

Master Thesis

The Price of Protection

The Impact of the Cultural Property Protection Act on Prices of German Artworks



Author	Kübra Fadime Karataş
Student Number	501556
Supervisor	Prof. Dr. Isidoro Mazza
Second Reader	Dr. Christian Handke
Programme	Cultural Economics and Entrepreneurship
University	Erasmus University Rotterdam
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Abstract

In August 2016, Germany has introduced the Cultural Property Protection Act that restrains the export of old artworks that are considered important for Germany's cultural patrimony. Long before the Act came into effect, opponents heavily criticized the law and prognosed serious negative impacts on the German art market. Now, three years after the law was introduced, this master thesis provides the first empirical analysis of its effects on art prices. Within the framework of difference-in-differences analysis, a hedonic pricing regression is applied to estimate the treatment effect of the law on art prices. The dataset consists of worldwide auction sales of artworks from 181 German artists. In total around 200,000 observations of auction sales between 1984 and 2019 were collected in a laborious process and analysed. This master thesis provides significant and robust evidence that the introduction of the law impacted the prices of artworks sold in Germany. The prices of artworks that fall under the regulation decreased by 17 percent due to the law. In the year leading up to the introduction of the law, which was marked by heavy public debates, an even larger negative effect of 24 percent was found. For sales outside Germany there was no significant effect observable.

Keywords: Act on the Protection of Cultural Property, Kulturgutschutzgesetz, Cultural protectionism, Cultural property, Difference-in-Differences, Hedonic price index, Voluntary export restraint

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I. Table of Contents

II. List of Tables	iii
III. List of Figures	iii
IV. List of Equations	iii
V. List of Abbreviations	iii
1. Introduction	1
1.1. Public Debate on the Impacts of the Act	2
1.2. Research Motivation.....	4
2. Cultural Protectionism – A Literature Review	5
2.1. Import Restrictions for Cultural Goods.....	5
2.1.1. Motives for Restrictive Policies	5
2.1.2. Protection of Cultural Diversity and the WTO.....	6
2.1.3. History, Policy Implications and Research on Import Restrictions	8
2.2. Export Restrictions for Cultural Goods	10
2.2.1. Cultural Internationalism versus Cultural Nationalism	10
2.2.2. Motives for Export Restrictions	11
2.2.3. Evidence from Different Countries	13
2.2.4. Empirical Research on Export Restrictions.....	16
2.3. Conclusion of the Literature Review	18
3. Overview of the Legal Framework	19
3.1. Preliminary Stage and Motives for a New Legislation.....	19
3.2. The Cultural Property Protection Act <i>CPPA</i>	21
3.3. Reception of the Act.....	26
4. Economic Framework.....	30
4.1. Voluntary Export Restraints	30
4.2. Research Hypotheses	31
5. Data and Sample	33
5.1. Artist Selection	33
5.2. Data Collection	34
5.3. Descriptive Analysis.....	34
6. Methodology	38
6.1. Empirical Framework.....	38
6.2. Variables	40
6.2.1. Interaction Variables.....	40

6.2.2.	Dependent Variable	40
6.2.3.	Control Variable.....	41
6.3.	Regression Equations.....	43
6.4.	Common Trend Assumption	46
7.	Results	49
7.1.	Regression Analysis	49
7.2.	Robustness Checks	51
8.	Discussion	55
8.1.	Interpretation and Discussion of the Results.....	55
8.2.	Limitations	57
9.	Conclusion	61
10.	Bibliography	64
11.	Appendix.....	71

II. List of Tables

Table 1: Thresholds by Category	23
Table 2: Descriptive Statistics	35
Table 3: Main Regression Results for Art Sales in Germany and Outside Germany	50
Table 4: Robustness Checks for Art Sales in Germany	52

III. List of Figures

Figure 1: Georg Baselitz, <i>Adler</i> , 1972 source: swr.de	0
Figure 2: Timeline of CPPA	20
Figure 3: Number of Sales in Treatment Group 1987-2018	37
Figure 4: Year Fixed Effects for Art Sales in Germany 1990-2019	47
Figure 5: Year Fixed Effects for Art Sales outside Germany 1990-2019	47

IV. List of Equations

Equation 1: Basic Regulation Treatment	43
Equation 2: Regulation Treatment for Outside Germany	44
Equation 3: Post-Leak Treatment Effect	45
Equation 4: Isolated Regulation and Anticipation Effects	45

V. List of Abbreviations

Art.	Article
CPPA	The Cultural Property Protection Act
DID	Difference-in-Differences Analysis
EEC	European Economic Community
et al.	et alia - and others
EU	European Union
GATT	General Agreement on Tariffs and Trade

GATS	General Agreement on Trade in Services
GDP	gross domestic product
GG	Grundgesetz - German Basic Law
i.e.	Id est – that is to say
KGSG	Das Kulturgutschutzgesetz [The Cultural Property Protection Act]
MFN	Most- favoured nation
OMP	Old master pieces
p.	Page
para.	Paragraph
UNESCO	United Nations Educational, Scientific and Cultural Organization
U.S.	United States
USA	United States of America
UK	United Kingdom
VER	Voluntary export restraint
WTO	World Trade Organisation
WWII	The Second World War
The 1954 Hague Convention	Convention for the Protection of Cultural Property in the Convention Event of Armed Conflict (The Hague, May 14, 1954)
The 1970 UNESCO Convention	Convention on the Means of Prohibiting and Preventing Convention the Illicit Import, Export and Transfer of Ownership of Cultural Property (Paris, November 14, 1970)
The 2005 UNESCO Convention	Convention on the Protection and Promotion of the Diversity of Cultural Expressions (Paris, 20.10.2005)
TFEU	Treaty on the Functioning of the European Union
§	Law section

1. Introduction

In the summer of 2015, a heated discussion on export regulations for artworks kindled in the German art market scene. The German Government planned a new cultural property protection law that would restraint the export of artworks that are considered national cultural property. Artworks that meet certain conditions of age and value would only be allowed to be taken out of the country if the responsible government authority considers them as not important for the German cultural patrimony. Stakeholders feared that the intended regulations would bring the international art market in Germany to collapse (Open letter, 2015). Under loud protests and political pressure, *The Cultural Property Protection Act (Kulturgutschutzgesetz, or CPPA)* was finally introduced in August 2016. Never before has a cultural policy legislation been publicly criticized with such an intensity and furor (Manigold, 2017). The debate was marked by a lack of information and affective reactions of different agents in the art market (Schmidt, 2017; Weiler-Esser, 2017). The law's scope and its potential impacts were not clear (Manigold, 2017).

Despite the high level of public attention, there has been no scientific study on the law's impact on the art market up until today – almost three years after the law's enforcement. With this master thesis, I aim to fill this gap by providing empirical evidence on the law's impact on prices of the affected artworks. I do so by extracting a large dataset of auction sales of works of important German artists. Applying the framework of Difference-in-differences analysis and Hedonic price regression, I estimate the effect of the regulation on hammer prices. As the effects of the law might work into opposing directions for art price in Germany and outside Germany, I estimate those separately.

This study is organized as follows: Continuing this introductory section, the public debate will be briefly portrayed and the motivation underlying this research will be presented. In Section 2, the topic will be further introduced and relevant literature on the interplay of trade and culture reviewed. Hereby, I examine the notion of cultural protectionism and give examples of other countries applying export restraints. Section 3 will give an overview of the legal framework and discuss the critique of the CPPA. After that, I will present the economic framework upon which the hypotheses of this study are built. In Section 5 the data and the sample will be presented followed by the methodology in Section 6. The regression results will be presented in Section 7.

In Section 8 the findings and their limitations will be discussed. Finally, Section 9 will conclude the thesis and give an outlook for future research.

1.1. Public Debate on the Impacts of the Act

The public debate on this matter initially gained momentum after a draft bill of the planned act was leaked to the public in July 2015 (von der Decken, 2017). The draft version included paragraphs that surprised and upset many agents within the art market: The planned export restrictions were stricter than expected as they aimed to affect also younger and less expensive artworks. Additionally, the bill stated that contemporary artworks could also be subject to the regulation if they are at loan in public or mostly public funded institutions, they could become registered in national lists for national cultural property. In direct response to the leak, Georg Baselitz – one of the most renowned living German artists – withdrew his works from several public museums. It was not only out of fear that his works could become national cultural property but primarily an act of protest against the up-coming law and a way to put pressure on the legislation process (Machowecz, 2015). Art dealers also protested vehemently against the planned law: The Federal Association of German Galleries and Art Dealers published an open letter to the German Cultural Minister Monika Grütters. The letter was signed by 259 representatives of the art market, including the most renowned German gallery owners, claiming that the new Act would “regulate the art market to death” (Open letter, 2015, title). The main accusations of the critics were that the Act would expropriate the owners by registering privately-owned works as national cultural property (Schendel, 2017; Tittel, 2015). A further threat was that the German art market which had already been weakened by the increase of the value added tax on artworks in 2014 would entirely break down once the new law came into place (Manigold, 2017; Fricke, 2018). The economist, Bruno Frey, forecasted in an interview that such export restraints for artworks would lead to the effect that less art would be imported to Germany as it would not be easy to resell them for the previous price. Consequently, less collections would be established in Germany (Frey in Eckert, 2015). Furthermore, the lobby of art dealers predicted that the CPPA would trigger an exorbitant administrative expenditure for both sides, the dealers and the respective government bureaus, due to the application’s procedure for export licenses. Monika

Grütters, however, objected to the alleged fears. She argued that the regulation would affect a maximum 10 percent of the total sales in Germany (Eckert, 2015).

Almost three years after the Act came into force, the impacts of the export restrictions seemed ambiguous. The first evaluation report by the Supreme Federal Authority responsible for Culture and Media, published at the beginning of this year, states that contrary to the worries of art dealers, the administrative expenditure caused by export licenses was less than expected. Less than 1,000 applications per year were registered. Yet, the spokeswoman of the association for art dealers, states that the reported numbers only display the outlay from the perspective of state agencies. The expenditure of art dealers caused by the CPPA is not reflected in the report (Berking, 2019).

Furthermore, the official report argues that Germany remains a stable trade spot for art and antiquary, and profits of German auction houses did not decline after the introduction of the CPPA (German Bundestag, 2019). In fact, the German auction houses, Grisebach and Lempertz, did not account for any losses within the first months of the new regulation. The same article, however, also reports that some antiquary dealers closed their shops due to strict provenance proofs that they could not comply (Manigold, 2017). Yet another newspaper article in *Die Zeit* states that the supply at German auction houses, as well as their profit, diminished. Furthermore, some German auction houses opened new dependencies in Austria and Belgium in the aftermath of the legislation to execute a part of their sales outside of Germany. Many artworks were transported to neighboring countries shortly before the new the regulation came into force (Schmidt, 2016). One art logistics firm reports that their exports from Germany to the Netherlands rose by 14 percent, to UK by 12 percent and to Belgium by 5 percent after the law was announced (confidential source, personal communication, 25.01.2019¹). According to art market insiders, artworks of a total value exceeding one billion EUR were exported from Germany during that period (Manigold, 2017).

¹ This information was entrusted to the author under the promise of anonymity and confidentiality. Neither the source of the information nor the name of the company can be communicated.

1.2. Research Motivation

It should be noted that the legislation process was dominated by a public panic and protests. Even a few years after the Act's introduction, it is remarkable that there is still much confusion and uncertainty about the scope of the new Act, as well as its potential impact on the art market. Apart from policy reports, news paper articles and legal papers, there is no empirical research that investigates the effects of the CPPA. The aim of this thesis is to fill this gap and provide the first empirical analyses about the implications of the new German Act on the Protection of Cultural Property on the art market. To put it short, the topic of this investigation was chosen by genuine interest that was fueled by the heated debate. Evaluating whether the CPPA did fulfill its goals or whether it is the correct policy instrument (from a normative perspective) is by no means the aim of this thesis and beyond its scope.

2. Cultural Protectionism – A Literature Review

Globalization and digitalization propelled the exchange of cultural goods beyond national borders (Bisin & Verdier, 2014). People from a country consume cultural products from different countries throughout the world. However, the exchange of cultural good can be and often is subject to trade regulations. It is an ongoing debate whether to treat cultural goods as any other good or if they compose an exception due to its immaterial importance for a society reinforcing the notion of cultural identity (ibid.). While some national governments have an interest to foster a liberal trade of cultural goods, others restrict the free exchange of cultural product with certain policy instruments. There are different motives that constitute protective policies regarding trade with cultural goods which can be subsumed under the term cultural protectionism. Cultural protectionism is defined as “a tool for the act of maintaining and guarding the sovereignty of a unique nation-state culture identity” (Murphy, 2009, p. 39). In this chapter, I will portray key literature on conflicts of trade with cultural goods. The focus particularly is to elaborate on the reasons and motives that underlie protectionist policies. Towards the end of this chapter, available empirical research on export restraints will be discussed to analyze which methodologies has been applied within the field and what outcomes has been generated.

There are two core dimensions of barriers to trade that impede the free circulation of cultural goods: restrictions against the export of domestic cultural property and the import of foreign cultural products. Both have different manifestations and explanations for their public interventions. I will start with the policy instrument that is more concerned to protect the domestic culture from foreign influences that could affect or even replace their own cultural heritage. The cultural products concerned are mostly audiovisual and media based like music, cinema and broadcasting.

2.1. Import Restrictions for Cultural Goods

2.1.1. Motives for Restrictive Policies

According to Baughn and Buchanan, the threats leading to protective behaviour are partially the fear that foreign goods could contaminate domestic cultural identity and hence could

destabilize a system of values (Baughn & Buchanan, 2001). Voon (2007) suggests that the underlying assumption of this argument is that cultural goods – expressed through a certain language and within a set of shared values and beliefs – are important for the cultural identity of a community. Their loss could then affect a nation’s cultural diversity and distinction. A second thread that legitimizes cultural protectionism is that foreign goods could cannibalize the market and displace local culture, where local indigene culture would diminish steadily and all culture would become homogenised. The third reason for a protective manner is rather economic: through market entry of foreign goods into the own market, domestic cultural industries could be at risk not keeping up in a free market situation. Hence, the fear is that domestic products are not able to compete with the foreign goods. The State feels the need for intervention to boost the local products and secure the domestic cultural industry. Whether this intervention is in favor of domestic consumers is doubtful (Baughn & Buchanan, 2001).

After WWII, a major case that led the discourse about cultural protectionism was the fear of *Americanisation* shared by many EURpean countries (Acheson & Maule, 2006; Doering-Manteuffel, 1995). The claim was that American broadcasting could commercialize the domestic culture and lead to an erosion of standards of quality (Footer & Graber, 2000). Among other impacts, the subsequent protective behavior led to a restriction for non-EURpean films in the EURpean Community in 1991. Many countries like Canada, Egypt, India and Brazil followed suit and limited movies and broadcasting from the USA with the argument to preserve their own cultural identity and diversity. The USA, however, argued that cultural diversity is used as an excuse to protect the domestic film and television industry and that monetary motifs were at stake. A heated discussion on how to trade with cultural goods sparked off. The question at centre was whether cultural goods should be traded as all other commodities or if trade treaties should have *cultural exceptions* (ibid.). The conflict on trade and cultural diversity found its way to international multilateral platforms, which I will briefly portray in the following.

2.1.2. Protection of Cultural Diversity and the WTO

Voon calls the discord of the two different views on how to maintain the interplay of trade and cultural products “the clash of cultures” (Voon, 2006, title). On the one hand, the protection of cultural diversity that is seen at threat through globalization. On the other hand, the notion of

international integrations, that reinforces free trade and individual choices, and the belief that through cultural exchange new forms of culture will evolve. The positions of the conflict are advocated by different international institutions. On the one side, the WTO including its platform the General Agreement on Trade in Services *GATS*, as well as its predecessor the General Agreement on Tariffs and Trade *GATT*. On the other side, there is the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions, short 2005 UNESCO Convention. The states that have different opinions on the case, namely the USA on the one side and Canada and the European Union on the other, are members at both multilateral organizations and, thus, obliged to comply with both of their rules (Iapadre, 2014).

The treaties within the WTO require from its members to not favor domestic products and services over foreign products and services. A further obligation is the *most-favored nation* MFN principle. It requires that no advantage is given to a particular country that is not given to all other members of the WTO (Voon, 2006). Some member nations want to exclude cultural goods particularly audiovisual services from the mentioned obligations. During the Uruguay Round table from 1986 until 1993, Canada and the European Union nations were claiming for a cultural exception in the WTO legislations to protect cultural diversity. However, other nations, above all the USA, denied such cultural exemption as it could open up the door for deep protectionist policies. In the end, audiovisual services were not excluded from the general GATS obligations. Although in the case of audiovisual services, some EU nations do not comply to the MFN obligation anymore (Iapadre, 2014).

The UNESCO Convention on Cultural Diversity that came into force in 2007 is a multilateral measure to tackle the issues of cultural diversity protection at a global level. The main aim of the Convention is to protect cultural plurality and to acknowledge the national sovereignty in the context of cultural matters (Iapadre, 2014). Some declarations within the Convention diametrically oppose the free trade principles of the WTO. The Convention states that cultural products and services should be recognized as having an identity-forming nature. They shall be protected and promoted. As the law does not specify the definition of culture products, some WTO members opposed to the Convention claiming that the imprecise definition could lead to an extension of the exception to other goods that are marginally linked to culture, such as computer games, designer products, architectural services, etc. (Voon, 2006). Furthermore, the 2005

UNESCO Convention recognizes the nation's sovereignty: parties "may adopt measures aimed at protecting and promoting the diversity of cultural expressions within its territory" (UNESCO, 20.10.2005, §6.1). Hereby, the Convention does not only acknowledge the nation's sovereignty in protecting cultural diversity, but it also recognizes the right to promote the domestic cultural goods and services. This right opposes the WTO principle to not favor the domestic products over other products. At the same time, the Convention declares to be in favour of co-cooperation and co-production within states to promote cultural diversity. This is also against the MFN obligation in which member states should not grant privileges to some countries if they are not given to all (Voon, 2006).

The UNESCO Convention is an attempt to voice a global interest in the protection of cultural diversity. However, it is not binding and member states have the right to opt out from the convention. Acheson and Maule 2004 claim that this would reduce its credibility and its effectiveness (Acheson & Maule, 2004). According to lapadre, the convention lacks to enforce commitments and rather maintains it on a declarative level (lapadre, 2014). Voon suggests that it is the responsibly of the WTO to find a solution for the exceptional position of cultural goods within international trade; UNESCO is not the right platform to tackle trade issues (Singh, 2009).

2.1.3. History, Policy Implications and Research on Import Restrictions

Although the discourse on cultural protectionism had its peak in the 90s and the beginning of the century (laparde, 2014; Voon, 2006), the discussion on trade and culture can be traced back to Frankfurt School in the 1930s and 40s (Footer & Graber, 2000). The feeling of being threatened by foreign cultural products on the one hand and the assertion that their own culture is superior to other foreign cultures on the other hand, were first articulated by the representatives of the Frankfurt School, prominently Adorno, Horkheimer and Benjamin. They saw the cultural values put at risk by the emerging cultural mass industry represented through radio, cinema and television. The mass industry would standardize and homogenize cultural values (Footer & Graber, 2000).

Although the scholars of the Frankfurt School did not have economic motives in mind when arguing for a preservation of their own cultural values, in her book Voon states that protective policies mainly focus on economic reasoning. They particularly aim to protect their

own cultural industries. However, trade restrictions should primarily protect the special identity-forming nature of cultural goods. If trade restrictions are merely set for competitive advantages of the domestic product over the foreign product, she does not see the legitimization for trade barriers. If this is the case, other measures, like investments and substitutions, should be applied to boost the domestic cultural industry (Singh, 2009).

In fact, in his paper Throsby argues that cultural policies do not exist in a vacuum but have economic impact. Moreover, the economization of cultural policy is an ongoing trend, especially in developed countries. Some explicit cultural policies are implicit economic policies, where at first glance they might look cultural, but they carry hidden economic intentions (Throsby, 2009). To illustrate his argument, he gives the example of creative industries. Cultural industries are mostly subsidized and promoted by institutions for cultural affairs, such as cultural ministries with the aim to increase cultural participation, foster artistic excellence and stabilize national cultural identity. However, Throsby argues the real goal of cultural industries is primarily economic. Throsby states, “beneath the cultural rhetoric, these industries emerge as a favoured source of growth in output, incomes, exports and employment in future” (Throsby, 2009, p. 182). Implicit, though strong, economic objectives are pursued by the means of cultural policy instruments (Throsby, 2009).

There are various theoretical and empirical studies dealing with the impact of trade barriers on trade of media based cultural products (Iapadre, 2014). The paper by Francois and Van Ypersele, for example, shows that barriers to trade for cultural goods can improve the welfare for both exporting and importing countries (Francois & van Ypersele, 2002). Hellmanzik and Schmitz (2016), on the contrary, show that countries that set import restrictions on foreign cultural services have both lower import and export of audiovisual services. Consequently, protective cultural measures do not merely lead to a decrease of imports of foreign cultural goods, but also affects the export of own goods negatively and thus hurt the domestic industry (Hellmanzik & Schmitz, 2016).

After having presented the issue on import restrictions for foreign cultural products, the second part of the literature review will be dedicated to the trade conflicts that refer to export restrictions for cultural goods under which the German property protection act can be classified.

2.2. Export Restrictions for Cultural Goods

The second manifestation of barriers to trade within the realm of cultural goods are export restrictions. This side of cultural protectionism is mostly concerned with the trade of artworks of fine art, as well as archeological artefacts. The aim of the protective policy is to keep artworks that are valuable for the national patrimony within the borders of the country. Again, the underlying assumption is that cultural goods contain valuable information about a nation's history and values and thus manifest a common national cultural identity which needs to be protected from migration. Where this reasoning comes from and what other motives are at stake when setting export restrictions will be discussed in the following. Available literature on export restrictions for cultural goods are mostly legal articles. However, a few available economic papers dealing with the impact of export restrictions on cultural goods will be discussed towards the end of this section.

2.2.1. Cultural Internationalism versus Cultural Nationalism

John Henry Merryman, a legal expert and the founding father of law of art, states that there are two ways of thinking about cultural property. Nation-states can either adopt the policy of cultural internationalism or cultural nationalism (Merryman, 1986). Two positions that are diametrically opposed to one another, yet both hold up the idea of protecting cultural property. However, their understanding of protection is based on different reasoning. Within the policy of cultural internationalism, all cultural properties independently of their origin and property rights or their location belong to all mankind. Hence, access to common human culture should be provided to everybody and its protection should be a concern for all mankind (Merryman, 1986). This point of view reinforces the free exchange of cultural goods as long as they are treated respectfully. This way of thinking about cultural goods has its roots in the aftermath of WWII. The lessons learned from the experience during war time where hitherto many works of art were looted (Buranich, 1988) has been written down in the Convention for the Protection of Cultural Property on the Event of Armed Conflict in May 1954 – the so-called *Hague Convention*. This was the first multilateral convention on how to deal with cultural property (Merryman, 1986). The convention applies to all cultural property in all circumstances (Merryman, 1985). The protection

of cultural goods under the concept of cultural internationalism embodies three main aspects that should be fulfilled by the state that guards the property: preservation, integrity and distribution (Merryman, 1985). The aspect of preservation concerns the protection of the artefact's substance. An appropriate maintenance involves the protection from environmental influences, for example, in a museum that has the required facilities. Furthermore, the integrity of a property should be ensured, meaning that a work should not be pulled out from its context and it should be preserved in its entirety. Finally, the safeguarding nation is in charge to provide access to the artefact.

The other way of thinking about cultural protectionism embodies nationalistic values. The idea of cultural nationalism is that cultural goods do have an owner. They belong to a specific national cultural heritage, which constitutes a national identity and thus should be protected (Merryman, 1986). This way of thinking legitimizes national legislations such as export restrictions for domestic cultural goods to protect their own cultural identity, which is manifested in the goods. The nationalistic manifestation of cultural property finds its legitimation in the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property from 1970, the 1970 UNESCO Convention (Merryman, 1986). On the one hand, the 1970 UNESCO Convention tries to impede illegal trade with artworks by facilitating restitution of illicit goods and forbidding trade with artworks that were exported under the violation of the origin country's jurisprudence; On the other hand, however, it gives the nation-state the authorization to set trade restrictions to protect domestic cultural goods, if they are of *specific cultural value* for the State (Merryman, 1986).

2.2.2. Motives for Export Restrictions

The notion of cultural nationalism as a reason for protectionism needs careful examination. It implies that property rights of an artwork from earlier times belongs to the nation constituted on the territory where the artist created the work. In fact, Merryman questions why a current government of a nation should have power over artefacts historically associated with its people or territory (Merryman, 1985). He argues that cultural nationalism is more a self-serving assertion than a reason that legitimizes property rights. However, the core notion of the argument is that cultural objects are collective memories that transmit information about the

history of the descendants living today on that territory. Access to one's history is important and constitutes a cultural identity. Yet, the remaining question is whether the enjoyment of art that holds personal historical importance automatically implies its possession. The artefacts could be located somewhere else, but still accessible to its descendants or it could be made available through different media, like text, replica or digital media (Merryman, 1985).

Yet for artefacts that manifest a common cultural identity, the argument of national interest seems plausible. William Buranich (1988) however, questions if the argument of cultural nationalism can be applied in the same way to modern artworks. His concern is that export restrictions are applied also to modern art – which he defines as art created since 1863 – although modern art often has a multinational characteristic, where artists at that time did not only have single locations where they worked and produced (Buranich, 1988). The question raised is when are nations eligible to keep private works of a modern art within the domestic borders? The example of van Gogh's *Sunflowers*, auctioned in the UK in 1987, illustrates the conflict very well. The respective English government body required an export license for the painting and delayed the Japanese bidder from purchasing the work. During the three-month period, the English bureau in charge tried to acquire funds to purchase the painting to keep it within the national borders. After the money could not be collected, the work was sold to the Japanese firm (Buranich, 1988). Why a work of the Dutch painter who lived most of his life in France could be proclaimed by the English is questionable. Surely, the argument of cultural nationalism does not work as legitimization for this case.

It is obvious that there exist further reasons for cultural protectionism than merely the preservation of a national patrimony. Economic reasons could be at stake, especially when trying to keep modern artworks within the borders of the own country. The economic value of a work is not only constituted from its actual financial value on the market, but also indirect economic impact can be generated through visitors and tourists when the work is exhibited (Merryman, 1985). Other reasons for restraining works of art from export could be a desire to possess aesthetic valuable pieces of art, either for its pure enjoyment or for research and scholarship reasons (Buranich, 1988). A piece of art could also bring prestige and pride, which counts as political interests and could result in protective policies (Merryman, 1985).

However, Buranich argues that the only valid reason to set export restriction for cultural goods is when they are of specific cultural value for the state who is claiming its possession as stated in the 1970 UNESCO Convention (Buranich, 1988). The other above-mentioned reasons do not explain why a nation's claim should be superior to another nation's claim for the piece of art. Yet, the UNESCO article does not pinpoint the definition of *specific cultural value*, nor is it clearly stated who decides what specific cultural value means? Is a specific cultural value attached to a good by only declaring it as such? (Buranich, 1988). In this aspect, Buranich sees the danger of unequal distribution of cultural goods when the definition of the legal article is kept open. He is concerned that protective export restrictions could be based on reasoning that is hardly linked to national patrimony. In such a case, especially art collecting countries could keep the majority of artworks and prohibit their export. He is distinguishing between art rich countries, those countries who are *treasure houses* of ancient artifacts like African and Latin American states, Mexico, Greece etc. Art collecting countries on the other site, are equally rich, but they accumulated their art through the international market. The latter are wealthy countries whose wealth is represented by its people's economic power and by numerous art collections and institutions, particularly auction houses. In the course of export restrictions, Buranich claims that art will steadily move from art rich countries to art collecting countries, as the former cannot afford to set restrictions to keep their treasures within the borders. Doing so would not only cause economic disadvantages but also requires a concern and appreciation for cultural heritage (Buranich, 1988). On the contrary, Merryman argues that art rich countries particularly apply strict export restrictions, while being aware of the historical cultural drain that happened in history, such as in many Latin American countries, Greece or Italy (Merryman, 1985).

In fact, different countries apply different export restrictions for cultural goods. Before presenting the German law in detail in the next chapter, in the following three countries with varying policies will be briefly present USA, UK and Italy.

2.2.3. Evidence from Different Countries

2.2.3.1. The United States of America

The U.S. does not have any national patrimony laws, except for very specific rules to protect ancient indigenous sites (McAndrew & O'Hagan, 2000). It rather pursues a "policy of no

policy” (Bonneau, 2013, p. 58), where the notion of cultural internationalism is applied to promote free trade of cultural goods (Folkinshteyn, 2007). The major reason why the U.S. has not instituted barriers to trade for cultural goods is that it typically is a net importer of art. This outcome was also due to the fact that, in the 19th century, art imports were duty free (Folkinshteyn, 2007). Similarly, there was never a need for export restrictions, so to speak. The U.S. rather took an indirect measure to support the protection of art. Through tax incentives, private collectors were encouraged to actively purchase art. Folkinshteyn also argues that, on the one hand, the U.S. is a young nation and it would have been hypocritical to claim any cultural patrimony; on the other hand, it has a tradition of free trade, as well as individual liberty. In this case, the individual freedom to decide what cultural property respectively means. Moreover, Folkinshteyn does not believe in the benefits of such restrictive law, as those countries applying export restrictions face legal and financial challenges. In his essay, he gives the examples of Italy and France (Folkinshteyn, 2007).

2.2.3.2. The United Kingdom

Not very different to the U.S., the United Kingdom is oriented towards a moderate regulation system that tries not to oppose the idea of a free market, but sets trade restrictions. UK requires export licenses for artworks that exceed certain age and value thresholds (50 years and £39.000, respectively). If this is the case, according to the *Waverly Criteria*², responsible authorities judge if a work to sell has a close connection to the nation’s culture, if it is of outstanding aesthetic importance or outstanding significance for scholarship. If one Waverly Criteria is met, the purchase can be delayed by several months, where the public authority gets the opportunity to raise funds to buy the artwork themselves at a fair market price. If a public buyer (or a private buyer that guarantees access to the public) is not found during the delay period, the authority has to permit the license (McAndrew & O’Hagan, 2000). The procedure aims not to penalize the private owner by public interests or cut off the access to the art market. Annual reports of the Reviewing Committee on Export of Works of Art show that within the period of

² The Waverley Criteria established in 1952 judges the artistic value quality of an object and its importance for the national patrimony. The three criteria are: “1) Is the object so closely connected with the nation’s history and current life that its departure would mean a misfortune for the nation? 2) Is it of outstanding artistic and aesthetic importance? 3) Is it of outstanding significance for the study of some particular branch of history, art, or learning?” (McAndrew & O’Hagan 2000, 45).

1989 and 1998, on average, only two percent of the exports needed a license application. Among those, only 253 works were checked for the Waverly Criteria by a competent committee. Additionally, the license was denied for only 93 cases due to domestic offers (McAndrew & O'Hagan, 2000).

2.2.3.3. Italy

Italy represents a very different example of dealing with cultural property. Being an art rich country, it has very strict control on the export of cultural goods and could be classified as a cultural nationalist (Calabi, 2017). Any work of art that was created more than 70 years ago needs an export permission by an export office of the cultural ministry. The monetary threshold for those works is relatively low with 13,500€ (Calabi, 2017). The state can deny an export of a privately-owned work of art if the object is of cultural interest, which means of artistic, historical or archeological or ethno-anthropological value. Then, it might be classified as cultural property (Calabi, 2017). However, it is important to highlight that objects do not have to have a special connection to the Italian culture or nation to be classified as cultural property (Buranich, 1988). The State may deny an export license without being compelled to purchase the artwork (Calabi, 2017). McAndrew and O'Hagan report that over 30 million works of art in Italy are listed as cultural property and need export permission to leave the country, which is typically denied (McAndrew & O'Hagan, 2000). A survey on art markets in *The Economist* from 1990 refers to an economist who estimated that Italian art prices were 30 percent lower than they would have been if international consumers would have unrestricted access to the Italian market. Unfortunately, neither the economist's name, nor the methodology used, is clarified in the article (Stevenson, 1990). Thus, such restrictions are also blamed for having triggered a large black market in Italy (Putnam, 1992; Onofi, 2009).

The comparison of different countries shows that each has own motives and ways to deal with the protection of cultural patrimony from removal. It could be summarized that the US as a net importer of art rather benefits from an internationalist behaviour while Italy as an art rich country tries to protect its property by setting strict trade barriers. UK takes a position in-between. It does apply export restrictions; however, a ban is only executed when the state acquires enough money to purchase the property to be exported themselves. Before examining

the legal setting in Germany, available empirical research on export restrictions for cultural property will be discussed.

2.2.4. Empirical Research on Export Restrictions

Although legal papers dominate the terrain of cultural protectionism, there are also a few related empirical studies that deal with the economic impact of export restrictions on cultural property. To the best of my knowledge, the only research that explicitly studies the effects of a legislation on art prices is Onofri (2009). Onofri examines the impact of the Italian export veto on the prices of old master paintings (OMP) sold in Italy assuming that they are important for the Italian patrimony and thus fall into the above portrayed legislation. She uses a panel data of 200.000 OMP sold and auctioned worldwide during the period of 1992 and 2002. Within this data set, Onofri extracts three sub-groups of schools of OMP from Italy, Germany and Great Britain from the 13th to the 19th century. She applies a quasi-hedonic price index. That means instead of using the logged painting's price as the dependent variable, she takes the percentage difference between the estimated and the hammer price. Among other hedonic characteristics of the painting, Onofri adds the auctioned state as variable, in which she takes the assumption that if an old master painting was sold in a distinct country it was exposed to the local legislations of that country. Results indicate that OMP sold in Italy show a negative price differential with a significance level at 5 percent. Yet, her results do not seem plausible when explaining the differences among the different schools sold in Italy. For instance, the percentage of the price differentials – her dependent variable – for OMP of Italian schools sold in Italy are lower by 0.016 percent while for German schools sold in Italy the results show a reduction by 18.24 percent and for British schools sold in Italy there is a decrease of the percentage price differentials by 0.164 percent. Onofri does not give an explanation for why the percentage price differentials for the different schools vary drastically, nor does she clarify why the coefficient for the Italian schools is relatively small. Although, one might expect that OMP of Italian schools are more affected by the Italian legislation than the other schools, her findings show differently. She acknowledges that her results are preliminary yet show that legal frameworks do affect price dynamics of artworks. Onofri's model does not include any value thresholds that need to be met in order to be eligible for the regulation, as it assumes that all old master paintings would be hit by the Italian veto. Moreover, results at hand cannot be interpreted clearly, as the paper lacks a qualitative survey

on the different legislations concerning art exports of the other countries that are compared to Italy. Thus, it is not possible to rank the countries compared according to the state of openness towards art trade (Onofri, 2009).

Other studies examine the bias that buyers may have for domestic art. Steiner, Frey and Resch (2013) examines the home bias of art collectors. A collector has a home bias when his collection's composition shows more artworks from artists of his own home country than the average demand for that country's art. Among other correlations to home bias, like the size or the economic power of a country, the paper tests the correlation of collectors' home bias to the country's openness towards art trade. The hypothesis is that the lower the legal barriers restricting art transactions in a country are, the lower the home bias of collectors are within that country. The openness of a country is measured by the sum of exports and imports divided by the GDP. This measure shows indirectly the state of legislation on trade, as liberal legislations allow for more trade. Using a cross sectional dataset of 3119 art collectors worldwide from 2013, they apply a classical linear regression model. Indeed, their results show that trade restrictions affect the collecting composition of art collectors. The more open a state is towards trade, meaning lesser trade restrictions for art transactions applied in that country, the lower the home bias is of collectors of that country (Steiner et al. 2013).

A further paper by Renneboog and Spaenjers (2014) researches how geographical segmentation affects prices and returns in the international auction market. Their presumption is that geographical segmentation affects prices on the one hand, due to legal barriers to trade, as well as practical hurdles like transaction and search costs and on the other hand, because of demand variations for different types of art in specific countries, called the home bias. In their research, Renneboog and Spaenjers focus on 13 developed countries, using a unique dataset with more than one million auction sales in a time period between 1970 and 2013. From their results, they conclude that geographical segmentation of the art market is especially due to demand differences prevalent in different locations of the world. Yet, local specifications did not lose importance – except for the high-price segment – despite the fact that, according to the authors, local barriers to trade diminished and economic integration grew. Nevertheless, the authors admit that their analysis does not quite tell if trade restrictions and practical barriers hinder the supply of artworks to spread throughout the world or if supply is adjusting to the international

demand differences. Yet, they found out that Australia and Italy show large local deviations from global economic trends. The authors conclude that this might be affected due to legal trade restrictions in the case of Italy and due to high transport costs for Australia (Renneboog & Spaenjers, 2014).

2.3. Conclusion of the Literature Review

This review has shown that the literature on trade restrictions aiming to protect cultural goods has two dimensions. One is concerned with audiovisual cultural goods and services that are aimed to be protected from foreign influences through import restrictions for foreign cultural goods. The other is concerned with the protection of visual arts particularly artworks and archeological artefacts. Export restrictions shall help to keep valuable works of art within the borders of their own country and secure national patrimony. While the most prevalent reasons to do so are those that are derived from the argument of cultural nationalism, the review also showed that there are monetary, as well as, prestige motives at stake. Two core policies in dealing with trade and culture has been analyzed: cultural internationalism and cultural nationalism. With the new Act, Germany rather takes the position of a cultural nationalist in line with Italy and UK. There are only a few empirical research studies that include effects of export restrictions in their estimations. Respectively, only one is dealing with the export veto in Italy. The paper shows that the policy intervention has a negative effect on the art prices in Italy. Before estimating the impact of export restraints in Germany, the CPPA will be examined carefully in the next chapter. The definitions in the legal texts will help to define variables for the analysis.

3. Overview of the Legal Framework

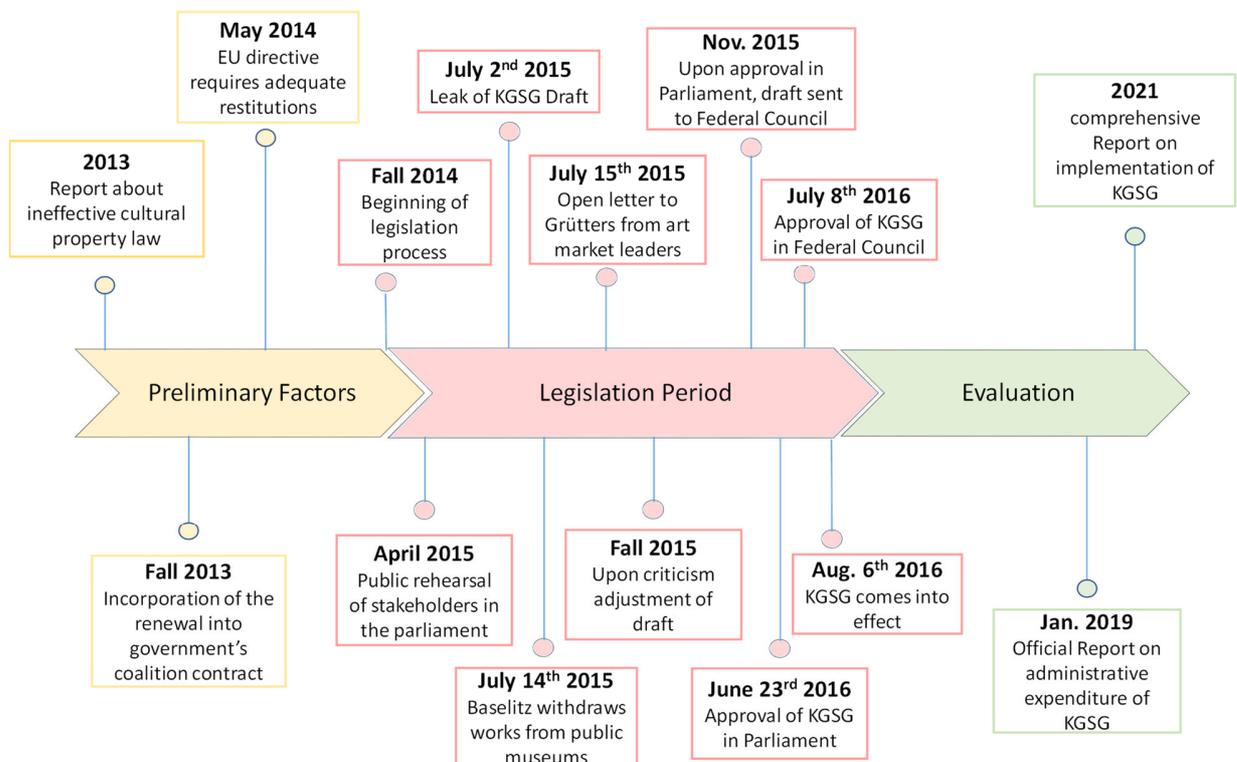
In the literature review the reasons for export restraints were examined and different examples of export bans for artworks in different countries were presented. They will now be compared to the German export regulations in the CPPA. Before going into the details of the legal text, political reasons that led to the renewal of the law will be presented.

3.1. Preliminary Stage and Motives for a New Legislation

It is not new that Germany was concerned about protection of cultural heritage. Its first legislation on the protection of cultural property was introduced in the Weimar Republic 100 years ago in 1919 and regulated the export of artworks (Weiler-Esser, 2017). Further legislations and renewals followed over the time. The new German Act on the Protection of Cultural Property, namely the *Kulturgutschutzgesetz* (CPPA), came into force in August 2016. Different factors led to the extensive legislation, which has a scope of 91 articles. One of the key reasons for a new legislation was a European policy from 2014 that required from its member states to execute restitutions of cultural property that was unlawfully exported from the object's home country (European Union, 2014). The European regulation needed to be transposed into German law, as the German law at that time did not effectively execute restitutions (von der Decken, 2017). From a domestic perspective, the reason for a renewal of the law was a report from 2013 that revealed the ineffectiveness of the previous law for protection of cultural heritage from 2007. According to that report, no single cultural property that was claimed as national patrimony by a foreign country was given back. The weak point of the legislation was that for a restitution, it required that the property was listed in a national list of cultural property. However, only a few countries worldwide list their movable cultural property. The majority is not even aware of the property until it is looted. Next to the incapability of the law, Germany had developed to a free platform for trade with illicit artifacts. Traders of illegal art did not have to fear prosecutions. Terror groups involved in the business of illegal excavations and trade put high pressure on Germany to react quickly to its legal loopholes (Weiler-Esser, 2017).

Finally, the renewal of the act was included into the coalition agreement of the new government in 2013 and the Commissioner for Culture and Media, Monika Grütters started a process in 2014 where statements and opinions from experts and stakeholders were gathered. During this period of exchange and consolidation, a draft bill was leaked to the public for unknown reasons (von der Decken, 2017). Thereupon, a heated public debate arose accompanied by affective reactions of a group of stakeholders, namely artists, art dealers and collectors, as mentioned in the introduction. However, it was not only a reaction, but also an act of political counter pressure as a means of lobbying to influence the legislation process. In fact, due to successful lobbying of art dealers, the Commissioner for Culture and Media readjusted the article for export regulations and liberalized the financial value and age thresholds for goods that require an export license as well as the diligence requirements for art dealers (Fechner, 2018). In the following, I will first introduce relevant parts of the legislations. Second, I will discuss the law reviewing the main critique on the new Act.

Figure 2: Timeline of CPPA



3.2. The Cultural Property Protection Act *CPPA*

The CPPA unified different legislations that were previously split into three distinct legislations. The new Act now brings together important fragments of cultural property protection. On the one hand, it regulates the import of cultural goods and restitutions of illegally imported works; on the other hand, the Act protects cultural goods from removal and obligates art dealers to oblige diligence requirements (Weiler-Esser, 2017). The First part of the law clarifies key terms and defines concepts important to the Act. Among them is the definition of *cultural property* which “shall mean any movable object or aggregates of things of artistic, historical or archeological value or from other areas of cultural heritage, in particular of paleontological, ethnographic, numismatic or scientific value” (CPPA³, §2, para. 1, no. 10). It is important to emphasize that the definition of cultural property is kept general and does not have a particular connection to the German heritage in anyway.

Cultural property of national significance however, is called *national cultural property*, as defined in section six of the Act. According to that part, cultural property is classified as national cultural property when it is either 1) registered in a list of cultural property of national significance, or 2) is part of a public collection or 3) owned by an institution that is largely public funded or 4) part of the collection of the Federation or the Länder⁴ (CPPA, §6, para. 1). Section two of the paragraph points out that upon the confirmation of the lender, also private owned works that are on loan in public institutions are temporarily considered as national cultural property for the duration of their loan (CPPA, §6, para. 2). This part of the paragraph particularly triggered a scepticism among the collectors and initiated some collectors to withdraw their works from public collections (Manigold, 2017) although the paragraph explicitly pinpoints that the work is only considered as national property when “the competent authority is granted permission by

³ The official author of the Act on the Protection of Cultural Property *CPPA* 2016 is the German Bundestag. In the following this source will be cited as CPPA to make clear that it is referred directly to the Act. To be more accurate, the respective section (§) is enclosed followed by the paragraph (para.) and the number (no.) of the sentences if available.

⁴ Federation means the Federal Republic of Germany. The Länder are the 16 states of Germany. In some affairs, including cultural affairs they have superiority and autonomy from the Federal Republic. (Basic Law Art 28; Art 30; Klein 2009, 137)

the lender or depositor” and “the lender or depositor may withdraw such permission at any time” (CPPA, §6, para. 2).

With the introduction of the CPPA, any cultural property that exceeds certain age and financial value thresholds requires an export license, regardless of its being exported into the inner-EURpean market or any other country (CPPA, § 24). The legitimation to execute such restrictions is given by the German Basic Law that states: “The federation shall have exclusive legislative power with respect to safeguarding German cultural assets against removal from the country” (German Basic Law, Art. 73⁵, para. 1, no. 5a). The licensing procedure is the core novelty of the new act and serves several functions (Jayme, 2017). On the one hand, it screens the good in order to decide if it could be listed as potential cultural property of national interest. On the other hand, it ensures that the work to be exported was not imported illegally by violating any nation’s export law. Hence, the licensing procedure is a key instrument within the CPPA to protect cultural property from removal and impede trade with illegal cultural goods (von der Decken, 2017).

However, the licensing procedure currently operates in a dialogue mode, where thresholds valid for exports from Germany to the inner-EURpean market are different from those to states outside of the EURpean Union. License requirements for exports of artworks leaving the territory of the EU were already introduced in 1993 and renewed in 2009. According to the EURpean Regulation from 2009, cultural property of certain categories and surpassing certain age and monetary value thresholds are required for an export license (EURpean Union, 2014). The exact categories and thresholds for the non-member countries as regulated in EG Nr. 116/2009 are listed in the Appendix.

What is new for the CPPA is that it extends the licensing procedure for all exports from Germany particularly for exports to the EU states. Germany has the right to set their own export restrictions, referring to the 1970 UNESCO Convention, that explicitly mentions to undertake export certificates (UNESCO, 1970, §6). The EURpean treaty from 2007 also allows setting national export barriers, however, it explicitly states that they shall merely protect national cultural property and shall not be a covered barrier to trade (EURpean Union, 2012, §36). Yet, this is the

⁵ In the German Basic Law 1949, laws are referred to as Articles (art.) instead of using the symbol §

major critique on the CPPA that the licensing process scans all cultural property that meets certain thresholds, regardless of a special national value of the good. All cultural property might possibly be of national interest. However, the experts argue that licensing requirements for German borders were long overdue as they functioned as a sluice for looted goods to other European states (von der Decken, 2017).

The list below shows the categories and thresholds that require an export license when leaving the territory of Germany. The categories are related to the European treaty of 2009. The age and financial value thresholds have been liberalized after the public turmoil led by actors of the art market. The price of the art object is determined by the price of purchase when it was bought or sold within the last three years. Otherwise the owner estimates a value at the time of the application (CPPA, §24, para. 4). The legal authority that is in charge to grant a license is the supreme Federal authority of the Land where the cultural good is located at the time of application (CPPA, §24, para. 6).

Table 1: Thresholds by Category

Category	Age in Years	Value in EUR
Paintings	75 or older	300,000 or higher
Watercolors, gouaches, pastels	75 or older	100,000 or higher
Mosaics, drawings	75 or older	50,000 or higher
Sculptures	75 or older	100,000 or higher
Photographs	75 or older	50,000 or higher

Note: This list is not exhaustive. Only relevant categories are listed for the purpose of the thesis. See appendix Table A3 for complete list.

All cultural property as defined in (CPPA, §2, para. 1, no. 10), that is in the German territory for at least two years is required to apply for an export license when leaving the country when it exceeds the above listed thresholds. Works of living artists are excluded from the licensing procedure. The obliged authority has to react within 10 days and either grants the license or initiates a registration process. A license shall be granted if there is no export ban. The export is banned, if the object has been either illegally imported to Germany (CPPA, §21, para. 3), seized

(CPPA, §21, para. 4) or a procedure to enter the register of cultural property of national significance has been initiated by the authorities (CPPA, §21, para. 1). Upon the licensing process, the respective supreme Land authority can register a cultural property into the list of cultural property of national significance when 1) “it is particularly significant for the cultural heritage of Germany, its Länder or one of its historical regions and thus formative for Germany’s cultural identity and 2) if its removal would be a significant loss for Germany’s cultural heritage so that keeping it in the federal territory is of outstanding cultural interest” (CPPA, §7, para. 1, no. 1-2). Cultural property can be registered based on the mentioned criteria only in consultation with an export committee (CPPA, § 14, para. 3). A committee of five experts that are appointed by the supreme Land authority is in cooperation with the supreme federal authority responsible for culture and the media. Also, organizations from the cultural field can suggest individuals to be appointed for the export committee. The export committee shall be composed of experts from research, museums, private collections and art and antiquarian dealers for a duration of five years (CPPA, § 14, para. 2).

Upon a rejection for a permanent export, a cultural institution can purchase the work, yet it does not have to. The price for an offer to purchase the work to be exported is set by an external expert. It does not have to be the market price. The owner is permitted to reject the offer (CPPA, § 23, para. 6). During the legislation process, especially, art dealers fight for the inclusion of this paragraph. Yet they are not satisfied with the result as firstly, the purchase by a public institution is voluntary and secondly the price set by an external expert will probably be inferior to the market price of the work to be exported. Hence, different than it is maintained in the UK, for example, the owner of cultural property will face the drawbacks when his or her work will be discarded as national cultural property (von der Decken, 2017).

However, the owner of a cultural good also has the right to prove that the requirements needed to be registered as cultural property of national significance are not fulfilled. This so-called negative proof is binding and the object can be exported upon confirmation that the object did not meet the criteria to be listed (CPPA, §14, para. 7).

The Act also includes modifications for the licensing process. A general open license can be granted to institutions preserving cultural property when they are exporting cultural objects

on a regularly basis. However, the general open license is only valid for temporary exports (CPPA, § 25). Institutions such as museums can especially benefit from this exception. There is a further exception to the rule, the specific open license. This license is given to a specific cultural property that is temporarily exported on a regularly basis (CPPA, § 26). This might concern famous artefacts that are regularly exhibited abroad. Von der Decken gives the example of an antique music instrument that is regularly exported by a musician to give concerts abroad (von der Decken, 2017).

Is a cultural good classified as a national cultural property, this status entails prohibitions and obligations as well as rights and privileges. National cultural goods must not be destroyed, damaged or irreversibly manipulated, unless for the purpose of restoration or conservation (CPPA, §18). Possessing a cultural national good obligates the owner to notify the respective supreme Land authority where the property is listed in the case of demolition or loss. The second obligation is to acquire a license if the property shall be temporarily or permanently exported. The license shall be approved when the good was looted and resituated to its eligible country. The application shall be denied if “there are overriding significant interests of German cultural heritage” (CPPA, §23, para. 2).

The right of restitution goes along with the status of a national cultural property. In the case of looting, Germany is entitled to reclaim the work of art for 75 years. Furthermore, the possessor of national cultural property benefits from tax privileges, in particular concessions of the inheritance and gift tax, as well as income tax (CPPA, §12, para. 1). The same paragraph binds the respective supreme Land authority to acquire the piece of art from the owner, if the owner is forced to sell it due to economic hardship (CPPA, §12, para. 1). Finally, the owner has the right to request the deletion of registration when circumstances that led to a listing of the property has changed (CPPA, §13).

The sections concerning the import of cultural goods are of minor importance for this thesis. However, they shall be mentioned briefly. The import of cultural property is forbidden if the property a) is classified as a national cultural good by another country and has removed from there unlawfully, b) was exported under the violation of EU directives, namely the embargo regulations concerning Syria and Iraq, or c) if the good was removed from a territory that faces

an armed conflict based on the 1954 Haag Convention (CPPA, §28; Fechner, 2018). Cultural property that is classified as national cultural property by another state can only be imported to Germany when an export license from the country of origin can be provided (CPPA, §30). Furthermore, trade with unlawfully imported cultural property is forbidden. A cultural good is unlawfully imported when it was imported to Germany under the violation of a European member state's law after 1992, or when it was imported under the violation of a non-European state's legislation after 2007. That means property that was imported before the stated dates cannot be claimed as unlawfully important. However, it needs to be proven that it was important to Germany before these years. If proof cannot be given, it is assumed that the good was imported after the stated dates and, hence, is illegal (CPPA, §32).

Finally, a commercial art dealer, as well anybody that places an art object on the market, is required to fulfill diligence requirements. Non-commercial dealers are asked to provide proof that the property to sell was not lost, unlawfully imported or unlawfully excavated (CPPA, §41). For professional art dealers, the diligence requirements are more comprehensive. They are obliged to give information about the alienor and the provenance of the good, as well as to provide documents that confirm that the property was lawfully imported and exported. Moreover, they have to provide descriptions and illustrations of the property as well as a declaration from the alienor stating that the dealer is allowed to possess the object. Furthermore, the commercial dealer is obligated to examine if there are any bans and restrictions concerning the trade of the good, and if the good is registered in a national list of another country (CPPA, §42).

The legal text presented in this part has been subject to many discussions and criticisms. In the following the evaluation of the CPPA by experts as well as affected groups will be portrayed.

3.3. Reception of the Act

Broad criticism on the Act has been articulated from different stakeholder groups. On one side, for parties concerned about the protection of archeological objects, the new Act does not provide comprehensive protection for artefacts. On the other, for art dealers, the legislation it

too strict with setting requirements that aggravate their way of working. I will present multiple sides of the reception of the law in the following.

From the perspective of an archeologist, Fechner argues that the CPPA is a paradigm shift when it comes to the protection of archeological artifacts (Fechner, 2018). It is the first time that the German government is truly concerned about the protection of artifacts, regardless of which country they belong to. In terms of protection, the German government moves from a nationalist standpoint to a more international perspective. The strict import and export restrictions curb both the trade with illicit works and illegal excavations, which both ultimately harm cultural property. With the new law, looted artifacts no longer have to be registered in a national list to be considered as illicit and, finally, to be returned to its country of origin. This is considered to be progress in the context of restitutions of looted goods (Fechner, 2018).

Yet, to import cultural property to Germany, an export license is required. If the dealer cannot provide an export license, the German border authorities have to check if there is an export ban in the respective country from which the good was exported. If the officials cannot find any ban, the good can be imported to Germany. Fechner criticizes this procedure, as it requires that German authorities are able to comprehend different laws in a short period of time (Fechner, 2018). Also, not every country might be concerned about their cultural property and might have regulations on protection of cultural property. In addition to that, in times of political turmoil, as well as in corrupt countries, export licenses might be received unlawfully. The mentioned 1954 Hague convention that bans exports of cultural goods only applies in the case of armed conflicts. Hence, in order to receive protection from the German government, the imported cultural goods first require protection from their country of origin (Fechner, 2018).

Furthermore, section 32 of the CPPA forbids trade with illegally imported goods only when they were imported after 2007 (from nations outside of EU) or 1992 (from EU nations). Hence, the trade with unlawfully imported goods before these dates still remains legitimate in Germany. This regulation is insufficient for a compensative combat of illegal trade within Germany (Weiler-Esser, 2016).

Fechner also argues that the CPPA does not protect the actual substance of the property. To protect the property from destruction is, according to the German constitution, the

responsibility of the federal Länder (Fechner 2018, 60). Hence, the Act is primarily concerned to localize and register cultural property. This is a major criticism articulated by Fechner: the CPPA mainly aims at the national localization of cultural goods, rather than its all-encompassing, genuine protection (Fechner, 2018).

Jayme's (2017) critique goes even beyond. He argues that with the new Act, the German government primarily aims to screen and keep cultural property within the borders. Except for archeological objects that do not require certain financial value thresholds worth considering as national cultural property, cultural property of other categories is primarily defined by its financial value. According to Jayme, it is problematic that art is only valuable and important to the nation when it precedes certain financial thresholds, making art primarily an economic asset. He implies that the interest to scan expensive art might be connected to the aim to prevent tax evasion. Hence, with the CPPA, the German government joins motives of protection with fiscal interests (Jayme, 2017).

Bruno Frey, as well as Erik Jayme, criticize that it is anachronistic to set up nationalistic property laws nowadays (Frey in Eckert, 2015; Jayme, 2017). Frey argues that although the German government involves a large administrative apparatus and engages expert committees that are involved in the registering procedure, at the end, the results about what to classify as national cultural property will always remain random. The notion of German national property is arbitrary and elusive (Frey in Eckert, 2015). Jayme points out that, especially for contemporary art, it is hard to claim any national linkage. Contemporary artists produce their works in a global world, meaning that it is hard to pinpoint their affiliation to a single country. Therefore, he likes the fact that the CPPA excludes artworks younger than 75 years from the legislation. Contemporary art should have free access to the international art market (Jayme, 2017).

Moreover, dealers are put at a disadvantage by the CPPA. First, due to strict diligence requirements, their way of working needs to be changed. Much more research and paperwork need to be accomplished to meet the new conditions (Berking & Gerke, 2019). Furthermore, in the case of being registered as national cultural good, the dealers who could not sell their art to foreign clients do not get compensated by the government. The right to purchase art to be

exported by a public body in § 23, paragraph 6 is rather obsolete, as it is not obligatory for the government (Jayme, 2017).

Contrary to criticism articulated by many, von der Decken points out that the critique on the CPPA mainly focuses on the economic and private value of the cultural property and, consequently, the individual losses faced by the introduction of the law. It fades out that cultural goods have a dual character. The other part is composed of its public and cultural value for a society. As cultural products have positive externalities for the public, keeping them in the country might increase the welfare for society when the goods are exposed to the public. Hence export restrictions can also have benefits that are not quantifiable in financial terms. Thus, the critique should not bring the financial interests of a single person to the fore, but also mind that protection of cultural property serves a public concern (von der Decken, 2017).

This section presented the factors leading to the CPPA as well as main parts of the legal text and the reception of the law by mostly legal experts. The most important aspects to retrieve from this part are the new regulations on export for artworks. The categories and threshold figures for artworks that need export permissions as visualized in the table will be used to define the observation groups upon which the main variable of interest is constituted. However, before going on with the empirical analysis, the next chapter will present the economic framework of voluntary export restraints that is used to explain the causality between the export restrictions and the changes in prices for regulated artworks. From this analogy, possible hypotheses regarding the impact of the CPPA on prices of German artworks will be deduced.

4. Economic Framework

4.1. Voluntary Export Restraints

The export restriction for certain artworks set by the German government are part of a category of trade policies called voluntary export restraints (VER). VERs were a widespread policy in the 80s. It should be noted that the terminus voluntary might be misleading in some occasions. Unlike the KSGS – which indeed can be considered voluntary – many of these VERs were rather a result of pressure from an importing country which aimed to protect its domestic industries (Vidigal, 2019). In two prominent examples the US put pressure on countries to reduce their exports of specific goods to the US in order to protect the US industry: In one case Australia, Canada and New Zealand introduced VERs on their beef industry (Allen, Dodge, Schmitz, 1983) and in the other, Japan placed export restrictions on their automotive industry (Berry, Levinsohn, Pakes, 1999).

Voluntary export restraints set by a government impact the consumer's, as well as the producer's welfare in both countries the exporting and the importing country. When a country's government sets VERs for a specific product, the domestic supply of that product will rise, because less of that product will be exported. This leads to a decrease of the prices for that product in the (now less) exporting country. Different implications are generated from the price reduction for the domestic actors involved in the trade of that product: domestic consumers will benefit from the VER in the first place, as they will be able to purchase the good for a lower price than before. Hence, the consumer surplus in the market increases in the exporting country when a VER is set. The producers, however, encounter disadvantages from a VER since the prices for their products decrease and the producer surplus in the market declines. There are quota rents generated from VERs that can be either kept by the government or passed to the producers to pay for the losses caused by the VER. The general welfare impact of the VER in the exporting country is an aggregate of the gains and losses for consumers, producers and the recipients of the quota rents (Suranovic, 2010; Gandolfo, 2014).

For a country that imports the product that is being restricted by an exporting country, different implications apply. Due to the VER, the supply for the product abroad will decrease. Consequently, prices in the importing country will increase for both the imported product and

the domestic supplement of the product. Opposite to the consumers in the exporting country, consumers in the importing country face drawbacks that are attributed to the VER. The producers' surplus in the foreign country, in contrast, will increase since the prices for their domestic supplements rise. That again positively impacts the outputs of the domestic firms, such as employment and profit. Even new firms may be generated. Although the consumers welfare might be reduced in the importing country due to the VER, domestic producers of substitute products will gain from VERs (Suranovic 2010; Gandolfo, 2014).

4.2. Research Hypotheses

The theory of voluntary export restraints can be applied to the case of export restrictions for cultural property set by the German government in August 2016. Due to the new German Act on the Protection of Cultural Property, certain artworks, namely old and expensive artworks of German artists considered of national significance, are hindered from being exported to other countries. Consequently, the limits to export artworks, keeping them within the national borders will tend to cause excess supply of these works in Germany. This effect will cause a decrease in the prices of this group of artworks. Hence, art buyers and collectors in Germany might benefit from the export restrictions as they are able to purchase this class of art for a lower amount of money than before the regulation. Dealers of this type of artworks, however, will face a reduction of surplus as they will gain less from the sales of old, high-end artworks from important German artists. As the legislation excludes living artists from the regulation, producers of artworks are not affected directly by the VER, although they might be affected by a general decrease of prices on the German art market. However, the analysis of this aspect goes beyond the scope of this paper. I will merely examine the impact of the regulation on prices of artworks included in such a regulation, namely within a high-price segment, at least 75 years old, and produced by artists considered of national significance. Therefore, the first Hypothesis set up based on the framework of voluntary export restraints, is the following:

Hypothesis 1: As a result of CPPA, art prices for regulated artworks sold in Germany *will decrease*.

According to the theory of VERs, importing countries will also be affected by the German regulation. As there will be less art of the mentioned group available to purchase, the prices abroad for those artworks included in the regulation will rise. Hence, the second Hypothesis derived from the economic theory of VERs is the following:

Hypothesis 2: As a result of CPPA, art prices for regulated artworks *will increase outside of Germany.*

Before testing the hypotheses, the data and sample, as well as the underlying methodology of this research, will be presented in the following chapters.

5. Data and Sample

The aim of the sampling was to generate a dataset with works of the most important German artists. On the one hand, the artists should be of high importance for the German patrimony; on the other hand, they should have sold works that surpass the age and financial value thresholds established by the CPPA as listed in the legal overview. In order to achieve this goal, the data was gathered in a two-stage procedure as explained in the following.

5.1. Artist Selection

To generate a sample with the most important German visual artists of all times, I use the source of *Reclams Künstlerlexikon* [Reclams Artists Lexicon] (Darmstaedter & von Hase-Schmundt 2002), which is a compact lexicon printed in third edition listing the most important artists worldwide. However, it does not only include just painters but also other visual artists such as architects, set designers, graphic designers, etc.

All artists with German citizenship, including those with double citizenship (e.g. German-U.S.-American), were extracted from the lexicon. To reduce the sample to a manageable size and to be sure to extract merely the most important German artists, I considered only those who either have an additional visual next to their written bibliography or whose entry exceeds a length of 13 lines. It was assumed that longer entries or pictures aside the bibliography will reflect the high relevance of the artist. Including also artists with fewer entry lines would have probably overstrained the resources available for the following data gathering. A similar approach of gathering samples based on the length of the bibliography was used by Renneboog and Spaenjers (2013; 2014). With this procedure, 566 German artists were extracted from the lexicon. As the regulation only includes works that were created at least 75 years before the purchase date, all artists born after 1920 were dropped assuming that most of the artists are artistically productive after their teens. This reduced the number of artists to 414.

5.2. Data Collection

Data on art sales were retrieved from the platform Artprice.com. Artprice.com is an online database that contains information on auction sales since 1962 for approximately 0.7 million artists worldwide. The platform gathers its information from catalogues of auction houses. Currently they watch more than 6.000 auction houses worldwide⁶. The platform provides information on the artwork's characteristics, its selling price, the place and auction house where it is sold, as well as the date of sale.

From the final dataset all artists were removed that had less than 100 lots on Artprice.com to be sure that sufficient data is available to capture every artist's fixed effects. The final list consists of 181 artists and can be found in the appendix. On average, I have collected 1,100 observations per artist resulting in just above 200,000 in total. The dataset covers the time period from 1984 to early 2019.

For the artists of the final sample, I have collected all information on all their auction sales available on the platform (see Section **Fehler! Verweisquelle konnte nicht gefunden werden.**3. for a precise overview of the indicators). Unfortunately, the platform does not provide a data export tool to download or extract the data at a reasonable cost for research purposes. Therefore, data had to be extracted manually from the web page and then filled into a structured form, which was an enormously time-consuming task that was done in more than 2,000 iterations of obtaining and restructuring data. Information on the birth and death of the artists was added separately to the dataset. Due to capacity constrains, the information on the signature of the artist could not be considered in the data collection, nor the pre-sale estimation prices. After having described the data selection and collection procedure, in the next part, I will describe the dataset to give a sense what information it contains.

5.3. Descriptive Analysis

⁶ The information was retrieved from the company's homepage: <https://www.artprice.com/>

The total number of observations in the dataset is 200,464. One quarter of the total number of observations is, however, omitted from considerations. This is due to the fact, that some lots are listed at auctions but are not sold. Artworks which did not sell do not have a hammer price, which is crucial for this thesis as it is the dependent variable. After omitting artworks with not-listed prices, the sample is downsized to approximately 147,000 observations. This dataset is split into two observation groups: all artworks that surpass certain age and financial value limits as stated in Section 3.2. compose the treatment group. The rest is assigned to the control group. The observation groups will be explained in detail in the following parts.

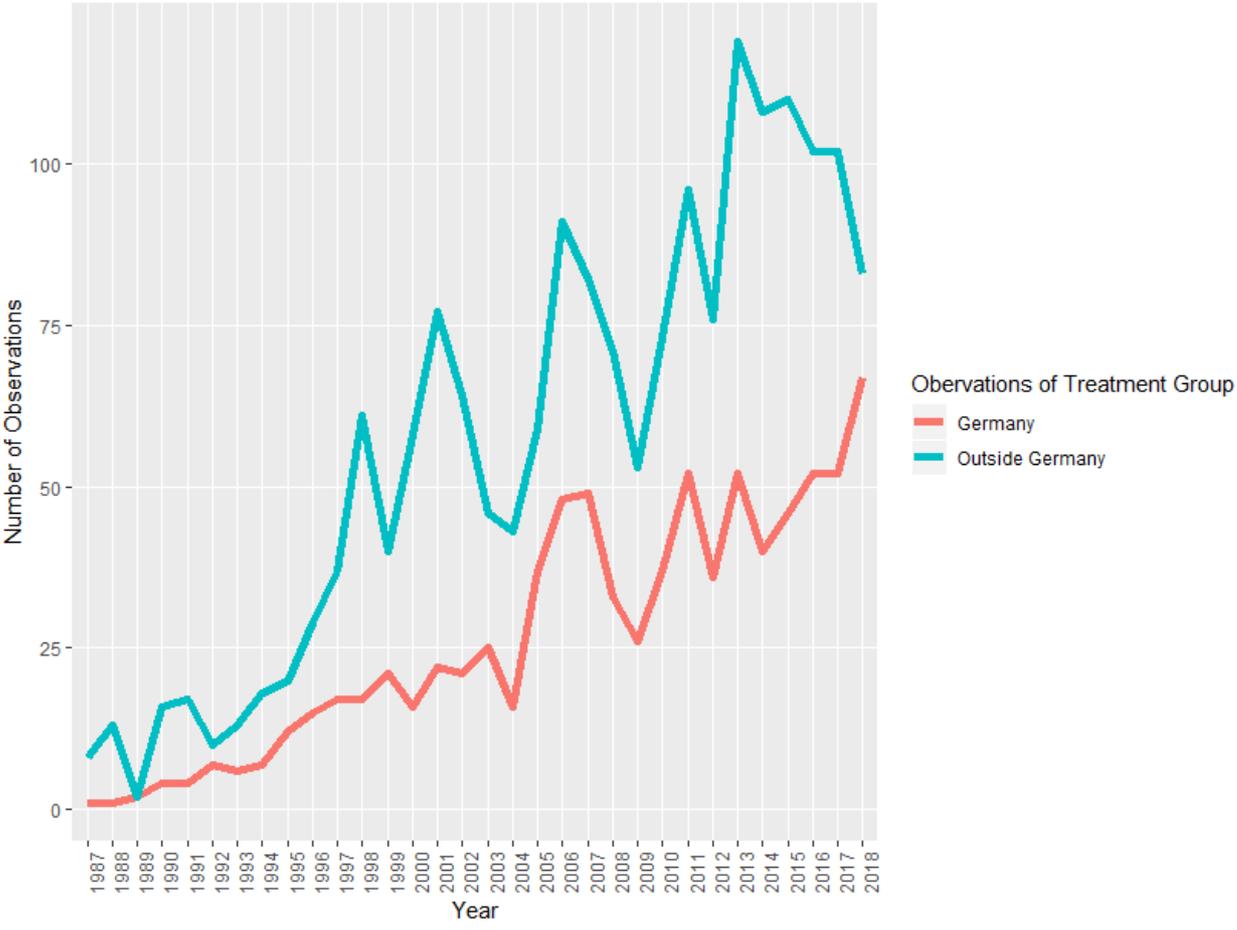
Table 2: Descriptive Statistics

	Sold in Germany	Sold outside Germany
Total Number of Observations	139.937	60.527
Valid Observations	101.464	45.399
Treatment Group	841	1.818
Artworks sold above 10,000 EUR	13.403	14.282
Artworks sold in post Regulation Period	11.051	5.538
Artworks above 10,000 EUR sold in post Regulation Period	1.389	1.326
Artworks in Treatment Group sold in post Regulation Period	150	221
Min Age of Artworks	0	3
Max Age of Artworks	547	555
Average Age of Artworks	95	135
Min price of Artwork in EUR	1	1
1 st quartile price of Artworks in EUR	300	900
Median of Price of artwork in EUR	950	3.337
4 th quartile price of Artworks in EUR	4.000	15.880
Max price of Artwork in EUR	4.700.000	36.448.000
Average price of Artworks in EUR	8.849	53.176
Share of Treated Group in Nobs	1,4%	4,0%
Turnover of Treatment Group post Regulation	50.778.500	206.095.535
Share of Turnover of Treatment Gr. Post Regulation	42,5%	58,5%

The dataset contains very young artworks, the youngest, for instance, is by Karl Otto Götz from 2017. The oldest works are from Renaissance, such as works from Albrecht Dürer. The range of art prices is very large, too. It spans from one to 36 million EUR. To level out the price differences and enable comparability between the observation groups, the basic control group will later be adjusted in Section 6.4. The number of artworks within the treatment group is 841 for Germany and 1,818 for outside of Germany. The number of works sold in Germany after the regulation period in August 2016 is 11,051. Within these post regulation sales only 150 were affected by the CPPA. This corresponds to a share of only 1.4 percent. The share of affected artworks sold after the regulation's enforcement outside of Germany is four percent. Hence, only a small fraction of sales is affected by the CPPA.

Figure 3 is a visualisation of the number of sold artworks in the treatment group over time. It shows the number of sales between the periods 1987 and 2018 for Germany (red) and outside of Germany (blue). It is observable that none of the graphs shows an extreme peculiarity after the cut off year in August 2016. However, the number of treated artworks sold outside of Germany shows a slight decrease, while the treated artworks sold in Germany slightly increase in number after the cut off. Both observations confirm the economic theory of voluntary export restraints, where the domestic country retains more of the regulated product, while the number of products decreases in the importing country due to the restriction.

Figure 3: Number of Sales in Treatment Group 1987-2018



6. Methodology

6.1. Empirical Framework

To estimate a treatment effect on the art prices of German artists that can be attributed to the cultural policy regulation, I will combine two common methods that seldom have been combined in the economic analysis of the art market. I will apply the hedonic pricing model to the data collected, as described above. The hedonic price regression will be embedded into the framework of a Difference-in-Differences (DiD) analysis to trace price differences between the sales pre regulation enforcement and post regulation enforcement.

DiD analysis is used for quasi-experimental settings where individuals or goods that are observed are affected by the occurrence of an event, such as the introduction of a policy. DiD consists in comparing the before-after difference of the treatment group to the before-after difference of the control group. The difference of the two before-after differences of the treatment and the control group is the DiD estimate of the treatment effect (Angrist & Pischke, 2008).

Trying to identify the treatment effect by simply comparing the price levels of the treatment group before and after the treatment would be very likely to yield a biased result. There are usually always unobserved factors which affect the outcome variable, and which are correlated with the treatment. By using a control group which has not been exposed to the treatment, unobserved factors can be controlled. However, it needs to be assumed that the unobserved factors influence the treatment and the control group in the same way over time. This assumption is called the common trend assumption. It is not possible to test for common trends after the treatment. But, it is assumed that the common trend assumption is fulfilled over the entire period of observation if the treatment and the control group show common trends before the introduction of the treatment (Angrist & Pischke, 2008). The common trend assumption will be tested later in the analysis.

The model of hedonic regression is particularly used for goods that are heterogenous and not often traded, such as houses or artworks, as it allows to control for their various characteristics. The idea is that such goods are “valued for their utility-bearing characteristics”

(Rosen, 1974, p. 34). These series of characteristics that compose the item have shadow prices that determine the price of the asset. The method combines all sales in the data and estimates the implicit prices for single characteristics to measure a price of the good that is cleared from the characteristic's hedonic price (Higgs & Worthington, 2005). Then, a time dummy can capture the pure time fixed effect and can build a "quality-adjusted hedonic price index" (Renneboog & Spaenjers, 2014, p. 7). Thus, by controlling for several variables, one of interest can be isolated and traced for any effect on the price (Vosilov, 2015). The hedonic price index has been frequently used in research on real-estate prices, as well as in the field of art market studies. By using this methodology, price trends for works of art, as well as the impact of different determinants affecting the price of an artwork, can be analyzed.

The combination of hedonic regression and Difference-in-Differences analysis is used by Ginsburgh, Radermecker and Tommasi (2017), who estimate the effect of expert opinion on art prices. In other research fields, the combination of these methodologies has been applied several times in the context of housing prices after the occurrence of a sudden event. Zhang and Leonard (2018), for example, estimate the impact of flood hazards in the Fargo-Moorhead Metropolitan Area on neighbouring house prices over a certain time period and spatial distance to the disaster site. Another paper by Tu (2005) assesses the price differences of property after the construction of a new sports stadium. A further paper researches the impact of a new public mass transport system in Montreal on the real-estate prices of houses located in spatially different distances to the rail way (Dubé, Legros, Thériault & des Rosiers, 2014).

For my research design, I have chosen the combination of the above-mentioned methodologies for the following two reasons. Firstly, the export restrictions introduced in Germany in summer 2016 work as a quasi-experimental set up, which permits the use of DiD. Secondly, the observed goods are artworks, heterogenous products for which the hedonic pricing index has become a proven method. After explaining the empirical framework used for the analysis, the following sections will present the created variables and the regression equations.

6.2. Variables

6.2.1. Interaction Variables

As I study the treatment effect on the auction sales of artworks affected by the policy regulation compared to the sales of artworks unaffected by the regulation, I have created two variables for the analysis. The first variable is the *Treatment* variable. It includes observations of artworks, whose hammer price exceed the financial value threshold for the artworks category and that have an age of at least 75 years at the date. These artworks compose the treatment group and take the value 1. Those artworks with lower hammer prices compose the control group and take the value 0. Financial thresholds for the category of artworks are those listed in the Table 1 in Section 3.2.

The treated artworks are affected by the regulation only after the regulation came into force in August 6, 2016. Thus, a second variable is introduced called *Regulation*. This variable marks the moment of the policy change. It takes the value 0 before and 1 after the introduction of the regulation. Consequently, the variable of interest is a third variable that is created by the interaction of the treatment and the regulation variables. In the hedonic price method, the variable of interest can be isolated by controlling for other usual price determinants. A similar approach, for example, was performed by Vosilov (2015), who estimates the shadow price of the interaction of patriotism and home bias on art prices (Vosilov, 2015). Apart from variables of interest, treatment and regulation, I have added a number of control variables that will be explained in the following paragraph after presenting the dependent variable.

6.2.2. Dependent Variable

The selected dependent variable is the hammer price of the auction sale. Consciously, the estimated price is not taken into account as pre-sale estimated prices set by auction houses can be biased. According to Mei and Moses (2005), experts at auction houses adjust their estimations particularly for artworks in the high-segment to fetch higher benefits (Mei & Moses, 2005). Thus, it might be that the estimated prices for German artworks anticipate the regulation and thus could be adjusted to the circumstances. To exclude this bias, the hammer price is selected as a dependent variable in the regression. For the analysis, the financial value thresholds as stated in

the Act are taken to define the treatment and control groups. The main analysis does not take into account the seller's fee or the buyer's premium that are either deduced from or added to the hammer price (Mei & Moses, 2005). These variations will be, however, discussed later in the robustness checks. The reason to bypass this aspect at first is that the CPPA does not specify whether the financial thresholds for artworks that require an export license should correspond to the seller's or the buyer's price. The price that should be considered when applying for an export license could be either both the seller's or the buyer's price or even an estimated price: "the financial value [...] shall correspond to either the price paid within the past three years when the cultural property was bought or sold or, [...] to a justified domestic estimated value at the time of the application" (CPPA, §24, para. 4).

6.2.3. Control Variable

Next to the main variables of interest regulation and treatment, relevant control variables were added to the hedonic price regression. According to Ginsburgh, Mei and Moses (2006), the selection of characteristics as control variables is a key element of the hedonic price model as their combination shall capture all the shadow prices determining the artwork (Ashenfelter & Graddy 2003; Ginsburgh et al., 2006). Hence the composition of the selected hedonic characteristics directly impacts the variable of interest and the results of the research. Yet Ginsburg et al. also notes that the selection of independent variables is mostly determined by the available data (Ginsburgh et al., 2006). I have chosen control variables that are the most popular and have been frequently used in studies on the art market (Renneboog & Spaenjers, 2013). Each of them will be presented in the following.

The first independent dummy variable is the *artist's name*. The artist dummies control for artist fixed effects. According to Higgs and Worthington (2005), the name of the artist is associated with the reputation and the quality of the art and is one of the most important determinants of the price of a painting (Higgs & Worthington, 2005,).

The second control variable I added to the analysis is the *size* of the artwork. Size is a continuous variable. Since the data contains different categories of artworks, the dimensions are not consistent. The data lists sculptures sometimes with a single dimension, others with three dimensions. Paintings and prints have generally two dimensions. To ensure a comparability

between the works, only the largest dimension of each lot was considered. Ginsburgh et al. (2006) review different hedonic price indices and conclude that there is not always a linear relation between price and size. The price is not linearly increasing with size; when artworks get too large the price might decrease (Ginsburgh et al., 2006). Therefore, the size variable is squared in the estimation.

Category is a dummy variable including six categories that describe the type of the artwork: painting, watercolor, drawing, print, sculpture and photography. Related to the category, a further inherent characteristic of the artwork is added, its *supportive medium*. The supportive medium is also a categorical variable. 46 distinct supportive mediums are considered, the most commons are oil and wood. Some papers combine the variables category and medium, for example, painting on wood or oil paintings. To be more specific, in this thesis, the categories were not combined.

Apart from inherent characteristics of the artwork, information on the artwork's sale were also added to the regression. First time dummies were added to control for time fixed effects. The dummy *year of sale* includes sales from 1984 to 2019. *Seasonal effects* is a dummy variable that includes the twelve months. Many papers include the month variable, as there seems to be a difference in auction prices between the different periods within a year. Although opinions are inconsistent about which month fetches the highest prices, it seems reasonable to control for them as they show a significant effect on the price (Agnello, 2002).

The variable *auction house* contains the information about the location the artwork was auctioned at. It is a dummy variable with several categories. Only the most frequent auction houses appearing in the data were considered. Four internationals: Christie's, Sotheby's, Bohams and Phillips; and two German auction houses: Grisebach and Lempertz. It is important to include an auction house dummy variable, as some auction houses namely Sotheby's and Christie's, tend to have higher shadow prices on the hammer price due to their reputation and market power (Higgs & Worthington, 2005).

Finally, to the hedonic price regression for artworks sold outside of Germany a further variable was added: the *country of sale*. As the dataset is an accumulation of auction sales from different countries, it is necessary to control for country fixed effects. Here, only the most

frequent countries in the dataset were considered. Those are: USA, UK, France, Austria, Switzerland, Belgium, Italy and The Netherlands.

In total seven – for the regression outside of Germany eight – control variables were added to the regression that are supposed to help to estimate the shadow prices of the main interaction variable regulation and treatment. In the following the regressions equations will be presented.

6.3. Regression Equations

Different regressions have been undertaken with the data. The first one is the basic regression that combines the control variables and the interaction term regulation and treatment. The hedonic linear regression is described as follows:

Equation 1: Basic Regulation Treatment

$$\ln p_{i,s,t,m,p} = \alpha_0 + \sum_{k=1}^{k=K} \alpha_k x_{k,i,t,m} + \sum_{t=1}^{t=T} \beta_t z_t + \sum_{m=1}^{m=12} \mu_m \omega_m + \gamma \text{regulation}_p + \delta \text{treatment}_s + \lambda \text{regulation}_p * \text{treatment}_s + \varepsilon_{i,s,t,m,p}$$

Where $\ln p_{i,s,t,m,p}$ is the logarithm of the price of painting i , with $i = 1, 2, \dots, N$ sold in year t and in month m . The logarithm of the regression allows a better fit of the data as the auction data at hand is skewed due to outliers (Vasilov, 2015). $x_{k,i,t,m}$ is a characteristic k (artist, size, category, supportive medium) of painting i , observed in year t and month m . I also include time fixed effects where z_t is a dummy variable taking the value of 1 when the painting is sold in the year t and 0 otherwise. ω_m is a further dummy variable that takes the value 1 when the painting is sold in month m and 0 otherwise. Regulation_p is a dummy that indicates if the painting i was sold pre or post regulation enforcement. It takes the value 1 when painting i was sold post regulation otherwise 0. The price segment is indexed by s . The dummy variable treatment_s takes the value 1 if the painting i is in a certain high-price segment and 0 if otherwise. The interaction of regulation_p

and $treatment_s$ creates a dummy variable that takes a value of 1 if the sale of the painting was effectively affected by the regulation and the value of 0 otherwise. $\alpha, \beta, \mu, \gamma, \delta$ and λ are parameters.

As the artworks sold outside of Germany has been auctioned in different countries, the basic equation is modified for sales outside of Germany and supplemented with a country fixed effect:

Equation 2: Regulation Treatment for Outside Germany

$$\ln p_{i,s,t,m,c,p} = \alpha_0 + \sum_{k=1}^{k=K} \alpha_k x_{k,i,t,m} + \sum_{t=1}^{t=T} \beta_t z_t + \sum_{m=1}^{m=12} \mu_m \omega_m + \sum_{c=1}^{c=C} \theta_c \sigma_c + \gamma regulation_p + \delta treatment_s + \lambda regulation_p * treatment_s + \varepsilon_{i,s,t,m,c,p}$$

Where σ_c is a dummy variable taking the value of 1 when the painting is sold in the country c and 0 otherwise. θ is a further parameter.

Although the regulation came into force as mentioned in summer 2016, the leaked draft bill in July 2015 announced the details of the expected regulation. Thus, agents involved in the market were already informed about the upcoming law and its scope. Therefore, it can be expected that agents in the art market reacted to the leaked bill. In this matter three channels of action can be expected: Firstly, it is possible that collectors or dealers that were planning to sell an artwork could become tempted to sell their art before the regulation came into force to bypass its effects. This could lead to an increase of supply, lowering the prices. Secondly, potential buyers that planned to keep the artwork in Germany expect their resale value to be lowered due to CPPA. This would decrease their willingness to pay and hence again lower market prices. Thirdly, art buyers that want to export out of Germany see their window of opportunity closing and try to purchase the artworks before the law is in place. For this reason, foreign demand and market prices might increase. To capture this expectation effect, a second estimation is applied, in which the date of the draft leak is taken as the pivotal year for post regulation time. The approach of adjusting the cut-off years to the narrative circumstances in a DiD analysis was also applied by the

already mentioned paper by Ginsburgh et al (2017). The regression equation is described as follows:

Equation 3: Post-Leak Treatment Effect

$$\ln p_{i,s,t,m,q} = \alpha_0 + \sum_{k=1}^{k=K} \alpha_k x_{k,i,t,m} + \sum_{t=1}^{t=T} \beta_t z_t + \sum_{m=1}^{m=12} \mu_m \omega_m + \varphi postleak_q + \delta treatment_s + \tau postleak_q * treatment_s + \varepsilon_{i,s,t,m,q}$$

Where $postleak_q$ is a dummy that indicates if the painting i was sold before or after the leak of the draft in July 2015. It takes the value 1 when painting i was sold post leak, otherwise 0. The interaction of $postleak_q$ and $treatment_s$ creates a dummy variable that takes a value of 1 if the sale of the painting was effectively affected by the post leak effect and the value of 0 otherwise. φ and τ are further parameters.

However, the observed treatment effects for the period after the leak and the period after the enforcement need to be distinguished from each other. The first estimation shows the effect caused by the regulation, the second one shows the reactions to the leak. The latter is a kind of reaction in the market that anticipates the upcoming law. The former, the regulation effect, might be influenced by the reaction effect caused by the leak. To capture the pure regulation effect that is not blurred by the effect of the leak, a further variable called *anticipation* is introduced. The equation is described as follows:

Equation 4: Isolated Regulation and Anticipation Effects

$$\ln p_{i,s,t,m,p,q,r} = \alpha_0 + \sum_{k=1}^{k=K} \alpha_k x_{k,i,t,m} + \sum_{t=1}^{t=T} \beta_t z_t + \sum_{m=1}^{m=12} \mu_m \omega_m + \gamma regulation_p + \rho anticipation_r + \delta treatment_s + \lambda regulation_p * treatment_s + \nu anticipation_r * treatment_s + \varepsilon_{i,s,t,m,p,q,r}$$

Where $anticipation_r$ is a dummy that indicates if the painting i was sold after the draft leak in July 2015 and before the regulation's enforcement in August 2016. It takes the value 1 when painting i was sold in between the post leak and the pre regulation period, otherwise 0. The interaction of $anticipation_r$ and $treatment_s$ creates a dummy variable that takes a value of 1 if the sale of the painting was effectively affected between the post leak and pre regulation period and the value of 0 otherwise. ρ and v are further parameters. In the following chapters the Equation 4 will be considered as the main specification.

6.4. Common Trend Assumption

A common trend assumption is a requirement to use the difference-in-differences approach (Angrist & Pischke, 2008). The treatment and control group have to show common trends before the regulation applies. Investigating whether the treatment and control group follow the same trend over time cannot simply be done by a comparison between average prices for specific time points in time. These average prices would always be biased by composition effects. For example, a single high-priced oil-painting already could massively bias the average price of the whole month of a year. To exclude such disturbance, an adapted version of the hedonic price regression is recalculated: From the basic Equation 1, the variables of interest which are the dummy variable for the treatment group, the dummy variable for the periods of the CPPA and the interaction term are excluded. All other artwork and time related characteristics remain in the estimation. Then this equation is estimated for the treatment group and the control group individually. The basic control group consists of all artworks that are not part of the treatment group. I then plot the values of the year dummies to see whether the year specific effects co-evolve.

Figure 4 shows the common trends for sales in Germany, Figure 5 shows the trends for sales outside Germany. The red line shows the yearly fixed effects for treated artworks and the blue line shows for the control group including all artworks. It is noticeable that the control group develops quite unstable for both sales in Germany and outside Germany. While one could still

Figure 4: Year Fixed Effects for Art Sales in Germany 1990-2019

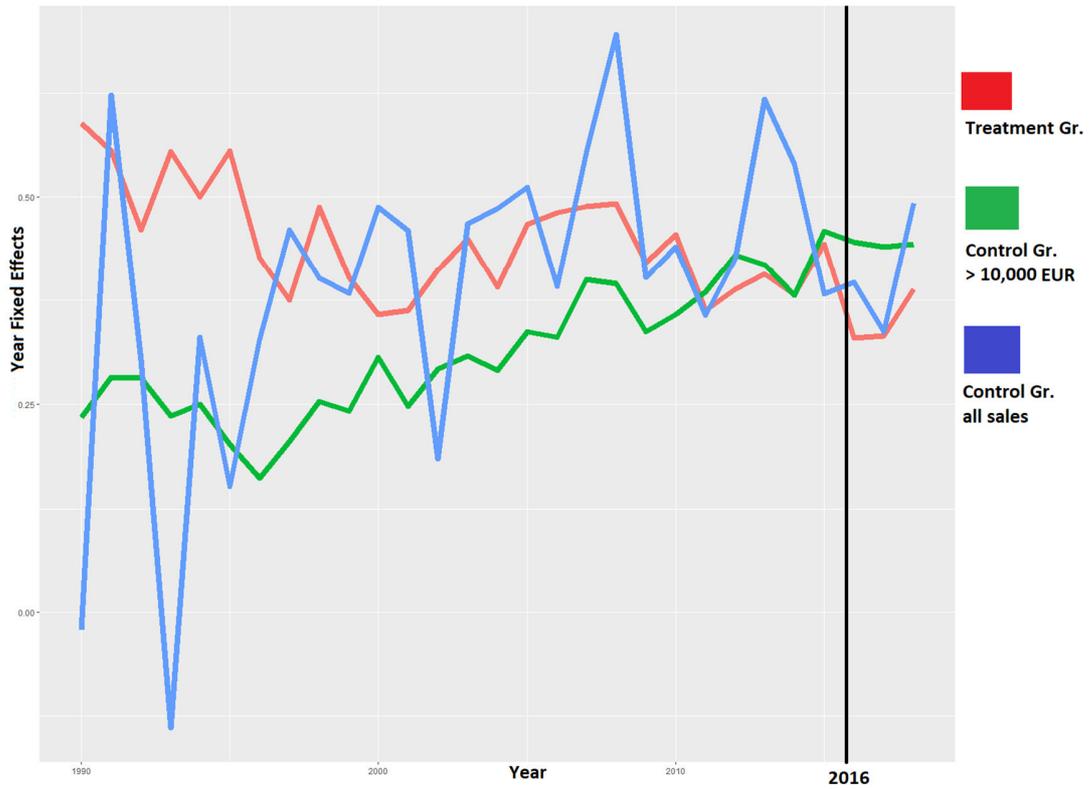
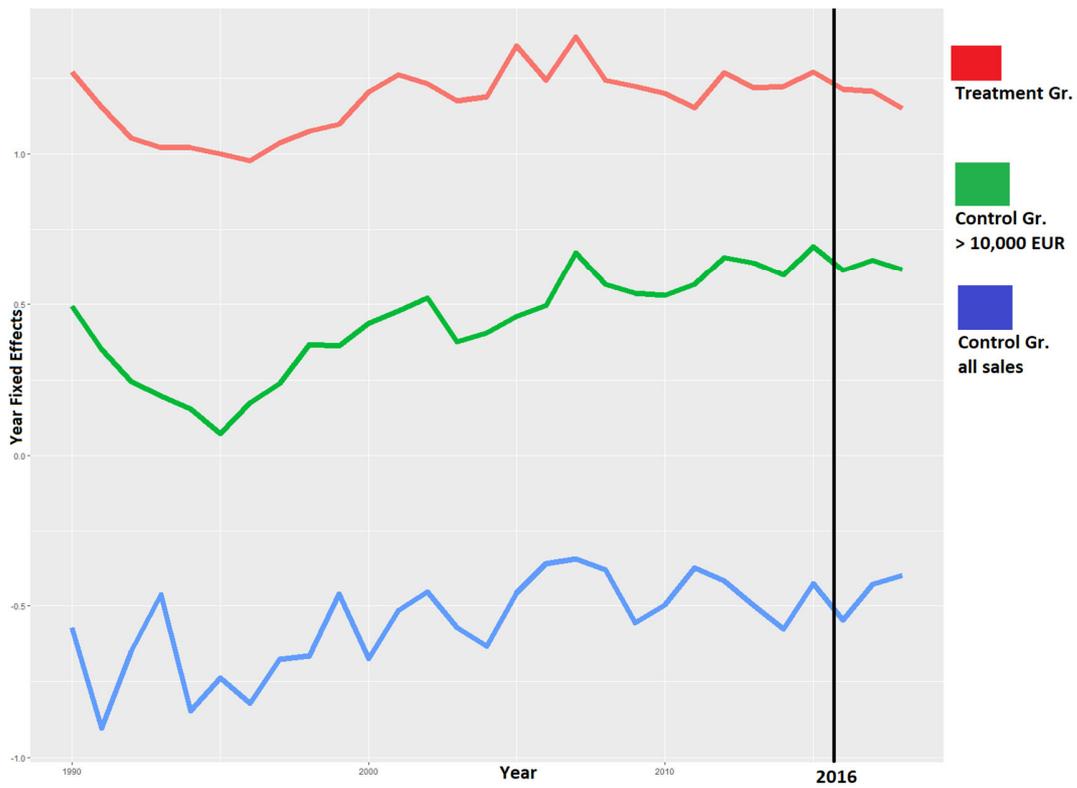


Figure 5: Year Fixed Effects for Art Sales outside Germany 1990-2019



argue that the control group and the treatment group follow the same trend for sales outside Germany, it is clearly not the case for sales in Germany. For this reason, the assumption must be falsified that the control group as defined so far and the treatment group follow a common trend.

Considering that more than half of the artworks in the sample have been sold for values below 1,000 EUR or in the lower thousands, it seems hard to compare those sales to the high-price segment of the treatment group. To make the treatment and the control group more similar, all artworks from the control group whose prices are below a certain threshold are removed. I chose that threshold to be at 10,000 EUR as prices are then more comparable to the prices of the treatment group, but the sample size still remains larger than if the threshold has been increased further. However, in Section 7.2, the results for different thresholds will be reported to test the robustness of the results.

The new control group is shown with green lines in Figure 4 and Figure 5. The trends for the treatment group and the new control group in which the low-price segment is omitted are largely parallel before the year of the treatment. The similarity between the treatment group and the adjusted control group is clearer in Figure 5 which shows the auction sales outside of Germany. Thus, in order not to violate the common trend assumption and apply a DiD analysis, it seems plausible to select a control group whose trend resembles the trend of the treatment group. Therefore, in the main estimation, the DiD analysis will be applied on the adjusted control group that includes only artworks that have higher prices than 10,000 EUR.

7. Results

7.1. Regression Analysis

Fehler! Verweisquelle konnte nicht gefunden werden. shows the results of the main regression analysis. The coefficients for the dummies outside the interaction term *post enforcement*treatment*, *post leak*treatment* and *anticipation*treatment* do not have any explanatory power and can therefore be ignored: the dummy variables for the different time periods are all co-linear with the other time fixed effects. The dummy for the treatment group will always be positive and significant as the treatment group per definition has the highest sale prices. Therefore, in the following only the coefficients for the interaction effects will be discussed.

The first column presents the treatment effect for affected artworks that were sold after the introduction of the CPPA in August 2016. The coefficient of the interaction term *regulation and treatment* indicates a negative effect of the treatment on the hammer price. The hammer price of an artwork that is affected by the regulation is on average about 15 percent lower than the price of an artwork that is not affected by the regulation. The coefficient of the treatment variable is significant at the 1 percent level. The adjusted R^2 indicates that 60 percent of the variance is captured by the model which seems to be a good fit considering the heterogeneity of artworks. These results support Hypothesis 1: The Cultural Property Protection Act has a negative impact on the prices of artworks that are affected by it.

Column two presents the treatment effect for affected artworks sold after the leak period in July 2015. The coefficient of the interaction term shows that the prices of treated artworks sold after the post leak period decreased by 19 percent at the 1 percent significance level. This hints that the auction market reacted to the upcoming law before it was introduced as the coefficient is larger than in the previous specification.

Column three shows the results for the third equation. The coefficient for the interaction term of *anticipation and treatment* indicates that the hammer price of a treated artwork that was sold in the anticipation year declined on average by 24 percent. The next line in the same columns

Table 3: Main Regression Results for Art Sales in Germany and Outside Germany

	<i>Dependent variable: log(price)</i>					
	GER Post Enforcement	GER Post Leak	GER Anticipation & Regulation	Outside Ger- many Post Enforcement	Outside Germany Post Leak	Outside Germany Anticipation & Regulation
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	1.635*** (0.025)	1.654*** (0.026)	1.654*** (0.026)	1.582*** (0.023)	1.585*** (0.023)	1.585*** (0.023)
Anticipation			0.366 (0.695)			0.286 (0.318)
Post Enforcement	0.672 (0.631)		0.671 (0.631)	0.658 (0.561)		0.658 (0.561)
Post Leak		0.671 (0.631)			0.658 (0.561)	
Treatment*Anticipation			-0.240*** (0.092)			-0.052 (0.087)
Treatment*Post Enforcement	-0.153*** (0.059)		-0.172*** (0.059)	-0.008 (0.062)		-0.011 (0.062)
Treatment*Post Leak		- 0.190*** (0.052)			-0.024 (0.053)	
Artist FE	Yes	Yes	Yes	Yes	Yes	Yes
Set of FE for Artwork Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Control for Size	Yes	Yes	Yes	Yes	Yes	Yes
Auction House FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	No	No	No	No	No	No
Seasonal FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	-	-	-	Yes	Yes	Yes
Observations	13,202	13,202	13,202	13,961	13,961	13,961
R ²	0.619	0.619	0.619	0.686	0.687	0.687
Adjusted R ²	0.604	0.604	0.604	0.673	0.673	0.673

Note:

* p<0.1; ** p<0.05; *** p<0.01

shows the treatment effect for affected artworks that are sold after the enforcement when the anticipation year is isolated from the estimation. The coefficient for this interaction term indicates that affected artworks sold after the regulation enforcement declined by 17 percent compared to artworks that are not affected by the regulation. This estimation is considered as the main specification of this analysis. It allows to observe both treatment effects the regulation effect and the anticipation effect isolated from each other.

Columns four to six of **Fehler! Verweisquelle konnte nicht gefunden werden.** present the results for the hedonic price regression for works sold outside of Germany. The coefficients of the interaction terms do not show a significant effect. Hence, the second hypothesis is rejected: there does not seem to be a significant impact of the CPPA on prices of affected artworks sold outside of Germany.

7.2. Robustness Checks

In order to corroborate the results presented above, robustness checks have been applied. In this section, I present several variations of the regression equation and the data sample to show that the results are robust. As only results for art sales in Germany did show significant effects in the main analysis, robustness checks on sales outside Germany are omitted. However, they can be found in Table A2 of the appendix.

The first two columns of **Fehler! Verweisquelle konnte nicht gefunden werden.** show adjustments of the treatment variable. The cut offs of the financial value thresholds for the treatment group have been reduced to 90 percent in the first case and increased to 120 percent in the second case with respect to the initial figures. These adjustments reflect two cases. First, if the hammer price of the artwork corresponds to a seller's price, the value a seller receives from selling the artwork is only 90 percent of the hammer price that is later reported in the auction. This is due to the fee of approximately 10 percent of the artworks' price a seller has to pay an auction house when he or she wants to place an artwork in the market (Neuendorf, 2016). Second, if it is a buyer's price, a premium of an average 20 percent is added to the initial hammer price, as the buyer has to pay an extra commission fee to the auction house from where the

artwork is purchased (Neuendorf, 2016). Both specifications with the treatment defined as seller's and as buyer's price show significant negative effects of the CPPA

Table 4: Robustness Checks for Art Sales in Germany

	<i>Dependent variable: log(price)</i>						
	Seller's Price	Buyer's Price	All Sales	Sales above 5,000 EUR	Sales above 20,000 EUR	Excluding not treated Artists	Using Monthly FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	1.585*** (0.024)	1.795*** (0.031)	2.405*** (0.044)	1.927*** (0.029)	1.348*** (0.025)	1.643*** (0.027)	1.654*** (0.026)
Anticipation	0.108** (0.050)	0.108** (0.051)	0.045 (0.031)	0.105** (0.043)	0.105* (0.061)	0.140** (0.059)	0.366 (0.695)
Post Enforcement	0.116 (0.073)	0.131* (0.075)	0.057 (0.046)	0.172*** (0.064)	0.092 (0.089)	0.190** (0.088)	0.671 (0.631)
Treatment*Anticipation	-0.177** (0.090)	-0.306*** (0.105)	-0.196 (0.151)	-0.174* (0.100)	-0.224*** (0.087)	-0.246*** (0.095)	-0.240*** (0.092)
Treatment*Post Enforcement	-0.135** (0.055)	-0.200*** (0.070)	-0.144 (0.097)	-0.131** (0.065)	-0.131** (0.056)	-0.136** (0.061)	-0.172*** (0.059)
Artist FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Set of FE for artwork characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control for size	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auction House FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	No
Month FE	No	No	No	No	No	No	Yes
Seasonal FE	Yes	Yes	Yes	Yes	Yes	Yes	No
Country FE	-	-	-	-	-	-	-
Observations	13,202	13,202	95,942	21,157	7,505	10,206	13,202
R ²	0.613	0.592	0.707	0.598	0.605	0.618	0.619
Adjusted R ²	0.606	0.584	0.706	0.593	0.592	0.612	0.604

Note:

* p<0.1; ** p<0.05; *** p<0.01

at the 5 percent and the 1 percent level, respectively. The magnitude of the effect is with -0.18 for the anticipation effect and -0.14 for the regulation effect are somewhat smaller for the seller's price specification than for the main specification. The magnitude of the effect on the buyer's price on the other hand, is with -0.31 for the anticipation year and -0.20 after the enforcement of the CPPA are larger than the main specification. Comparing these figures, one might assume that the negative effect of CPPA is larger when looking on artworks in a higher price segment.

Columns three to six show adjustments of the sample. In column three, the control group consists of all observations that are not part of the treatment group (as discussed in Section **Fehler! Verweisquelle konnte nicht gefunden werden.**). The coefficients are negative and have similar sizes as in the previous specifications but they are not significant. This is not surprising considering the violation of the common trend assumption discussed before. Column five shows the results for the estimations when artworks are omitted whose hammer price is lower than 5,000 EUR. The results, as well as the significance level, are lower to those of the main regression. In column five, the control group is reduced by artworks that have a lower hammer price than 20,000 EUR. Even then, the treatment effect for the artworks sold after the regulation enforcement remains the same. The effect for artworks sold during the anticipation year, however, increased by -0.22 at a high significance level. Column four and five show that different definitions of the control group confirm the significant negative impact of the CPPA on the prices of the treated artworks. Only moderate changes between the estimated effect sizes can be detected.

Column six shows the estimation results for another variation: for the case that the sample consists of only those artists that have at least one observation in the treatment group, all the other artists are omitted from the sample. The results again confirm the effect found before. Only the coefficient for the period since the enforcement of CPPA indicates a 14 percent decrease of prices instead of 17 percent in the main specification.

Finally, in column seven, the standard sample is used and monthly fixed effects are applied instead of yearly and seasonal fixed effects. This is done so as the cut offs for the anticipation year and the period after the enforcement both are in the middle of the year which might cause some

compositional issues. However, the results of this robustness check confirm that the findings in the main specification are robust on a 1 percent significance level.

In conclusion, the robustness checks strongly support that the CPPA had a negative impact on prices of affected artworks sold in Germany both in the year between the leak and the enforcement and the time since the enforcement. Only the specification which uses all art sales including the very-low-price segment did not provide empirical support for this. However, as shown in Section **Fehler! Verweisquelle konnte nicht gefunden werden.** this estimation violates the assumptions of the DiD framework and can therefore be left aside. The estimated size of the effect for the anticipation year varies between a reduction of prices by 17 percent up to 31 percent. For the time after the enforcement of the law, the estimated reduction of prices varies between 13 to 20 percent.

8. Discussion

8.1. Interpretation and Discussion of the Results

After the results have been presented, they will now be contextualized within the political circumstances the legislation process was embedded in. Further, it will be discussed what implications can be drawn from the findings.

The results of the main estimation show that the regulation has an impact on the prices of the artworks that are subject to the legislation of CPPA – if the artwork is to be sold in Germany. Affirming the first hypothesis, the prices for treated artworks sold in Germany decrease due to the new CPPA. Treated artworks sold after the regulation lose on average 17 percent of their financial value. This estimate is cleared from the influence of the year prior to the enforcement, and now reflects the pure effect of the CPPA on treated artworks. Considering the high prices in the treated segment, a reduction of the price by 17 percent is a substantial loss. If the average price of a work in the treatment group sold in the regulation period is approximately 339,000 EUR, it means a loss in value in average by 58,000 EUR per artwork due to the CPPA. It can be assumed that this depreciation is at the expense of art collectors and art dealers who dealt with affected artworks. In this respect it does not seem surprising that those were the loudest parties protesting against the CPPA. However, there could be also stakeholders who might benefit from the price decrease. Public museums, for example, who usually have low acquisition budgets could purchase valuable German art easier when the prices for that group are decreased (Manigold, 2017). However, it is crucial to note that although there is a substantial treatment effect, only a very small fraction of the dataset falls into the treatment group that was sold after the regulation. The share of treated artworks by the CPPA corresponds to only 1.4 percent of the total sales after August 2016. The low number of works hit by the regulation could imply that the age and financial value thresholds were wisely set by the German government in order to not affect too many works of art.

The findings show that there is also a treatment effect that begins already with the debates and turmoil in the scene triggered by the leak of the draft bill of the planned CPPA. The estimations show that in between the leak in July 2015 and the enforcement of the CPPA in August 2016, the prices for artworks in the treatment group decreased by 24 percent. Since the

Act was not yet effective during that year, this observed effect is not attributed to the regulation, but rather to an expectation effect in the art market. The high decrease of prices for artworks in the treatment group could be explained by an anticipative reaction of dealers and collectors to sell old and expensive artworks from German artists before the enforcement could affect their sales. This might have led to an increased supply in the market for that specific kind of art and made the prices decline.

It is remarkable that the treatment effect during the leak year is higher than the estimated effect after the regulation. This difference might support the argument that the scope of the Act was not quite known during the turbulent legislation period. This might have caused a larger uncertainty in the market, that tempted more owners and dealers to place their works in the market. Also, the leaked draft version of the Act included stricter threshold figures for exports, which could explain the larger treatment effect. After the law had been introduced, the scope was clearer and it was noted that the thresholds were liberalized. Hence, the adjusted thresholds and the growing certainty about the law might have affected the treatment effect positively.

The robustness checks show that the treatment effect appears even if the dependent variable is adjusted to the seller's or the buyer's price. This shows that there is not a sharp financial value threshold for which the treatment becomes effective. It is rather a range of high-price segment artworks that are hit by the regulation. This is plausible because the CPPA does not specify if the stated financial thresholds should correspond with the buyer's, the seller's or the estimated value of the artwork. It is also interesting that the treatment effect increases with price. Table 4 shows that the treatment effect for the buyer's price in the post enforcement time is -0.20 and for the anticipation year even -0.31. The increase of the treatment effect could be explained by the fact that more expensive artworks are more likely to be banned from export.

For the works sold outside of Germany, no impact of the regulation could be estimated. This might have various reasons. It might require more time to observe an effect of the German regulation on sales outside of Germany. It might be that the scarcity of German artworks will increase by time and, thus, will show an effect in several years. The effect in Germany, however, could be observed more immediately. Also, it might be that there is no scarcity of artworks by German artists on the international market yet, as a substantial number of artworks have been

exported abroad shortly before the introduction of the CPPA. It is also plausible that the international art market is subject to many influences that the analysis at hand did not capture. To be able to detect a single effect in such a large market, the regression is supposed to be more comprehensive, including global factors.

In any case, the time period of observation after the legislation came into force is two and a half years. During this time, only a few hundred lots were sold in the price segment as defined in the Act. That means the results could get more pronounced when the research is repeated in a couple of years with more treated lots being traded in post regulation time.

8.2. Limitations

The research makes assumptions that limits the scope of this thesis. In this chapter, the limitations of this study will be discussed. The limitations concern the dataset, the selection of the variables, as well as the scope of the findings.

First of all, the findings reflect only the treatment effect for the treated group. General assumptions about the development in the art market cannot be generated from this study. The second crucial limitation is a data constrain: The final sample includes only a fraction of auction sales. Then again auction sales reflect only a part of the German art market. According to Ginsburgh et al 2006, auction sales represent only 33 to 50 percent of the art market. Sales from the primary art market, such as sales at galleries and art fairs are not included in the dataset. Also, private auctions of collectors or direct purchases from the artist or his or her family are not included in the data. The reason is that information on sales in the primary market is hard to acquire and sales data is mostly not made transparent (Velthuis, 2011). This limitation could lead to the fact that the estimated treatment effect could change if other types of sales could be included to the estimation. Hence, the results cannot be generalized for the entire German art market, but rather for a small fraction within the auction market. Yet, the sample remains quite representative, as the observed artworks are old and at least created before 1920. These kinds of old artworks are usually sold on the secondary art market. Galleries, art fairs and purchases directly from the artists mostly concern contemporary or late modern art (Velthuis, 2011).

The hedonic price regression includes several variables that capture the shadow prices of the artwork's characteristics. Yet, more characteristics could have been added to the estimation to make the hedonic price index more precise. Such information might include whether the artwork was signed by the artist, the subject of the artwork and the epoch it was created in. The artwork's provenance could have also been an added regression. Furthermore, for the dependent variable, the estimated pre-sale price could have been considered, too. However, within the scope of the data collection, these variables were not easily retrievable from the data source Artprice.com.

A further limitation of the dataset is that it cannot be traced for repeat sales of the same artwork. The advantage of resale records is that comparing the exact same artworks to each other that were sold before and after the regulation, a more precise treatment effect could be estimated. Although it is very likely that the dataset contains repeat sales, as it spans a period of over 30 years of auction sales, it is hard to find the right pairing. As Artprice.com gathers its data from catalogues of different auction houses, the information gathered could be misrecorded. The hedonic characteristics of the work, such as the name and the size, have to match exactly to make sure that it is the exact same artwork that is resold (Ginsburgh et al. 2006). However, as the post regulation period is very short, not many resales would occur in the dataset to gather enough observations.

In addition to that, the data does not contain information about the work's provenance. It is only known where the artwork is auctioned. It is not possible to say if the artwork was imported shortly before the sale and hence it not subject to export regulation, as only artworks are affected by the Act that are longer than two years in the country. Neither is clear if the artwork sold in Germany is planned to be actually exported.

The thesis undertakes some simplifications which need to be disclosed at this point. It is assumed that the artworks in the treatment group are affected by the regulation for two reasons: they are made by important German artists and thus are of significance for the German patrimony and they surpass age and financial value thresholds that require an export license. However, even if the artworks in the treatment group require an export license due to its value and its age, the respective expert committee engaged by the respective federal Land authority might decide not

to include the artwork into the register of cultural national patrimony. In this case, a license could be assured and the artwork could be exported. Yet, even if some of the artworks in the treatment group are not subject to an export ban in the end, the requirement for an export license and the possibility that the export could be denied might influence the purchasing motivation. Therefore, for this research, it is plausible to treat the artworks from the treatment group as if they are restricted from export.

Moreover, the selected control group might not be perfect, because it consists of artworks from a lower price segment. However, by excluding very low-price artworks, it was tried to level out the differences between the control and the treatment group. On top of it, the observation groups are by the same artists, so the control group could be considered quite good. This assumption is also supported by the common trend graphs Figure 4 and 5.

It is also important to note that the study does not include trade data into consideration. Indeed, it is assumed that the price decline of the affected artworks is an indicator for the decrease of exports of the observed group. Due to the lack of export data, it cannot be assured that the export of certain artworks has decreased with the regulation. Therefore, it cannot be excluded that the estimated treatment effect captured something else.

Concerning the interpretation of the results, it is important to remark that the DiD treatment effect is in fact an average treatment effect on the treated. That means it estimates on the effect of the treatment on the artworks that are in the high-price segment, older than 75 years and by famous German artists. It is not an effect that can be attributed to the entire art market or the entire observation groups. Also, it cannot be ruled out that other segments of artworks would have reacted differently to the treatment.

Finally, the research only investigates one single aspect of the Act's impact, namely its influence on prices of certain German artists of certain age and value sold at auctions as mentioned above. Other aspects that are also relevant to evaluate the impact of the CPPA receive no attention in this thesis. This includes the impact of the CPPA for museums: it is not investigated if the CPPA leads to a decrease of artworks in German museums due to the withdrawals of some artists, or if the collections grew due to the fact that with decreasing prices museums could acquire more artworks. It has not been mentioned if the Act impacts the exchange of artworks

and the international presence of German art outside of Germany. In addition, the impact of the CPPA on trade with illicit artworks is not researched in this study.

9. Conclusion

This thesis investigated the impact of the German Cultural Property Protection Act on art prices of selected German artists. The starting point of the research was the public turmoil among different stakeholders of the art market that was present long before the legislation actually came into force in August 2016. After reviewing the essential literature on the notion of cultural protectionism, it was shown that there are two main policy streams that are prevalent today: cultural internationalism and cultural nationalism. With the CPPA, Germany recently took the path of cultural nationalism perusing the goal to protect cultural property from removal that is identity-forming for its society. Upon the examination of the legal text, it was analyzed which artworks are affected by the law. According to the age and financial value thresholds as defined in the Act, two observation groups were created: those who are affected by the new legislation and those who do not meet the criteria to be of national interest to be registered on a list for national cultural property. For the economic framework, the theory of voluntary export restraints was applied to the auction sales of works from a selection of 181 Germany artists sold in Germany and outside of Germany. The dataset included more than 200,000 observations, encompassing the period between 1984 and 2019. An empirical analysis combining the Difference-in-differences methodology with the hedonic price regression was executed.

The findings present that the CPPA has an impact on the prices of artworks of selected German artists auctioned in Germany when they are affected by the regulation. The estimations show that the price for treated artworks is reduced on average by 17 percent compared to artworks that are not affected by the regulation. Artworks of the same segment sold outside of Germany are not affected by the CPPA. However, the estimated treatment effect affects a very low number of artworks. Less than two percent of the total sales in Germany in the post regulation period was affected by the CPPA. However, this small fraction accounts for almost 43 percent of the turnover of total sales within the post regulation period.

One of the core findings of this thesis is that the turmoil prior the regulation's enforcement had also an impact on the art prices. This anticipation effect stimulated by the draft leak and public debates was even more pronounced than the actual treatment effect estimated for the

time after the CPPA's introduction. During this time, expensive and old artworks by German artists lost value on average by 24 percent.

All in all, with the data at hand, it can be concluded that the CPPA has a substantial effect on prices of artworks of important Germany artists sold in Germany that are affected by the regulation. The art prices were also affected by the anticipation effect prior to the CPPA's enforcement. Art dealers and collectors selling artworks of German artists in this price segment face disadvantages that can be attributed to the CPPA. Yet, the number of affected artworks is relatively low. Only a small fraction of the auction house market is affected by the law. In the course of the regulation enforcement, the number of auctioned artworks remain stable. However, it is very important to note that the data at hand merely reflects a fraction of the art market. The presented results might have been different if different kinds of sales apart from auction sales could have been added to the analysis.

This thesis has provided a first economic study on the impact of the new German Cultural Property Protection Act based on empirical analysis using a large dataset. With the findings, the thesis does not aim to evaluate the CPPA. This is not possible as many aspects of the CPPA are not examined in this study. Also, it should be highlighted that the study merely examines the impact of the Act but does not aim to generate a normative imperative from the findings. Although the scope of the results might be limited, they still can be used in different contexts. Not only in academia, to compare the impacts of different export legislations on art in different countries, but also in the policy field. For instance, five years after the introduction of the CPPA, the Member of the Federal Government responsible for Culture and Media is urged to notify the German Parliament about the application and impact of the CPPA (CPPA, §89). Hence, when the law is evaluated in 2021, the findings of this study could be considered in the report.

The impact of restrictive laws on the art market is a field that is yet little explored. Further studies could provide more insight on the implications of policy interventions into the art market. This research design could be repeated in a couple of years when there is more data available for the post regulation period and, consequently, more artworks that have been affected by the CPPA. In the context of the German Act, it is also interesting to research anticipative strategies within the market that become manifested to avoid the negative effects of the law on art prices.

For instance, it could be researched if relative high numbers of German artworks are placed in the market that are close to turning 75 years old. A further approach could be to observe the development of the art prices for post-war German artists that are yet considered as contemporary artists, but soon will be hit by the regulation.

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11. Appendix

Table A1: List of Artists and Total Number of Observations by Group

Artist	Total	Valid	>10,000 EUR	Treatment Group
Adolf Hölzel	1069	672	98	0
Adolf Oberländer	251	135	0	0
Adolf Schreyer	759	436	198	2
Adolph v. Menzel	1150	775	281	55
Albert Zimmermann	414	232	26	0
Albrecht Adam	228	149	64	0
Albrecht Altdorfer	517	432	13	1
Albrecht Dürer	9260	8053	985	189
Alfred Wolfgang Schulze Wols	1136	766	275	2
Andreas Achenbach	777	481	98	0
Andreas Paul Weber	2080	1569	0	0
Anselm Feuerbach	217	142	27	1
Anton Stankowski	549	386	8	0
Anton Raphael Mengs	116	75	38	1
Arno Breker	1119	810	36	0
Arthur v. Kampf	364	205	1	0
August Macke	738	535	302	74
Balthasar Denner	135	79	11	0
Bele Bachem	764	446	0	0
Bernard Schultze	1989	1199	102	0
Bernhard Heiliger	480	276	27	0
Bernhard Hoetger	300	170	13	0
Bonaventura Genelli	103	58	2	0
Bruno Paul	101	52	9	0
Carl Spitzweg	1442	1003	364	18
Carl Werner	380	216	32	1
Caspar David Friedrich	73	56	50	26
Christian Morgenstern	162	98	16	0
Christian Rode	122	52	0	0
Christian Schad	1069	603	55	7
Christian Wilhelm Dietrich	875	543	61	0
Conrad Felixmüller	1872	1483	126	8
Daniel Chodowiecki	1048	788	7	0
Eberhard Viegner	311	228	12	0
Eduard d. Ä. Schleich	197	146	22	0
Eduard v. Gebhardt	320	216	1	0
Edwin Scharff	162	120	3	0
Emil Adam	153	111	24	0
Emil Nolde	3923	3006	1742	240
Emil Schumacher	2130	1516	346	0

Table A1: List of Artists and Total Number of Observations by Group (continued)

Artist	Total	Valid	>10,000 EUR	Treatment Group
Erich Heckel	5480	3857	758	79
Erich Reuter	157	90	2	0
Ernst Barlach	2484	1761	297	17
Ernst Hassebrauck	510	335	0	0
Ernst Ludwig Kirchner	4312	3248	1553	276
Ernst Wilhelm Nay	1840	1311	475	0
Ewald Mataré	1112	809	216	4
Ferdinand Kobell	522	333	3	0
Franz Krüger	200	126	18	0
Franz Marc	694	545	175	47
Franz v. Stuck	1073	871	344	10
Franz v. Lenbach	702	454	46	0
Friedrich Ahlers-Hestermann	249	134	18	0
Friedrich Kallmorgen	473	341	23	0
Friedrich s´d. Ä. Preller	204	154	6	0
Friedrich Schaper	332	167	0	0
Fritz Cremer	300	186	0	0
Fritz Klimsch	823	619	176	1
Fritz Köthe	473	348	9	0
Fritz Mackensen	198	146	5	0
Fritz v. Uhde	234	129	25	0
Fritz Winter	1728	1269	351	0
Gabriel v. Max	408	290	53	0
Georg Friedrich Schmidt	291	186	1	0
Georg Kolbe	871	620	340	24
Georg Meistermann	505	343	46	0
Georg Muche	151	71	11	0
Georg Pencz	494	364	3	1
Georg Schrimpf	489	337	67	0
George Grosz	4982	3333	774	43
Gerhard Hoehme	939	585	99	0
Gerhard Marcks	2359	1697	141	2
Godfrey (Gottfried) Kneller (Kniller)	270	205	78	1
Hans Arp	3557	2700	834	54
Hans Baldung	263	224	23	3
Hans Bellmer	3228	2424	182	1
Hans Burgmair	167	123	5	1
Hans Hofmann	923	739	549	2
Hans Leonhard Schäuuffelein	102	67	11	3
Hans Poelzig	104	73	4	0
Hans Thoma	3095	2185	96	0
Hans Uhlmann	290	215	24	1

Table A1: List of Artists and Total Number of Observations by Group (continued)

Artist	Total	Valid	>10,000 EUR	Treatment Group
Heinrich Aldegrever	960	778	4	1
Heinrich Dreber	137	78	5	0
Heinrich Hoerle	180	127	31	1
Heinrich Nauen	377	244	41	0
Heinrich Vogeler	1646	1349	26	0
Heinrich Zille	3226	2390	94	1
Heinz Trökes	842	514	16	0
Helmut Andreas Paul Grieshaber	6003	4475	59	1
Hermann d. J. Gradl	550	259	0	0
Hermann Glöckner	799	686	32	0
Hermann Hesse	426	305	57	0
Ivo Hauptmann	902	554	22	0
Januarius Zick	175	119	35	0
Johann Friedrich Overbeck	102	69	10	1
Johann Georg Dillis	568	463	45	0
Johann Gottfried Schadow	177	138	8	0
Johann Heinrich Wilhelm Tischbein	232	168	33	0
Johann Joachim Kändler	3028	1833	166	5
Johann Sperl	100	56	11	0
Johann Wilhelm Schirmer	306	252	35	0
Josef Albers	2871	2517	809	0
Josef Hegenbarth	1074	807	6	0
Julius Bissier	764	562	151	0
Julius Schnorr v. Carolsfeld	196	140	20	3
Karl Fred Dahmen	1394	933	66	0
Karl Friedrich Lessing	106	68	8	0
Karl Friedrich Schinkel	219	167	25	4
Karl Hartung	243	178	47	0
Karl Hofer	2863	2059	741	7
Karl Kunz	130	61	1	0
Karl Otto Götz	1339	948	121	0
Karl Rössing	239	160	1	0
Karl Rottmann	129	85	28	0
Karl Schmidt-Rottluff	3243	2407	893	54
Karl Schmoll (Eisenwerth)	101	69	0	0
Käthe Kollwitz	6303	5195	515	50
Kurt Querner	351	255	3	0
Kurt Rudolf Hoffman Sonderborg	1022	694	53	0
Kurt Schwitters	767	584	424	56
Leo von König	127	82	15	0
Leopold Graf v. Kalckreuth	181	126	3	0
Lovis Corinth	5754	4372	282	40
Lucas d. Ä. Cranach	598	473	137	59

Table A1: List of Artists and Total Number of Observations by Group (continued)

Artist	Total	Valid	>10,000 EUR	Treatment Group
Ludwig Knaus	494	250	39	2
Ludwig Meidner	1202	827	83	14
Ludwig Mies van der Rohe	1780	1286	52	2
Ludwig Richter	694	366	15	3
Lyonel Feininger	4339	3581	1043	77
Maria Ellenrieder	168	131	0	0
Martin Schongauer	368	308	100	21
Mathias Goertitz	344	230	88	0
Matthäus d. Ä- Merian	809	546	2	0
Max Achermann	3179	2216	88	0
Max Beckmann	4070	3220	674	91
Max Ernst	8070	5680	1373	75
Max Josef Wagenbauer	162	99	7	0
Max Klinger	2387	1925	85	5
Max Kruse	107	85	1	0
Max Laeuger	585	360	0	0
Max Liebermann	5478	4359	766	82
Max Pechstein	4317	3270	876	85
Max Slevogt	1680	1200	131	2
Meret Oppenheim	769	620	37	0
Michael Wolgemut	113	79	1	0
Moritz v. Schwind	320	187	15	0
Oskar Schlemmer	492	335	172	22
Otto Dix	4377	3242	634	52
Otto Greis	130	96	0	0
Otto Müller	1422	1143	431	37
Paul Eliasberg	401	251	0	0
Paul Klee	2841	2155	1513	301
Paula Modersohn-Becker	409	328	126	12
Peter Behrens	214	133	1	0
Richard Riemerschmid	319	166	10	0
Richard Benno Adam	146	70	1	0
Robert Sterl	350	279	14	0
Rudolf Belling	110	61	18	2
Rudolf Levy	108	72	30	0
Rupprecht Geiger	1442	1215	136	0
Siegward Sprotte	340	237	0	0
Theodor Rosenhauer	144	124	28	0
Thomas Theodor Heine	263	191	7	0
Toni Stadler	232	151	8	0
Virgil Solis	110	72	2	0
Walter Leistikow	525	395	87	0
Wenzel Hollar	1022	738	15	1

Table A1: List of Artists and Total Number of Observations by Group (continued)

Artist	Total	Valid	>10,000 EUR	Treatment Group
Werner Drewes	569	450	24	0
Wilhelm Busch	259	213	60	0
Wilhelm Kaulbach	125	84	3	0
Wilhelm Kobell	493	317	52	1
Wilhelm Lachnit	295	217	4	0
Wilhelm Lehbruck	697	493	115	30
Wilhelm Leibl	376	272	28	2
Wilhelm Rudolph	662	393	1	0
Wilhelm Schnarrenberger	103	81	1	0
Wilhelm Trübner	556	320	48	0
Wilhelm Wagenfeld	236	151	0	0
Willi Baumeister	1538	1086	233	0
Willy Jaeckel	530	376	12	0

Table A2: Robustness Checks for Art Sales Outside Germany

	<i>Dependent variable:</i>						
	Seller's Price	Buyer's Price	All Sales	log(price) Sales above 5,000 EUR	Sales above 20,000 EUR	Excluding not treated artists	Using Monthly FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
treatment	1.563*** (0.023)	1.714*** (0.025)	2.228*** (0.032)	1.822*** (0.024)	1.368*** (0.023)	1.599*** (0.023)	1.585*** (0.023)
yearofLeak	0.046 (0.068)	0.094 (0.067)	0.027 (0.053)	-0.011 (0.060)	0.132* (0.076)	0.012 (0.074)	0.286 (0.318)
postEnf	0.122 (0.098)	0.167* (0.098)	0.081 (0.077)	0.131 (0.089)	0.260** (0.112)	0.117 (0.107)	0.658 (0.561)
treatment:yearofLeak	-0.086 (0.081)	-0.085 (0.093)	-0.084 (0.115)	-0.054 (0.088)	-0.102 (0.085)	0.007 (0.086)	-0.052 (0.087)
treatment:postEnf	-0.099* (0.059)	-0.050 (0.066)	-0.004 (0.085)	-0.052 (0.064)	-0.126** (0.061)	0.018 (0.062)	-0.011 (0.062)
Constant	7.240*** (0.290)	7.221*** (0.291)	5.853*** (0.249)	6.968*** (0.255)	7.744*** (0.446)	6.535*** (0.249)	7.330*** (0.285)
Observations	13,961	13,961	41,575	18,742	9,930	12,062	13,961
R ²	0.669	0.667	0.745	0.683	0.643	0.681	0.687
Adjusted R ²	0.663	0.661	0.743	0.679	0.634	0.676	0.673
Residual Std. Error	0.736 (df = 13710)	0.738 (df = 13710)	1.077 (df = 41281)	0.786 (df = 18474)	0.701 (df = 9697)	0.734 (df = 11885)	0.725 (df = 13378)
F Statistic	110.796*** (df = 250; 13710)	109.773*** (df = 250; 13710)	411.779*** (df = 293; 41281)	149.245*** (df = 267; 18474)	75.289*** (df = 232; 9697)	143.858*** (df = 176; 11885)	50.336*** (df = 582; 13378)

Note:

* p<0.1; ** p<0.05; *** p<0.01

Table A3: Age and Value Thresholds for EU Regulation (EG) Nr. 166/2009 and KGSG 2016

BKM

Übersicht der Alters- und Wertgrenzen für die Ausfuhr von Kulturgut nach § 24 des Kulturgutschutzgesetzes (KGSG)

Kategorien	Ausfuhr aus dem EU-Binnenmarkt (§ 24 Abs. 1 Nr. 1 KGSG und Verordnung (EG) Nr. 116/2009)		Ausfuhr aus Deutschland innerhalb der EU (§ 24 Abs. 1 Nr. 2 KGSG)	
	Alter (in Jahre)	Wert (in Euro)	Alter (in Jahre)	Wert (in Euro)
1. Archäologische Gegenstände ¹ aus Grabungen und archäologischen Funden zu Lande oder unter Wasser, aus archäologische Stätten oder aus archäologischen Sammlungen	100	0	100	0
2. Bestandteile von Kunst- und Baudenkmalern oder religiösen Denkmälern, die aus deren Aufteilung stammen	100	0	100	0
3. Bilder und Gemälde (außer Nr. 4 und 5), die nicht dem Urheber gehören	50	150 000	75	300 000
4. Aquarelle/Gouachen/Pastelle, die nicht dem Urheber gehören	50	30 000	75	100 000
5. Mosaik (außer Nr. 1 und 2)/ Zeichnungen, die nicht dem Urheber gehören	50	15 000	75	50 000
6. Original-Radierungen/ -Stiche/ -Serigraphien/-Lithographien und deren Matrizen/ Original-Plakate, die nicht dem Urheber gehören	50	15 000	75	50 000
7. Originalerzeugnisse der Bildhauerkunst und Kopien gleicher Herstellungsweise (außer Nr. 1), die nicht dem Urheber gehören	50	50 000	75	100 000
8. Photographien/ Filme einschließlich Negative, die nicht dem Urheber gehören	50	15 000	75	50 000
9. Handschriften einschließlich Landkarten und Partituren/ Wiegendrucke, die nicht dem Urheber gehören	50	0	75	50 000
10. Bücher	100	50 000	100	100 000
11. Gedruckte Landkarten	200	15 000	200	30 000
12. Archive	50	0	50	50 000
13. a) Sammlungen ² und Einzel Exemplare aus zoologischen, botanischen, mineralogischen oder anatomischen Sammlungen	keine Altersgrenze	50 000	keine Altersgrenze	100 000
13. b) Sammlungen ² von historischem, paläontologischem, ethnographischem oder numismatischem Wert				
14. Verkehrsmittel	75	50 000	150	100 000
15. a) Sonstige Antiquitäten ³ , sofern sie nicht unter die Kategorien nach Nr. 1 bis 14 fallen	zwischen 50 und 100	50 000	100	100 000
15. b) Sonstige Antiquitäten ⁴ , sofern sie nicht unter die Kategorien nach Nr. 1 bis 14 fallen	über 100	50 000	100	100 000