the analysis of the decision-making data from Germany resulted in findings that instead indicate why discretion should not be granted to the European Commission and France on the matter of nuclear energy use in the future.

On the contrary, the decision-making data gathered from the analysis of the French assessment provides very different results. As the French President, Emmanuel Macron, underlines, the use of nuclear energy in the future is a sovereign solution as he categorises this energy source as the least CO2 emitting. Furthermore, it is argued that France plans to increase the use of nuclear energy to decarbonise the French industry; however, the exact construction plans have not yet been published (Moussu, 2022). The Minister of Economy agrees with that and underlines the need in France for nuclear energy and the competitive advantage that France will gain from the increase in this source of energy (Teller Report, 2021).
Therefore, a very favourable position towards the Complementary Climate Delegated Act, as it supports the French construction plan for nuclear power plants. Furthermore, it must be underlined that France was one of the member states in the EU that addressed a letter to the European Commission underlining the "indispensable contribution to fight climate change" (Joint letter, 2021, p.1) of nuclear energy. Therefore, a very favourable position of France can be detected.
Looking at the Franco-German bilateral cooperation, the findings indicate that France has a very positive attitude towards the cooperation with Germany in the future and signalised openness towards a compromise with the German partner; however, without explaining what this compromise can look like.

4.3.3 Discretion-granting and trusting interstate relationships

Therefore, the findings from the first type of measurement regarding current developments in the nuclear discourse as well as the conflicting positions of Germany and France elaborated in the decision-making data provide a rather negative implication on the trusting interstate relationship between Germany and France. The nuclear discourse surrounding the Complementary Climate Delegated Act underlines the impact conflicting positions can have on a topic of international importance. On the one hand, France's self-interest is very high in implementing the new taxonomy as it consists of a relatively favourable position towards nuclear energy. On the other hand, Germany has a rather negative position toward nuclear energy in the future, as it will no longer use this energy source as of 2023. Therefore, the change of the measurement of decision-making data to *Why or WHY NOT does the decision-maker believe that discretion over a particular outcome should be granted?* brought up significant results on the negative impact conflicting positions can have on the trusting interstate relationship between Germany and France, as no openness towards the granting of discretion can be detected in Germany.

5. Conclusion

This thesis analysed the indicators of trusting interstate relationships in the current discourse on nuclear energy in Germany and France and measured to what extent this relationship can be affected. In addition, a desk research and content analysis have been conducted to answer this thesis's central research question:

A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?

The structure of this chapter begins with the assessment of each of the sub-questions and then leads to the assessment of the overall research questions. Lastly, this thesis's limitations are mentioned, and implications for future research are offered.

5.1 Answer to sub-question one

The first sub-question, namely: *How can trust in international relations be defined and measured?* It was answered in the theoretical framework. Generally, the complexity of trust as a concept was underlined, and the first broad understanding was given. From the description of general trust, a reference to trust in international relations was created, and finally, a measurement of trusting interstate relationships was developed for further analysis. Trust in international relations has many dimensions, including interpersonal, institutional, and ideological. It differs from the concept of general trust because certain elements such as risk perception, self-interest, the environment, and the evaluation of competence are increasingly crucial in an international context. Generally, trust in international relations includes the attitude of a country to grant discretion over a particular outcome to another, believing that its own interest will not be harmed (Hoffmann, 2002).
The measurement of trust in international relations was done through indicators of trusting interstate relationships. Namely, a division of rule indicators, oversight indicators, discretion-granting policies, and decision-making data was done to measure trusting interstate relationships. Each of these consists of different forms that indicate a positive trusting relationship or a negative one.

5.2 Answer to sub-question two

The second sub-question, namely: *Where can the different indicators of trusting interstate relationships be found? w*as answered through a desk research of secondary data. The results from this were the development of a multi-level approach to provide the most suitable overview of the complexity of trusting interstate relationships in the context of the nuclear discourse. Namely, the global, the EU and the bilateral perspective were added due to the different insights about trusting interstate relationships that can be gathered in an increasingly globalised world. Therefore, the distinction between the three analytical levels is tremendously essential to provide satisfactory results to the overall research question.

5.3 Answer to sub-question three

The third sub-question, namely: *What implications can be made regarding the current positions of Germany and France on the future of nuclear energy?* was answered through the conduction of the content analysis of the three forms of measurement of trusting interstate relationships. Especially regarding the future of nuclear energy in those two countries, one can see very conflicting viewpoints on that subject. Germany, as an opponent to the use of nuclear energy with its "Energiewende" in the future and France as the supporter of nuclear energy with its construction plans for at least six more nuclear reactors, could not differ more regarding their plans for the use of nuclear energy in the future.

5.4 Answer to the research question

The main research question is:

A future of nuclear energy? To what extent does the discourse on the use of nuclear energy in Germany and France affect their trusting interstate relationship?

All three sub-questions finally lead to the answer to the main research question. The multi-measurement and multi-level analysis led to some significant insights into the trusting interstate relationship between Germany and France. Firstly, the analysis resulted in many findings of oversight and rule indicators on the global-/ and EU-level; however, comparatively little information was to be found regarding the bilateral-level. However, regarding the rule and the oversight indicators, many positive results were detected, such as the primary use of framework-oriented agreements and after-the-fact oversight mechanisms. Nevertheless, the analysis also resulted in detecting several before-the-fact oversight mechanisms, especially in the global-level analysis. Therefore, both positive and negative indicators of trusting interstate relationships were found. However, significant findings were gathered in the decision-making data. As already described in sub-question three, *do Germany and France consist of conflicting viewpoints regarding the use of nuclear energy in the future?* Therefore, a conflict of discretion-granting can be detected. This can impact a trusting interstate relationship negatively, but as this conflict resulted from the recent developments in the European Union due to the Complementary Climate Delegated Act, the actual consequences of this impact are not known yet.

5.5 Limitations

This thesis consists of some limitations that arose during the conduction of the analysis.
Firstly, concerning results gathered from the EU-level analysis, one must understand that the EU consists of very little competence in the nuclear sector. Therefore, the implications that are made about rule and oversight indicators in this part of the analysis might also be explainable by the limited competencies of the EU.
Secondly, the measurement included in the theoretical framework on trusting interstate relationships has brought up some difficulties in this thesis as it focuses on the classical state-to-state relationships that slowly vanish due to the increasing globalisation. The analysis of the

nuclear discourse is an excellent example of how this measurement reaches its limitations, as the multi-level analysis provided some significant results on the global-/ as well as the EU-level analysis. Therefore, a possible limitation is that some of the findings instead indicate a trusting *international* relationship rather than a trusting *interstate* one.
Lastly, essential to be mentioned is the adaptation of the first form of measurement, as very few indicators of discretion-granting were to be found. However, as the opposite position of *why discretion should not be granted* led to some significant results, a shift of perspective was a suitable way to overcome this limitation.

5.6 Suggestions to further research

This thesis's empirical application of the measurement of trusting interstate relationships regarding the current discourse on nuclear energy led to some essential findings. As this form of measurement mainly includes the classical state-to-state relationship rather than a globalised perspective, future research could build on that measurement and develop a more suitable form to the recent developments.
Furthermore, as in the area of nuclear energy, many recent changes are being made regarding the future of nuclear energy. This area can be further investigated once more information is published on that topic. Especially within the European Union, there is always a continuous process in which many changes happen. Results gathered at this moment can have an entirely different meaning in another moment; therefore, this area is interesting to investigate further.

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7. Data Appendix

7.1 Units of Analysis

Global-level analysis

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