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Regulation or Reputation? Evidence from the Art Market

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We study the effect of public regulation of the art market. In 1981, France passed a Decree to regulate attribution practices, in a market where authenticity plays a key role in valuation and price formation mechanisms. By using empirical evidence from sales of early Flemish paintings (1955-2015), we show that the decree had a limited impact not only on due diligence and attribution practices but also on value of sales. The size and relative depth of the French art market compared to other countries, as well as the development of technical art history, the globalization of the art market, and compliance mechanisms explain the moderate impact of this Decree on old master sales. Our results therefore suggest that to regulate attribution in the arts, market mechanisms might be more effective than regulation.

Keywords Art Market - Authenticity - Reputation – French Regulation – Marcus Decree

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The logo for the University of Brussels (ULB), consisting of the letters 'ULB' in white on a blue square background.

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Abstract³

We study the effect of public regulation of the art market. In 1981, France passed a Decree to regulate attribution practices, in a market where authenticity plays a key role in valuation and price formation mechanisms. By using empirical evidence from sales of early Flemish paintings (1955-2015), we show that the decree had a limited impact not only on due diligence and attribution practices but also on value of sales. The size and relative depth of the French art market compared to other countries, as well as the development of technical art history, the globalization of the art market, and compliance mechanisms explain the moderate impact of this Decree on old master sales. Our results therefore suggest that to regulate attribution in the arts, market mechanisms might be more effective than regulation.

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Introduction

Unlike the markets for consumer goods—for which consumers can assess quality—several markets deal with goods and services whose properties cannot be appreciated immediately, leading to information asymmetries (Akerlof 1970). Experience and (meta)-credence goods fall into this category and are therefore the most concerned with asymmetric information (Ekelund et al. 1995; Ekelund et al. 2020). Works of art are the most probing example of (meta)-credence goods, for which the appreciation of quality is uncertain and mostly based on shared beliefs (Ekelund et al. 2020). For contemporary art, uncertainty has mostly to do with the long-run stability of aesthetic values, while for arts that have passed the test of time, uncertainty is about the reliability and stability of the artist's name in a market that is particularly sensitive to authenticity issues (Moulin 1967). This uncertainty in art generates three main forms of information failure: i) asymmetric information when either the buyer or the seller is more informed about quality; ii) shared uncertainty (or symmetric ignorance) when none of the agents has information; and iii) misinformation when all the available information is deliberately not shared (Lupton 2005).

Despite its high degree of asymmetry of information, the art market is one of the least regulated markets (Spiegler 2005). Regulation is nonetheless an important topic in the art world where litigations on art thefts, money laundering, looted art, fakes and misattributions occur on a daily basis. The recent passing of the *National Defence Authorization Act* (NDAA) in the United States, aiming to improve federal oversight of the antiquities market and to fight illicit money transfers, is an additional attempt to address the lack of regulation (Small 2021).

In this paper, we focus on the issue of authenticity in the art market, in which regulatory and reputational mechanisms have been implemented to protect stakeholders against opportunistic behaviours. Authenticity issues play a central role in the art market for they have financial implications. As soon as doubts are cast on authorship, the market value of the works significantly drops (e.g., Onofri 2009; Renneboog and Spaenjers 2013; Radermecker 2019). This observation stems directly from the fact that the artist's name and the guarantee of authorship are the most important price determinants in the art market (Oosterlinck &

Radermecker 2019; Ginsburgh et al. 2019; Radermecker 2019). Attribution is therefore viewed as “the cornerstone of the process of selling a work of art”, and one of the “the biggest threats to credibility and trust in the art market.” (Jauregui 1977, p. 1950; Deloitte 2016, p. 143).

In a market where prices are a function of information and mechanisms of co-creation of value, arguably with the connivance of cultural institutions (Mossetto 1994), the terms used to describe the works of art are of paramount importance. Countries may rely either on voluntary or on mandatory labeling systems (Bonroy and Constantatos 2008). In most countries, voluntary attribution systems prevail, with no legally binding mechanisms related to terminology. This is currently the norm in the three main locations of the art trade, namely the UK, the US and China. Market players are therefore compelled to address issues related to authenticity on their own. Leading auction houses, such as Christie’s and Sotheby’s, have developed their own authentication systems whose perceived value rests on their brand’s reputation. The situation in France is in sharp contrast. Largely inspired from the authentication practices prevailing at Sotheby’s and Christies, the Marcus Decree imposes the use of legally defined headings to all sellers based in France, with penalties in the event of non-compliance. Judges rely on these legally defined headings to assess whether a seller engaged in fraudulent practices. There is therefore an obligation of adequacy between the degree of certainty the seller can prove, and the description of the art object provided in the catalogue.

The Marcus Decree (1981) offers thus a unique opportunity to discuss the role of reputation versus regulation in the art market, in line with recent research on the art market’s private law and governance system in which the search for truth is central (Shortland and Shortland 2020). This opportunity is reinforced by the unique evolution of the French art market. Historically, the French law limited the access to the profession of auctioneer. In a first phase, the French art market was thus characterized by the absence of both international auction houses and regulation, granting a quasi-monopoly to French auctioneers. In 1981, the government passed the Marcus Decree, but international auction houses were only allowed in 2001 to hold sales on French territory. As a result, three distinct periods may be distinguished: a period with no regulation and no international competition, a period with regulation but no international competition, and a period with both regulation and international competition. We exploit these differences to assess the impact of regulation and contribute to the debate on the benefits of regulation versus market mechanism, namely reputation.

Our empirical strategy is designed to focus on a segment of the art market where an effect is most likely to be found. The rationale behind this approach is that if no effect is found for this segment, then there are good reasons to believe that this result may be generalized to the

market as a whole. The Decree's potential impact is more likely to be observed for artworks characterized by complex authorship and attribution issues. To be relevant, the analysis also needs to focus on works of art regularly traded in Paris, and ideally with a long tradition of being exchanged there. Flemish paintings from the 15th and 16th century meet these two requirements (Ainsworth 2003). Our analysis therefore relies on a data set composed of 15th and 16th century Flemish paintings auctioned between 1972 and 2015 in France, but also in the UK, the US and other European countries ($N=11,710$). Data from auctions have been extracted from the Blouin Art Sales Index, one of the most exhaustive online databases which therefore guarantees the representativeness of our sample. We convert and deflate hammer prices and express the values in US dollars taking 2015 as the reference year. In total, our sample accounts for 1,402 sales from the main auction houses based in France, and in Paris in particular. For comparison purposes, evidence from the US (New York with 1,510 obs.), the UK (London with 4,544 obs.), and other European markets (4,253 obs.), covering the same period of time, are provided.⁴ In order to consider authenticity issues, we focus on three segments: autograph works,⁵ indirect names,⁶ and spatiotemporal designations.⁷ Our analysis relies mostly on descriptive statistics, with a special focus on the composition of each market segments.⁸ Our turning year is 1981 which corresponds to the implementation of the new legislation in France. Our two main periods of interest are 1972-1981 (before the Marcus Decree) and 1982-2015 (after the Marcus Decree), but we also use 2001 as another turning point. Although Christie's and Sotheby's had representation offices in France since 1968, it was not before 2001 that they started to hold their own sales, after a new regulation of the auctioneers' profession allowed international auction houses to enter the French market.

In this paper, we find a limited impact of the Marcus Decree on the French art market. We attribute this finding to several factors: the size and relative depth of the French art market, the simultaneous globalization of the art market, the development of technical art history, and compliance mechanisms. Because of the inherent characteristics of the French art market, and as Christie's and Sotheby's formalized their authentication system before the Marcus Decree,

⁴ The last category includes auction results from Belgium, the Netherlands, Germany, Italy, Spain, and Switzerland.

⁵ Autograph works are executed by the artist in person and labelled with his historical name.

⁶ This group comprises works of uncertain or unknown authorship, with several attribution qualifiers used to signal different levels of authenticity ('attributed to', 'studio of', 'circle of', 'follower of', etc).

⁷ This group includes paintings for which the available information about authorship is limited to a mention of space and time, for example "Flemish school, 16th century".

⁸ In order to estimate the impact of an exogenous treatment on a specific group in comparison with a non-treated group, researchers usually use a difference-in-difference model (e.g., Bantenghansa and Graddy 2011; Ginsburg et al. 2019). Although this method would have been relevant to capture the effect of the Marcus Decree in the French art market, exploratory analyses of our data sets prevent us from employing it. The difference-in-difference model relies indeed on the parallel-trend assumption that is not met with our data.

we argue that international reputational mechanisms, reinforced by compliance mechanisms within the profession, tend to be as efficient as regulation. Most importantly, they may maintain a certain level of competitiveness in the markets subject to these mechanisms. This is in line with Ranchordás (2019), who states that “the availability of more information on the market, through informal enforcement mechanisms, reduces the need for public regulation.” Our analysis does not consider the costs of regulation or its effects on market practitioners. Neither do we attempt to assess to which extent the costs of this regulation are passed on the weakest customers. Yet, the literature has shown that regulation may have regressive effects (Bailey et al. 2019; Thomas 2019). All these elements raise the question as to whether regulating authenticity is desirable.

To develop our point the article is organized as follows. The first part introduces the arguments put forward regarding regulation in uncertain markets and sets regulation into perspective by discussing how reputational mechanisms work. The second part describes the market for Old Masters and argues that this market segment is one of the best suited to analyze the regulation of attributions. It then introduces briefly the Marcus Decree and describes the legal framework in France and the terms of guarantee developed by Christie’s and Sotheby’s. The third section presents our results regarding the impact of the Marcus Decree on the French art market. Section 4 discusses the findings by addressing the issue of transnational regulation before moving to conclusions.

1. Regulatory and Reputational Mechanisms in Uncertain Markets

Governments’ mission of protecting public interest from fraud and opportunistic behaviours may lead them to engage in direct market interventions. According to Lodge et al. (2012) and Ranchordás (2019), by implementing measures of control and legal frameworks, states help lower information asymmetries between suppliers and consumers, and create a more transparent environment with better informed stakeholders. Efficient regulations compel market players to enhance their quality standards in order to avoid negative externalities such as financial losses and reputational damages (Von der Crone and Vetsch 2009).

The art market is particularly subject to quality uncertainty and guaranteeing consumer’s trust is therefore crucial. Shortland and Shortland (2020) list several governmental measures that aim to restrict and mitigate criminal behaviours in the art market, including the inspection of art objects at international borders by custom officers, police intervention when a stolen work appears in the market or in a museum, systematic destruction of forgeries, legal proceeding by

owners of stolen art or by buyers deceived by the provenance or the authenticity of the works they purchased in good faith, and regulation of the profession. To prevent the sales of stolen or looted art objects is indeed an international priority (Fonseca da Silva 2016). Similarly, to control and regulate the export of cultural goods labelled as national treasures is another major international mission. To this end, some countries have created police art squads. Artworks may also be used to hide illicit profits (Oosterlinck 2017). Part of the regulations therefore aims to discourage their use for money laundering (Steiner 2017). Last but not least, some regulations also protect artists' revenues and copyrights (Solow 1998).

A small but growing literature is trying to gauge the economic impact of these regulations on the art market. Onofri (2009) look at the effects of export veto on the Italian market for old masters. Magri (2017) analyzes the reception of the Directive 2014/60/EU on the return of artworks unlawfully removed from the territory of a member state of the European Union. De la Rocha (2019) assesses the effect of the prohibition in trading ivory cultural objects. Interestingly, these studies tend to show the limited efficiency and relative impact of regulations and often point out the unexpected or adverse effects these regulations have on the art market. Yet none of these studies are concerned with questions related to customers' protection.

In a context of *laissez-faire*, where markets are dealing with high degrees of information asymmetries, reputational mechanisms are of paramount importance, for they develop and reinforce trust between parties (Bakos and Dellarocas 2011). Reputation is defined as the assessment of the attributes ascribed to certain economic agents, based on their past actions and perceived capacity to meet stakeholders' expectations (e.g., Weigelt and Camerer 1988; Herbig and Milewicz 1993). The reputation of a firm or agent can therefore influence consumers' beliefs on the quality of the good or service. Established reputations associated with strong brand names, high level of expertise and high-quality products are thus likely to be reflected in higher consumers' trust, competitive advantages, outperformance and sustainability (Ranchordás 2019). For this reason, reputational mechanisms can be as efficient as regulation for protecting buyers, as they lessen the risks of fraud, financial loss and post-purchase deceit. Many private parties are therefore capable of offsetting the lack of regulation by setting their own reputation mechanisms and quality standards.

Since very few laws provide a framework for negotiation and dispute in the art market, private governance is another valuable compensation mechanism in this sector (Shortland and Shortland 2020). Private governance instruments, individual intermediaries (e.g., experts, agents, art advisers, etc.), and brick-and-mortar gatekeepers (e.g., museums, auction houses, galleries, art fairs, etc.) play a role in reducing information asymmetries and mitigating market

failure (Aligica and Tarko 2012; McGinnis 2016; Shortland and Shortland 2020). To be acknowledged as a trustworthy gatekeeper requires, however, a long-established reputation. The reputation building process not only matters at an individual level, but also at the collective one, with notorious art experts, art dealers and auctioneers who gather into associations and committees to offset the lack of regulation and to secure the reputation of the entire profession. The fear of being excluded from these associations encourages members to comply with the profession's rules, as any misconduct may have dramatic repercussions on their reputation (Chaserant and Harnay 2015).

By making auction results publicly available, auction houses have become the self-appointed trustworthy gatekeepers of the resale market (Dempster 2014). This is notably the case of Sotheby' (1744) and Christies (1766) that have established their names at a global level, thanks to their long-standing reputation and visibility in the auction business. Despite some occasional controversies, their two brand names send high-quality signals to the art world (Bocart and Oosterlinck 2011). Works of art are meta-credence goods, which means that even indirect signals of quality cannot always guarantee the quality of the goods, and more importantly, that the belief in these signals takes precedence over certainty (Ekelund et al. 2020). The supply of reliable information to buyers is therefore crucial in the auction business, since transparency is the best policy (Milgrom and Weber 1986) and accurate and comprehensive information stimulate competition amongst bidders (Ashenfelter 1989). In parallel, leading auction houses have developed their own guarantees to protect buyers, sellers, and themselves against lawsuits. Considering this, Shortland and Shortland (2020) have argued that the art market governance system echoes some polycentric models in which several competing private decision-makers operate under a set of norms, rules and processes to maintain and enhance the trust of buyers and sellers. The authors specify that these rules are enforced in the pursuit of private profit and personal prestige, "maintaining a vibrant trade at the top of the art market that is surprisingly robust against crime" (Shortland and Shortland 2020, p. 158).

2. Issues of Authenticity in the Art Market

Paradoxically in view of its importance, the notion of authenticity is not legally defined. In some countries, definitions are provided by sectorial committees, chambers and associations. In France, the Council of Voluntary Sales, founded in 2000 and acknowledged by law as a regulating authority of public utility in July 2011, defines authenticity as the concordance

between the presentation of a work's origins and its effective origins, namely its author, date, and location of creation. Since greater information about authorship leads to higher profits, providing accurate attributions is crucial (Day 2014). The art market therefore requires good-faith individuals that provide honest and accurate attributions in order to increase efficiency, maximize profits and avoid legal issues (Milgrom and Weber 1986; DeMott 2013; Bandle 2016; Fincham 2017).

Already in the 18th century, art dealers and auctioneers used attribution qualifiers in their sales catalogues in order to dissociate autograph from non-autograph works. At the beginning of the 20th century, experts increasingly used written certificates to assess the authenticity of artworks, up to a point when their use became common practice (Bernier 1977). Almost from the onset however, several actors of the art market have criticized certificates that were often intentionally forged (Euwe and Oosterlinck, 2017). If certainty about authorship is almost never reached with non-contemporary arts, opinions amongst experts should at least converge to a relative consensus to be trustable (Spencer 2004; Fincham 2017). Interestingly, and for quite a long time, Christie's and Sotheby's used a system of attribution based on the writing of the artist' name before introducing, in the late 1970s, a new scale of authentication, more in line with scientific standards. Indeed, the launching of the Rembrandt Research Project in 1968 gave impetus to a deep reassessment of attribution practices, corollary to a broader movement known as technical art history; an interdisciplinary approach combining traditional art history with scientific investigations of artworks. To provide transparent attributions became a necessary condition for art dealers and auctioneers to stay in business. With the declining popularity of the certificate, new extrinsic evidence of authorship has gained in importance such as peer-reviewed publications, provenance research, exhibition history, and scientific examination. In addition to the creation of specialized departments, leading auction houses have also reinforced their collaboration with distinguished experts who operate as reputational intermediaries and contribute indirectly to these enforcement mechanisms. Self-regulation indeed implies to delegate regulatory tasks to private experts, who are also concerned with preserving their reputation (Ranchordás 2019). By using their expertise to provide careful attributions, they mitigate the risks for auction houses to be sued (Shortland and Shortland 2020).

The *Affaire Poussin* (1978-1983) started in this changing context, leading to the drafting of the Marcus Decree and the Poussin judgment (Vigneron 2004; Lahir 2019). In fact, this court case illustrates how a public scandal and external pressures resulting from a lack of harmonized rules revealed the weaknesses of the art market and accelerated the decision-making process at the governmental level. On 21 February 1968, a painting long attributed to French master

Nicolas Poussin was put up for sale as a “school of Carrache;” a label that significantly contributed to lowering its market value. On the day of the sale, the *Direction des musées de France* invoked its right of first refusal to cancel the sale and purchased the work for 2,200 Fr. A year after, the Louvre exhibited the work as a genuine Nicolas Poussin. This decision prompted the prior owners to request the cancellation of the sale, as they felt they had been misled by the auctioneer. The trial lasted 19 years, after an unprecedented legal procedure that led to the cancellation of the first sale because of an error of substance.⁹

By unveiling critical information failure in the market, the Poussin case prompted the French government to implement legal measures to reduce the risks of experiencing similar situations in the future.¹⁰ The Marcus Decree, passed on 3 March 1981, followed a first proposition of law presented in 1974 by Deputy Claude-Gérard Marcus, an expert in old masters.¹¹ The French jurisprudence set a legal framework in order to regulate the use of headings generally exploited to label works put up for sale. By compelling all sellers and intermediaries to carefully describe any lots put up for sale by using an official glossary of terms, the goal was not only to provide buyers with clear information but to avoid misattributions and financial prejudices in case of lawsuits (Gaillard 1999; Fournol 2019). In this respect, the Decree tends to meet at least two of the three main components suggested by Shortland (2018) for effective governance of authenticity, namely standard setting (the scale of authentication) and enforcement dispute resolution (legal framework). Another interesting feature of this decree is that its legal content is largely inspired from the authentication system developed by top auction houses Christie’s and Sotheby’s in the late 1970s, confirming the idea that reputational mechanisms often precede regulation (e.g., Bernstein 1992; Fournol 2019). As a result, all systems share obvious similarities.

If at first glance, the penalty for non-compliance with the decree (€1,500) appears poorly prohibitive for multimillionaire auction houses, this penalty mostly applies should the Marcus Decree not be used as a guideline for the description of the lot. In the event of an actual error of substance—which may occur even when using the official terminology—the case falls under the law of contracts. Leading auction houses also offer protection to buyers in their *Terms of guarantee* to avoid being prosecuted hastily as it would prove detrimental to their reputation.

⁹ *Erreur sur les qualités substantielles, conviction erronée des vendeurs quant à la paternité d'un tableau se révélant a posteriori être de Nicolas Poussin.* See also, Code civil, Article 1110. Poussin CA. Paris ch. 1, 2 février 1976, Cass. civ. 1er 22 février 1978 et Cass. civ. 1er, 13 December 1983.

¹⁰ Note that at the time, Drouot was still the main actor in public sales. Christie’s and Sotheby’s were already settled in Paris with representation offices but did not hold public sales yet. The *Compagnie nationale des experts spécialisés en œuvres d'art* was created in 1971.

¹¹ *Décret n°81-255 du 3 mars 1981 sur la répression des fraudes en matière de transactions d'œuvres d'art et d'objets de collection. Modifications made by Décret n°2001-650 du 19 juillet 2001 pris en application des articles L. 321-1 à L. 321-38 du code de commerce et relatif aux ventes volontaires de meubles aux enchères publiques.*

This explains why art crimes are rarely pursued in courts and why parties favor private resolution leading to the nullity of the sale (Shortland and Shortland 2020).

3. The Impact of the Marcus Decree on the Art Market: Empirical Evidence

In this section, we reflect on the potential effects of the Marcus Decree on buying and selling practices in the French art market by looking at empirical data. In a market that gives great importance and value to authorship, the Marcus Decree can be viewed as an exogenous treatment that intended to reduce information asymmetry and uncertainty. Since the compliance with the Marcus Decree has become a legal obligation for all auctioneers and art dealers active in France, we may expect a reinforcement of the domestic art market. In principle, three key components, discussed in the next subsections, should have been affected by this new regulation: due diligence, attribution practices and volume of sales, and value of sales. Yet, before addressing these points, three endogenous parameters must be discussed in order to better gauge the decree's potential impact.

Firstly, the *size and nature of the art market* in France must be considered. Even though Paris was long a leading platform of the art market, London and New York became the new leading centers in the aftermath of World War II, where major pieces, including European Old Masters, are now traded. According to McAndrew (2019), in 2019, France ranked fourth for the sales of European old masters, with respectively 5.1% in value and 10.1% in volume, against 50% and 21.3% for the UK, 31.3% and 18.8% for the US, and 5.4% and 8.2% for Austria. As shown by these ratios, quantity seems to prevail over quality in France. When high-quality old master paintings appear on the market, these works are usually auctioned in London or New York. Appendix 1 provides descriptive statistics that confirm this trend for our sample of early Flemish paintings. The UK represents the largest volume. Average prices for autograph works are higher in the US and the UK than in France and the other countries. In all countries, autograph works are on average more valuable than non-autograph ones, with the latter being proportionally more represented. Autograph works sold in France (\$167,559) are also statistically less expensive than in the UK (\$263,768) and the US (\$313,085), but more valued than in other European countries (\$99,110). A similar trend is observable for works of unknown or uncertain authorship. The average value for non-autograph works in France is \$36,881, for \$44,552 in the UK, \$45,846 in the US and \$26,706 in the rest of Europe. In France, autograph

works account for 27.3% of the sample, against 43% in the UK, 38% in the US and 33% elsewhere, which confirms that non-autograph works are the most represented in each country. This does not mean that good-quality pieces never appear at auction in Paris. Yet it is safe to say that the art market in France better reflects the middle- and low-end markets, while the high-end market is mostly represented by the UK and the US. In the middle- and low-end segments where enforcement mechanisms are usually less at stake, less-specialized agents must deal with hundreds or thousands of less-valuable art objects, for which getting comprehensive information can be costly and time consuming (Marrone and Beltrametti 2020). Put differently, search costs can rapidly exceed the final price of the goods, with potential monetary loss.

Secondly, the *epistemic context* in which the Marcus Decree was implemented is also important. The early 1980s correspond to a turning point for both scholarship in Old Masters and the art market. The 1970s, witnessed a change of paradigm that durably contributed to increasing the interest in artworks from uncertain authorship such as studio's works. Since the art market strongly relies on scholarship in art history, Christie's and Sotheby's had no other choice than to align with international scientific standards. The urge to harmonize their attribution practices was meant to enhance their reputation at an international level and to increase their market shares. As a duopoly, Sotheby's and Christie's had also incentives to reach a relative consensus in their attribution practices, which explains why both systems are extremely close. In light of this, there is no surprise that the French senate decided on regulating the domestic market, by issuing almost simultaneously a decree openly inspired from Sotheby's and Christies' practices. The Decree's exogeneous power might thus not be as strong as expected.

Thirdly, and linked to the previous argument, the role of *compliance mechanisms* should not be minimized. Compliance mechanisms require leading private agents or firms to invest in their reputation in order to be viewed as the reference in their sector. Markets that follow similar development have therefore strong incentives to lay down harmonized policies (Huberman and Meissner, 2010). By learning from competitors' practices, emulation contributes to boost global competition. In the absence of national or transnational regulations, attribution standards have become those of leading auction houses, i.e., Christie's and Sotheby's. The simultaneous globalization of the art trade has certainly intensified the spread of informal but homogeneous attribution practices, which have progressively been assimilated by most national markets. For business purposes, auction houses have therefore strong incentives to align with sectorial standards. This is what Chaserant and Harnay (2015) call the snowball contagion effect, namely when the supply of more transparent information creates psychological incentives for

compliance. By complying with informal rules, art market stakeholders improve the collective reputation of the profession (Loge 2014). If provincial auctioneers cannot always afford what leading auction houses invest in the authentication process, they can at least embrace similar attribution systems and seek other experts' opinion as much as possible (McKendrick 1992). Our research reveals that most attribution qualifiers promulgated by the Marcus Decree were already encountered in the international auction market before the 1980s. The spreading and assimilation of rules emanating from private governance therefore explain why the attempt to capture the effect of the Marcus Decree at a national level may be doomed to fail.

In the next subsections, we gauge the effectiveness of the regulation by looking at empirical data related to due diligence, attribution practice and volume and prices.

3.1. Due Diligence

If the Marcus Decree was considered as binding by market participants, one would expect sellers to be more diligent when bringing an artwork to the market, with more research effort aiming to support the given attribution. Evidence of further research efforts could be references to academic publications, additional information on the work's provenance (previous ownership and exhibition history), and output from technical examination using scientific technologies. Table 1 lists a series of items regularly considered as useful to authenticate artworks. Before 1981, the proportion of works for which these items were mentioned is very small. By contrast, after 1981, this figure increases substantially.

Table 1. Evidence of Certification in the French Art Market (Before and After 1981)

Certification process - France	Before 1981 (obs. 252)	Perc.	After 1981 (obs. 1150)	Perc.
Provenance	0	-	102	8.7%
Publications	0	-	50	4.4%
Exhibition history	0	-	16	1.4%
Certificate/expert	0	-	2	0.2%
Signature	13	5.2%	75	6.5%
Date	6	2.4%	61	5.3%

According to our data set, cataloguers did not provide systematically evidence of authenticity (provenance, exhibition history and publications, certificate) before 1981, suggesting limited research effort. At the time, the main evidence of authorship were date and signature, although

early Flemish paintings are known for being rarely signed and dated. The post-1981 period reveals that cataloguers began to pay greater attention to authenticity and quality signals. Provenance was mentioned in 8.7% of the cases, and references to publications in 4.4%. Even though proportionally small in percentages, the presence of these elements reflects a clear change in practice. Throughout the 1980s, Christie's and Sotheby's engaged with new marketing strategies including the publication of scholarly documented auction catalogues. Hence, the improvement in cataloguing practices should not be interpreted as the sole consequence of the Marcus Decree. But the increase in France is such that at least part is very likely due to the Marcus Decree. The absence of paintings examined through scientific technologies also tends to confirm that high-quality works rather sell in London or New York.

3.2. Volume of Sales and Attribution Practices

Since the authentication of artworks was not regulated before 1981, one might expect in theory a higher rate of “optimistic attributions” reflected in the French art market by more autograph works sold before 1981 (i.e., works executed by the artist's hand). After this turning year, and because auction houses are now subject to penalties if they do not comply with the decree, they may have increasingly opted for less-risky attribution qualifiers in order to avoid this risk. Theory would suggest, if the Decree was effective, an increase in volume of non-autograph works, and of spatiotemporal designations in particular (i.e., the less-risky attribution). Table 2 provides descriptive statistics on attribution practices in different countries before and after 1981.

Table 2. Sample Distribution by Identification Strategy and by Country, Before and After 1981

	FR (1,403 obs.)		UK (4,544 obs.)		US (1,510 obs.)		OTHERS (4,253 obs.)	
	BEFORE 1981							
	Obs.	Percent	Obs.	Percent	Obs.	Percent	Obs.	Percent
AUTOGRAPH Names	73	28.97%	950	87.24%	83	28.14%	402	58.35%
NON-AUTOGRAPH Indirect names	147	58.33%	102	9.37%	195	66.10%	210	30.48%
Spatiotemporal designations	32	12.7%	37	3.40%	17	5.76%	77	11.18%
Total	252	100%	1089	100%	295	100%	689	100%
	AFTER 1981							
	Obs.	Percent	Obs.	Percent	Obs.	Percent	Obs.	Percent
AUTOGRAPH Names	308	26.76%	1,010	29.23%	485	39.92%	965	27.08%
NON-AUTOGRAPH Indirect names	672	58.38%	2,130	61.65%	614	50.53%	1,991	55.86%
Spatiotemporal designations	171	14.86%	315	9.12%	116	9.55%	608	17.06%
Total	1,151	100%	3,455	100%	1,215	100%	3,564	100%

Several observations stand out. Before 1981, the UK was the leading market in volume for Flemish old masters with more than 1,000 sales, far above France (250) and the USA (295). At that time, there was also a great cross-country disparity regarding the proportion of autograph works. For France and the USA, this proportion was slightly above 28%. By contrast, for the other countries, more than half the works were presented as autograph, with a proportion reaching a staggering 87% in the UK. These large differences reflect more optimistic attributions in the UK than in France and the USA. Unsurprisingly the other categories also show vast discrepancies, with non-autograph works representing more than 58% in France and 66% in the USA. As for spatiotemporal designations they were most often encountered in France and the other countries group, which are arguably more representative of the middle- and low-end art market.

Yet, the most striking element in Table 2 is the sharp change in attribution observed after 1981. The most important variation occurs in the UK with autograph works dropping from more than 87% to less than 30%. At the same time, the proportion of indirect names jumps to

more than 61%. The “other countries” group follows a similar pattern with a drop in autograph works and a simultaneous increase in non-autograph ones. The situation in the USA stands in sharp contrast with an increase in autograph works and a decrease in non-autograph ones. In parallel, the share represented by the lowest category increased in all countries (i.e., spatiotemporal designations). One witnesses thus a general change in the description of artworks. In France, on the contrary, no obvious shifts in the use of each identification strategy can be detected. In this regard, our data advocates for a relative *status quo* in France unlike in the other countries where more substantial developments are visible after the early 1980s. France is therefore an outlier as the only country with no statistically significant change in proportion.

To better understand the longitudinal dynamics of these changes Appendix 2 depicts the yearly change in proportion for each country (France; UK, USA, other countries). The situation in France is characterized by a relatively stable proportions of autograph works. The Marcus Decree has thus not imposed any visible pattern on the data. The situation differs sharply in the UK. At the beginning of our sample most works were sold as autograph. From 1972 to 1980 the proportion remains relatively stable but experiences a dramatic drop starting in 1983. This drop can be explained by several factors. The late 1970s and early 1980s correspond to the transitory period during which Christie’s and Sotheby’s progressively moved towards a more transparent authentication system, articulated around standardized attribution qualifiers. While the opacity of their prior system may have led to over-optimistic attributions, the new system drastically limits the risk of opportunistic behaviors in authenticating paintings. This is visibly reflected in more cautious attributions (i.e., indirect names and spatiotemporal designations). One could argue that the implementation of this new system by Sotheby’s and Christie’s around 1981 may have been prompted by discussion related to the Decree in France. Evidence however shows that Sotheby’s Parke Bernet already implemented their new scale of authentication in 1979. Instead of being a reaction to the Marcus Decree it seems rather to be an endogenous market answer to a more pressing demand regarding authenticity. Another reason likely to explain the drop in autograph works sold in London is the growing importance of New York. While London has long been the heart of the high-end market for old masters, the great boom experienced by the art market in the 1970s led to the reallocation of market shares, especially towards New York where prices became extremely competitive (Wood, 1997). This shift tends to be reflected in a more balanced volume of sales between the UK and the US. The reallocation of major sales from one leading center to another may therefore be viewed as the result of a competitive strategy from leading auction houses. Finally, one may argue that both the US and

the French art markets show relatively similar patterns, with proportions of autograph works ranging constantly from 20% to 40% since the 1970s. Interestingly, a common feature of both markets is that authentication issues led to court cases with international media exposure, forcing auctioneers to operate more carefully. The most mediatized trial in the US was linked to the scandal around a later copy of Da Vinci's *La Belle Ferronière* in 1921, offered to the Kansas City Art Institute as an original but reattributed shortly after by British art dealer Sir Joseph Duveen.

For the next decades, all markets are characterized by reasonably stable ratios of autograph artworks, ranging on average between 30% and 40%. The slightly higher volume of autograph work sold in New York in the 2000s tends to confirm the city's leading position in the market for old masters. These ratios suggest a more cautious approach towards authorship when dealing with early modern paintings, which is consistent with recent advances in technical art history. Concerning non-autograph works, indirect names take over almost all the ground left by autograph ones. Spatiotemporal designations only begin to appear regularly after 1990 in the US and the UK. For the other countries (including Belgium, Germany, Italy, Spain, the Netherlands, Switzerland), the proportion of autograph names is high at the very beginning of the sample but experiences a decrease after 1977, offering a similar pattern as in the UK. The proportions of autograph works remain relatively stable afterwards, while those of non-autograph works spikes, illustrating the compliance mechanisms evoked in point 3.2. Spatiotemporal designations are encountered for the whole sample and also tend to remain stable over the years.

Our data suggest therefore that the Marcus Decree had a marginal effect on attribution practices in the market for Early Flemish paintings in France. The steadiness of non-autograph and autograph works tends to indicate that the Decree simply put into law an existing practice. The Marcus Decree then cannot be viewed as a fully innovative and strong exogenous treatment that has profoundly transformed the landscape of attributions in France. Our data reflects the existence of older similar practices, which have probably been enhanced and strengthened by the decree. In fact, the Poussin Affair and the epistemic context of the time may have prompted market participants to exercise caution well before the law forced them to do so.

3.3. Value of sales

Whereas the impact of the Marcus Decree on the French art market seems limited in terms of attribution practices and volume of sales, it may have affected the quality of artworks sold in

France with corollary effects on prices. By guaranteeing the artist's name, the Marcus Decree should, in theory, have increased certainty about authorship in the art market, and by extension, buyers' confidence. This higher confidence should in turn have led to a higher willingness to pay for autograph works. As a result, prices on this market segment may have increased. For non-autograph works, the theory would expect either a *status quo* or a decrease in value, for the Marcus Decree may have assigned unnamed works to less-appealing categories and reduced the possibility of reattribution. More scrutiny reduces indeed the likelihood to find so-called sleepers, which explains why some auction prices for non-autograph works sometimes largely exceed presale estimates.¹² Table 4 provides the mean and the median prices for the different countries before and after 1981.¹³

Table 3. Mean and Median Prices by Identification Strategy and by Country, Before and After 1981

	FR (1,403 obs.)		UK (4,544 obs.)		US (1,510 obs.)		OTHERS (4,253 obs.)	
	BEFORE 1981							
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
AUTOGRAPH Names	170,913	57,433	96,105	20,212	157,918	45,705	70,936	33,012
NON-AUTOGRAPH Indirect names	46,904	26,755	67,840	29,242	20,696	10,447	22,502	12,671
Spatiotemporal designations	45,439	33,647	34,364	23,877	27,342	26,074	41,684	30,259
Total obs.	252		1089		295		689	
	AFTER 1981							
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
AUTOGRAPH Names	167,404	56,171	421,971	101,116	340,256	98,415	112,145	37,055
NON-AUTOGRAPH Indirect names	37,519	16,677	40,976	16,123	45,990	19,643	26,458	12,572
Spatiotemporal designations	25,290	15,678	62,179	21,578	89,797	25,479	24,064	13,978
Total obs.	1,151		3,455		1,215		3,564	

¹² Sleepers are works whose outstanding authorship has not been discovered yet.

¹³ With systematic t-tests ran for the average prices between groups.

As previously, the Marcus Decree seems to have had almost no impact in France. Autograph Flemish paintings reveals an unexpectedly steady average price before and after 1981 (from \$170,913 to \$167,404, (with $t=0.0097$ and p value = 0.9922)). This is in sharp contrast with the UK and the US. In the US, the mean price of autograph works increases significantly even though the percentage of works remain stable. In the UK, the mean price jumps from 96,105\$ to 421,971\$. This increase reflects at least in part a stricter definition of autography, as evidenced in the percentage of works presented as autograph. These mean prices also confirm the preeminent role played by the US and the UK in this market segment. This trend not only reflects the rarefaction of genuine works, but also a greater care in authenticating art to avoid prosecution. While before 1981 the mean price in France was higher than in any other countries, the UK and the US largely overtook France after 1981. At that time, French mean prices for autograph works were indeed much closer to the prices observed in the “Other countries” group than in the UK or in the US. For non-autograph works the variation across countries is smaller after 1981 than before, suggesting a more integrated market. Most interestingly, the mean prices of indirect names drop and end below the mean prices of spatiotemporal designations. This observation not only suggests a greater mobility of good-quality works between attribution categories but also new consumption patterns that value quality over the actual attribution. In the US, the relationship between the mean prices of spatiotemporal designations and indirect names is the same. In both cases, the proportion of spatiotemporal designations increases over time. For the spatiotemporal designations, the French mean prices are once again closer to the mean of the group of other countries.

To provide a more granular overview of the market in France, a final step consisted in further looking at the auction houses active within the domestic market. One could indeed suspect different effects depending on the reputation of the auction house. Prestigious French auction houses may have been less affected by the decree because their reputation served already as a guarantee for potential buyers and sellers. Neither volume of sales nor prices were affected by this change in competition, with only few and far between statistically significant changes. Interestingly, and although they must comply with the French regulation, Christie’s and Sotheby’s Paris have not felt the need to adapt their glossary of terms.

The Marcus Decree seems thus to have had a limited direct impact on the economic value of old master paintings sold in France. While the average prices of artworks increased in the other markets, they remained impressively stable in France. Thus, art market participants did not perceive any immediate benefit of buying and selling old masters in France. Or to be more precise, as long as their works were of sufficiently high quality to be accepted by a leading

auction house, these benefits did not outweigh the prospects of higher expected prices abroad, where the markets were more liquid. Further analyses carried out on our sample indeed suggests that barely more than 10% of autograph works by important Flemish masters are sold in France, while the rest goes to the UK and the US. Sellers who own autograph and good quality works therefore tend to sell their goods in unregulated markets, where attributions are not legally guaranteed, but the reputation of the intermediaries is very strong, and where buyers are willing to purchase these works more aggressively. The authentication system and terms of guarantee set up by Christie's and Sotheby's seem thus to meet the expectations of both buyers and sellers. Put differently, the regulating instrument implemented in France, which ensures the legal protection of the stakeholders, is not particularly more efficient than private governance. On the other hand, the drop in value observed for non-autograph works tends to support our assumption that the Marcus Decree, because of its rigid certification system, could reduce the probability of positive externalities such as rediscoveries or sleepers, in a market that needs flexibility and some grey area to be competitive. Another possible explanation is that buyers active in the French art market are purchasing works whose average quality and value does not justify such a price increase. Indeed, the condition of authorship becomes particularly valuable when it is associated with highly sought-after artists' names. For these names, the guarantee of authorship is crucial and can make significant price differences.

Conclusion

Our paper contributes to the literature on the role of regulation and reputation in uncertain markets, and more specifically in the art market. There is indeed a compelling agenda in art market research to better understand which reputational and regulatory mechanisms come into play in this marketplace and how they interact. Through this paper, we do not only look at the implications of a national regulation on a local market, but we connect it with the key notion of reputation by analyzing the role of regulation versus market mechanisms. We focus on the Marcus Decree—a French Decree that regulates the authentication process of artworks since 1981—and the self-regulated authentication systems developed by Christie's and Sotheby's. Our empirical analysis, using sales of painting by Flemish Old Masters, suggests that the implementation of the decree in France did neither significantly strengthen the market for autograph and non-autograph works, nor radically modify the landscape of attributions. Quite to the contrary, similar and even stronger trends in prices and volumes are found in other European countries and in the US, both of which have experienced a visible growth over the

past decades. These primary results are based on a sample that only represents a fraction of the whole population of works concerned with attribution issues, further research is therefore required to corroborate the current findings. Our results suggest nonetheless that regulation had a very limited impact.

We argue that this moderate impact stemmed from several factors. The size and nature of the art market in France (low and middle ends), the synchronous development of technical art history, the progressive globalization of the art market, Christie's and Sotheby's reputation and leadership, as well as compliance mechanisms in the tertiary business are endogenous factors that contributed to dissipating and mitigating the impact of the Marcus Decree in France. The prompt reaction of the French senate after the *Affaire Poussin* and its willingness to regulate the art trade, however, contributed to enhancing the international reputation of the French art market and reinforcing the low- and middle-end markets where brand building and enforcement mechanisms are less encountered. In addition, critical views on current authentication system and practices are addressed.

Our study supports the statement that the art market is a reputational market, where enforcement mechanisms initiated by leading stakeholders can substitute for regulatory instruments (Shortland and Shortland 2020; Meisel 2010). When it comes to attribution, Christie's and Sotheby's have succeeded in developing their own rules and establishing themselves as duopoly of quality certifiers in the tertiary market. Our study also supports Beckert (2020, p. 8)'s argument that "confidence is the belief in the credibility of a narrative of the alleged quality of the product. By creating confidence in a multitude of actors, a narrative becomes a convention. In financial markets, as in the art market, assessments of quality are not stabilized primarily through institutions that aim to produce trust, but rather through institutions that produce confidence." Reputation building is however an on-going process, and any breach of the principle of trust may be irreversibly damaging.

Our research also suggests that neither reputation nor regulation can solve all authentication issues in the art market. For the vast majority of old master works are nothing but (meta)-credence goods. At best, reputation and regulation can help reduce opacity and information asymmetry and offer moderate guarantees to the buyers (Bandle 2016). As gatekeepers of the art market, leading auction houses are expected to provide the most accurate and reliable attributions, with respect to the economic premise that honesty is the best policy (Milgrom and Weber 1986). To a certain extent, and alike cultural institutions, auction houses tend to contribute to serving public interest (Lynch and Singer 1994). Yet, the sale of the De Vinci's *Salvator Mundi*, sold as an autograph work although its authorship was seriously

disputed amongst experts, is a compelling example of risky undertaking and moral hazard on the art market (Ekelund et al. 2020). If reputation and regulation can help reduce information asymmetries, none is sufficient to guarantee authenticity, especially for art pieces executed before 1870. Attributions at best only represent a consensus amongst experts at instant t . By purchasing (meta)-credence goods in local, national or international markets, buyers take the risk of seeing the attribution of the works change over time, along with art historical and technological advances. In case of positive reattributions, positive returns may be expected, while in the opposite scenario, the market value is likely to plummet. Such a change, however, does not affect the visual, material and aesthetic characteristics of the work.

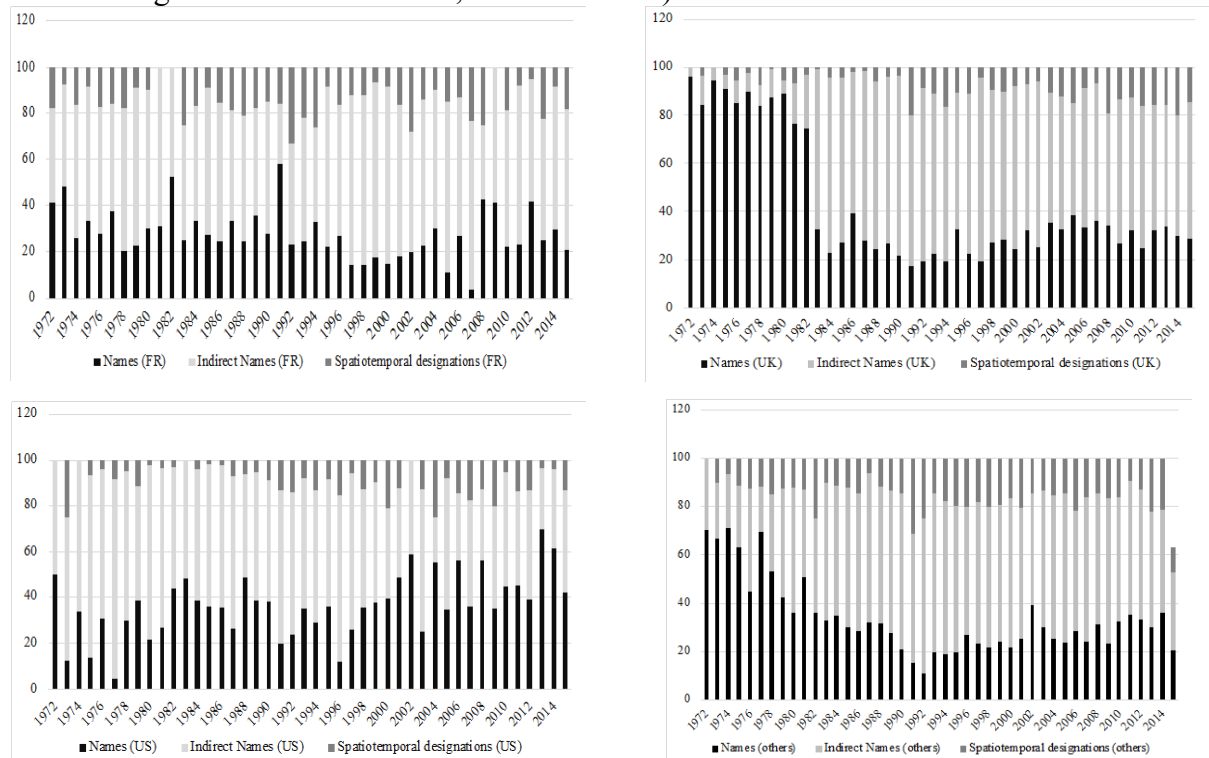
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Appendices

Appendix 1. Data summary for autograph and non-autograph works in France, UK, US, and other European countries

	France	UK	US	Other countries
All				
<i>Autograph</i>				
No. Of observation	384	1,962	569	1,384
Average price	167,559	263,768	313,085	99,11
Min.	1,267	560	940	953
Max.	3,959,556	1.08e+07	5,160,854	4,424,080
Standard deviation	345,594	813,397	628,942	263,754
<i>Non Autograph</i>				
No. Of observation	1,019	2,582	941	2,869
Average price	36,881	44,552	45,846	26,076
Min.	1,054	848	721	218
Max.	1,363,682	3,737,880	3,608,563	2,080,518
Standard deviation	72,529	124,314	145,99	62,528

Appendix 2. Volume of Sales by Identification Strategy between 1972 and 2015 (France, United Kingdom and United State, other countries)



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