

Valuing European Tapestry: From Riches to Rags

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Abstract

To counteract the longstanding bias toward paintings, this paper offers a preliminary, diachronic exploration of the market for European tapestries. By combining qualitative and quantitative data from sales and collection inventories, historiographical sources, and secondary literature, we shed light on past and present valuation mechanisms for this once esteemed luxury good. First, we discuss the supply of tapestries in the Early Modern period before examining demand. We then consider buyers' main motivations to commission woven works, including ostentation, devotion, lifestyle, and national identity building. Furthermore, we examine the characteristics that drove the medium's market value in the past, such as city brand name, technique and material, size, genre, and condition. We also investigate the variables that still influence buyers' willingness to pay in the contemporary auction market. The main contribution of this research is to highlight lesser-known works and markets that originated in the Early Modern period and that still represent a distinct segment of the art market in the present.

Keywords: European Tapestry – Textile art – Supply – Demand – Buyers' motivations - Market value

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Introduction.

European tapestries have long been regarded as the most exquisite and costly works of art, marketed as a luxury goods throughout the Early Modern period (Campbell, 2002; 2007; Brosens, 2013). Despite being at the center of a thriving industry that emerged in the fourteenth century, this unique medium, resulting from human creativity and skill, has surprisingly received little attention in cultural economics literature, which has tended toward fine arts and, particularly, paintings. The goal of this contribution is to shed light on the valuation mechanisms of this unique—albeit overlooked—medium and the economic factors that shaped the supply and demand sides of the market from a diachronic perspective.

Recent economic literature dedicated to the history of art markets has so far left little room for examining media other than painting. Indeed seminal works that have sparked new interest in research at the intersection of economics and art history—including Montias (1982) for the Dutch Golden Age; White and White (1965) and North and Ormrod (1998) for France; Goldtwaihe (1995) for Italy; and later, Vermeulen (2003) and De Marchi and Van Miegroet (2006) for the Southern Netherlands—were originally devoted to the markets for paintings. Building upon these pioneering contributions, cultural economists have further explored the mechanisms of supply and demand for visual arts in historical contexts, providing valuable complementary insights to the work of art historians. By applying methods traditionally used to analyze the contemporary art market to historical data, economists have contributed to the history of the art trade by exploring various economic issues, such as price determinants (Etro & Pagani, 2012; Etro, 2018), attribution issues (Van Miegroet & Radermecker, 2023), artists' labor markets and contracts (Etro et al., 2015; Etro & Stepanova, 2016; Piano, 2022; Piano & Piano, 2023), the role of Salons (Seave Greenwald, 2019; Saint Raymond, 2023), art dealers' stock management strategies (David et al., 2022), and even gender inequalities (de Beyssat et al., 2023). Despite remarkable advances in this field of research, a notable observation arises that the overwhelming majority of these works are exclusively dedicated to painters and paintings; it is no coincidence that these are also the most represented in art historical archives. Within the conventional category of fine arts, even sculpture and works on paper have received limited attention, not to mention decorative arts, which are conspicuously absent in cultural economics. Even in art history, this latter category of goods, to which tapestry long belongs, is marginally represented. When studies of tapestries do appear, it is most often through a case-study-based approach that is typical of the art historical discipline. Inevitably, these biases tend to hinder our understanding of the horizontal segmentation of past art markets (Alvarez de Toledo & Radermecker, 2020).

There are two main factors that elucidate the lack of research on fine European tapestries in both art history and cultural economics. Firstly, tapestries are complex works of art, situated at the intersection of fine arts and crafts, and they have long been categorized among other decorative and applied arts. These goods notably differ from fine arts due to their functional characteristics, which were intended to enhance the living environment of their owners. Regardless of their formal, aesthetic, and material qualities—which encompass both artistic ability and craftsmanship—decorative and applied arts serve, or have historically served, specific functions. For example, a gilded clock was crafted to indicate time, a silver teapot was used to hold beverages, a finely painted porcelain plate was designed for dining, a crafted silver chandelier was intended to hold candles and illuminate one's surroundings, while a wall tapestries were used to insulate a room and preserve warmth. Due to these functional characteristics, tapestries, and many other forms of decorative and applied arts, have been excluded from the category of fine arts, irrespective of their artistic value.

The marginalization of decorative and applied arts has had direct effects on historiography, which has long regarded tapestry as inferior to painting. Although the first evidence of weaving can be traced back to Ancient Egypt in the fifteenth century BCE, the *art* of tapestry experienced unprecedented developments during the late Middle Ages and the Early Modern period. The increasing demand from the French courts for luxury wall hangings played a pivotal role in the development of production centers such as Arras in the 15th century, particularly under the patronage of the Dukes of Burgundy. Other cities, including Tournai, Brussels, Antwerp, Oudenaarde, Aubusson, and Paris (home to the Gobelins royal manufactory), rapidly emerged throughout the 16th and 17th centuries, as prominent centers of tapestry-making, gaining international recognition (Campbell 2002; 2007). Interestingly, Giorgio Vasari was one of the first to point out the ambivalent status of tapestry by explicitly defining, in his *Vite*, the medium as “woven, portable paintings” (Vasari, 1568 [1912–15], 1:xxvii). The supremacy of painting also resulted in limited research on tapestry until the late nineteenth century, when some art historians, including Alexandre Joseph Pinchart (1823–1884), Jules Guiffrey (1840–1918), and Eugène Müntz (1845–1902), endeavored to retrace the history of the medium and restore its merit (Guiffrey et al., 1878–1785; Müntz, 1880; 1876). The study of tapestry gained some momentum in the late twentieth century, with scholars approaching woven works through a connoisseurial, iconographical, and stylistic approach inherited from the study of fine arts (e.g., Standen, 1985; Delmarcel, 1999). In the twenty-first century, under the impetus of art market studies and the digital humanities, tapestry historians have paid increased attention to the ecosystem in which European tapestries were designed, executed, traded, and consumed. Delving into archival records, these scholars have documented crucial aspects of tapestries’ value chains, including the development of the tapestry trade in Brussels and Antwerp (Puttevils, 2016; Brosens et al., 2018; Evans, 2019), the existence of complex professional networks (Brosens et al., 2017), the export and marketing of Flemish tapestry to France (Brosens, 2005; 2012), and the issue of demand uncertainty and quality control (Brosens, 2014). Recent major exhibitions, restoration campaigns, museum acquisitions, and historical events (e.g., the 500th anniversary of Raphael’s death) have also contributed to renewed interest in these once highly prized works of art (Campbell, 2002; 2007; Brussels, 2017). Most importantly, the maturation of tapestry studies has led to a profound reevaluation of the medium’s mastery, with tapestry now being recognized as a fine art.

Secondly, despite notable progress in European tapestry scholarship, most studies still predominantly rely on qualitative analysis, with sporadic estimates provided to illustrate the exceptional historical value of these luxury goods. However, due to the lack of comprehensive and consistent datasets, these estimates often remain approximate from an economic perspective, sometimes leading art historians to make reductive comparisons. One of the most famous examples is that of the Sistine Chapel ceiling (1508–1512), commissioned by Pope Julius II for 3,000 ducats and reported by Ascanio Condivi in his *Biography of Michelangelo* (1553). While this sum was substantial, it pales in comparison to the amount Pope Leo X paid for the execution of ten Brussels tapestries depicting *The Acts of the Apostles*. This series was based on ten cartoons by Raphael produced between 1515 and 1516/17, and estimated at 1,500 ducats each or 15,000 ducats in total (Campbell, 2002; Fermor, 1996). These costs did not even include the materials for executing the tapestry, and, by contrast, Raphael received nearly 1,000 ducats for completing the *Santa Cecilia* altarpiece commissioned for the Bolognese Church of San Giovanni in Monte (1514), and 855 ducats for his *Transfiguration* altarpiece (1516) (Shearman, 2003). Similarly, the *Story of David* series, produced in Brussels for Henry VIII in 1528, was said to equal the worth of a battleship (Campbell, 2007b). Although informative, these examples offer limited information about the real value of tapestry in the past and prevent researchers from drawing generalizable conclusions. Furthermore, these examples are mostly concerned with the finest woven pieces, leaving beside the vast majority of less prestigious

works, which were more representative of the tapestry economy. In other words, one of the main reasons why economists have not studied the tapestry market is the lack of available and reliable data. Arguably, this issue is not exclusive to tapestries and previous research on the history of art markets has already emphasized the challenges of accessing comprehensive datasets (Van Miegroet et al., 2019), such as matched employer-employee data (Etro et al., 2015) or robust samples that enable scholars to conduct quantitative tests of theoretical models (Piano, 2022). Yet, paintings remain the most extensively documented medium in old sales catalogs and collection and probate inventories; they have therefore received more attention at the expense of other art forms. Despite their copious presence in past households, decorative arts still lack systematic compilation in institutional databases. As a result, data related to tapestries are not only scarce but also unevenly documented—with recording systems and information varying significantly across the periods, regions, and types of sources, covered—thus hindering researchers from building a longitudinal, data-driven history of tapestries.

We, however, strongly believe that the current lack of data should not prevent cultural economists from examining other market segments that were integral to the Early Modern economy of the arts. Tapestry appears as a relevant case study due to the characteristics the medium shares with painting, while also possessing distinct attributes that necessitated its own valuation mechanisms. The medium is also interesting from a cultural economics perspective in that it experienced one of the most significant shifts in perceived value in the history of the arts. Using data from various sources (e.g., sales catalogs, collection inventories, historiographical sources, secondary literature) and a mixed method (e.g., exemplification and quantitative analysis), this paper delves into past and present valuation mechanisms for European tapestries. Our objective is to shed light on both the supply and demand sides of the tapestry market, with a particular emphasis on how tapestries were evaluated in historical contexts and how they are presently valued. To examine past valuation mechanisms, we disentangled the main characteristics of the medium (i.e., formal, aesthetic, material, functional), which provided utility to buyers and could, consequently, influence willingness to pay. While retracing the reception of European tapestries over the past five centuries is out of the scope of this paper, we aim to provide empirical evidence from different periods and contexts to illustrate what affected tapestries' market value. Each characteristic is discussed using written evidence from archival sources and data analysis outputs when available. The narratives used in this essay primarily stem from the work of tapestry historians who have conducted extensive research in archival repositories, enabling them to retrieve critical testimonies pertaining to tapestry history. Our paper distinguishes itself from this body of prior research by offering the first exploratory, econometric analysis, using unexplored data from the Getty Provenance Index (hereinafter, GPI), and contemporary auction houses. We investigate five distinct datasets (eighteenth-century French and British sales, eighteenth-century French and Italian inventories, nineteenth-century French sales, and twenty-first-century global sales) through descriptive statistics and, when possible, hedonic regression. For the contemporary evaluation of tapestries, we developed an adjusted model specification aimed to more accurately capture the idiosyncrasies of this complex medium.

This essay makes several contributions. First, we focus on a less familiar creative industry that emerged centuries ago. While the painting business in historical contexts has already been explored as a precursor to creative industries (e.g., De Marchi & Van Miegroet, 2006; Vermeulen, 2003), our essay highlights a labor- and capital-intensive, time-consuming enterprise that was particularly subject to risky entrepreneurial behaviors (Brosens & Slegten, 2019; Brosens, 2014; Turner, 2013; Buchanan, 1992). Characterized by a complex organizational structure and fierce competition, the tapestry industry provides insights into situations of quality uncertainty and information asymmetries in the market for luxury goods,

while also offering compelling examples of state interventions in the history of art markets. Secondly, by looking at a traditionally overlooked market segment and its valuation mechanisms, our paper contributes to a growing literature on price formation. To date, only a minority of economic research has attempted to empirically explore the market for decorative and applied arts. For example, Bauwens and Ginsburgh (2000) use a sample of silverware, although chiefly to assess the validity of presale estimates and to identify potential expert bias. Draper et al. (2013) studied related items in their work on junk silver to assess the impact of silver's gross value on sales prices. Renneboog and Spaenjers (2012) focused on diamonds and gems, controlling for each item's carat, color, clarity, and cut. Looking at indeterminate works of art—a category that encompasses many late medieval and Early Modern tapestries—Radermecker (2021; 2019) demonstrated that a typology of designations locating the works in space and time can help to understand the economic value of goods whose main predictive variable (i.e., the artist's name) is absent. However, none of these papers consider the market reception of decorative and applied arts from a historical perspective—a gap that our paper intends to fill. Thirdly, our work touches on the history of taste through the lens of an unusual medium. Existing literature on the economic history of taste primarily focuses on individual and collective preferences for paintings (Reitlinger, 1961; Carpreau, 2017), the stability of canons established historiographically over time (Graddy, 2013; Ginsburgh & Weyers, 2006a; 2006b; 2010), or the rediscovery of painters who temporarily fell into oblivion (Ginsburgh et al., 2019). Among this body of work, the reception of other media has largely been neglected. In this paper, we consider the socioeconomic factors (i.e., technological innovations, changes to lifestyle, and substitute goods) that have contributed to shifts in the perceived and economic value of tapestry over time.

The remainder of this paper is organized as follows. Section I revisits recent works in cultural economics that have focused on the market for paintings in the Early Modern period and in the nineteenth century. We discuss why, in the current state of research, tapestries are not always conducive to such analyses. To support our argument, we introduce, in Section 2, the main characteristics of the supply side of tapestry in earlier contexts and explain how these goods were technically produced. Section 3 explores the demand side of the European tapestry market by considering buyers' main motivations in commissioning these goods, primarily ostentation, devotion, lifestyle factors (e.g., mobility, acoustic properties, and insulation), and national identity building. In Section 4, we delve deeper into the formal, aesthetic, and material characteristics of tapestries that could influence buyers' historical willingness to pay. We predominantly discuss authorship and city brand names, techniques and materials, size, genre, and condition, systematically emphasizing how these characteristics differ from those of paintings. A similar, though more developed, analysis is then conducted for the contemporary market in Section 5. The final section concludes the paper.

1. Literature Review: The Primacy of Paintings in the Study Art Markets History.

In this section, we discuss recent contributions dealing with the economics of art history. Despite similarities between both media, we contend that certain approaches and research questions that prove effective in the context of painting may fall short when applied to tapestry.

Scholarly attempts to investigate market mechanisms in the Early Modern period originated with Montias and his groundbreaking work on Dutch artists. The originality of Montias's work resided in his quantitative analysis of the art market, which incited future generations of researchers to further combine theories, tools, and data from both economics and art history. Increased data availability, facilitated by the digitalization of art historical archives

(especially through the initiatives of the Getty Research Institute), has enabled economists to lend new magnitude to research on the history of art markets. Several economic theories (e.g., reputational and principal-agent theories and Schumpeter's creative destruction) and methods employed to investigate the contemporary market for paintings have been transferred to historical markets, enabling researchers to study the reception of this medium from one context to another. The abundance of paintings within archives further facilitated this process, albeit at the expense of under-documented art objects. As both Etro (2018) and Piano (2022) have acknowledged, painting has held a dominant position as the "queen art form" since the Early Modern period and overshadows other historically favored goods, such as mosaics and tapestries. The lack of comprehensive datasets (consisting of sales data, inventories data, commission contracts, etc.) therefore makes the quantitative study of the latter categories particularly challenging. As a result, the systematic replication of existing research on the tapestry market is rarely feasible due to this major weakness as well as to the medium's unique attributes. Nevertheless, reviewing recent research on the economic history of paintings can provide useful research directions with which to approach the tapestry economy.

Etro and Pagani (2012) achieved a significant step in the history of art markets in challenging the preconceived idea among art historians that past valuation mechanisms were primarily driven by extrinsic parameters, such as buyers' honor, prestige, status, and wealth. Their research empirically demonstrated that objective characteristics of oil paintings were crucial in determining past art prices. Using an original sample of seventeenth-century Italian commission contracts between patrons and painters, Etro and Pagani attempted to comprehend price formation by identifying a series of measurable variables related to the works themselves (e.g., artist's name, title, dimensions, number of figures, whether the work was part of a larger commission, destination city, and location of display [e.g., ceiling, walls, altars]), but also to the artists (e.g., date of the commission, age at the time of the commission, and perceived quality), patrons (i.e., private, institutional, or public commissioners) and the macroeconomic context in which the transaction took place. To test their theoretical predictions, they applied a hedonic pricing model to historical data—an econometric method widely employed in art market research to create price indices and identify variables that influence art prices (Ginsburgh et al., 2006; Renneboog & Spaenjers, 2013; Li et al., 2023). More specifically, this model considers the price of art as a function of a series of characteristics that reflect, to a certain extent, buyers' willingness to pay for each attribute. Among Etro and Pagani's primary findings, was that the artist's reputation, the size of the work, and its final location, already acted as price determinants. The suitability of hedonic regression for studying Baroque Italy led the authors to extend their research and apply this method to other geographical and temporal contexts, including the Venetian Republic between 1550 and 1750 (Etro & Pagani, 2013) and the Dutch Golden Age (Etro & Stepanova, 2016). In the latter case, the authors successively looked at the entry of painters into the market, market profitability, and innovation. Their price index, built on paintings inventoried in Dutch houses, establishes significant relationships among the dimensions of the work, the size and configuration of the house, and the value of the collection. Loughman and Montias (2001), who observed a correlation between the room of display and the painting's quality, already anticipated similar relationships. In another paper more broadly focused on the Italian Trecento and Cinquecento (1285 to 1550), Etro (2018) enlarged his set of covariates by controlling for time dummies, artists' fixed effects, size and square size, number of figures and square number of figures, technique, number of lots per commission, hometown of commission, artist's age and square age, date of birth, Vasari index, school, and destination. This model enabled him to identify an inverse-U relationship between the artists' age and the market value of their works. It also confirmed the presence of a monopolistic, competition-type market structure in which Renaissance painters operated, and a significant price increase between 1420 and 1500.

The potential offered by hedonic regression is certainly worth considering when studying the market for European tapestries. Just like paintings, tapestries hold a set of objective characteristics, such as genre, size, a given destination, and many other traits. We have reason to believe that, in addition to characteristics specific to patrons (i.e., buyers), material, formal, and aesthetic characteristics could well have influenced tapestries' valuations. However, as we will demonstrate in Section 3, certain characteristics that drove the demand for paintings in the Early Modern period do not apply as such to tapestries, including the artist's perceived quality. Tapestries were essentially collective works that challenged the traditional notion of authorship. As a result, studies examining the role of authorship in art dealers' product differentiation and sales strategies in the eighteenth century (Van Miegroet & Radermecker 2023) would also prove inefficient if applied to the tapestry trade. Moreover, certain information was inconsistently reported in Early Modern sales and inventory records, which presents challenges for researchers when developing optimal model specifications. Another difference is that most tapestries were bespoke luxury goods produced on commission and intended to adorn the walls of residences for indefinite periods of time. As a result, their presence in the secondary markets of earlier periods is disproportionately lower as compared to more paintings, which, more liquid, were produced for the free market as early as the sixteenth century. Therefore, constructing robust time series and price indices remains challenging in the field of tapestry research.

Besides price formation mechanisms and market performance strictly speaking, researchers have also developed alternative OLS models to study the history of art markets through the lens of labor economics and contract theory. Despite the relative rarity of painting commission contracts, documentation from the seventeenth century and later have allowed economists to better understand what factors governed the commissioning of works in this medium. In the vein of Etro and Pagani (2012), Etro et al. (2015) used a labor framework—considering artists as workers, patrons as employees, and genres as art sectors—to further investigate the supply and demand sides of painted works in Baroque Rome. Using a matched patron-artists dataset, they found an inter-genre compensation differential among genres, which allowed new genres to emerge in a competitive market. Looking closer at the internal organization of Italian workshops, Piano (2022) developed a theoretical model adapted to the context of Renaissance Italy. Arguing that Italian Renaissance paintings, either altarpieces or frescoes, were highly complex goods whose production required the succession of multiple tasks by multiple players (master, assistants, pupils, etc.), the author explored three aspects of this organization, including who would have been the owner of the workshop, which tasks should have been internalized or outsourced, and who—be it the owner or their employee—should have performed the tasks (both artistic and mundane). The theoretical model, faced with historical sources, confirmed that the master did assume residual clamancy over the execution of commissions and, despite the multiple players involved in the production process, did remain responsible for the final product. The role of creative freedom in commission contracts (1285–1530) was also addressed by Piano and Piano (2023). Exploiting the length of the description of the commissioned work, the difference between individual and corporate patrons, and the artist's reputation, the authors concluded that these variables affected, to varying extents, the creative process in Renaissance Italy.

If the production of panel paintings in the Early Modern period is often regarded as a complex process, this level of complexity is exacerbated when it comes to tapestry. Tapestry making was also dependent on contracts between patrons and *tapissiers* (tapestry producers), with a multitude of skilled and highly specialized workers involved throughout the production process (e.g., dyers, wool suppliers, cartoon designers, *tapissiers*, weavers). The multiplicity of stakeholders could put the commissioner in situations of great uncertainty. The next part of this

paper elaborates the tapestry supply chain, but the unique properties of tapestry making could allow economists to develop theoretical models aimed to further understand the strategic choices of tapissiers or the internal organization of their workshops. However, significant differences across workshops' innerworkings and production centers are also likely to challenge the development of a generalizable theoretical model, while the critical lack of commission contracts is likely to prevent scholars from testing the model with empirical evidence. If commission contracts for Early Modern paintings are relative scarce, equivalent records for tapestries are virtually unavailable or have not been systematically transcribed to be exploitable from a labor market or contract theory perspective.

The nineteenth century has also been subject to econometric analyses. Using sales data from Goupil and Knoedler gallery business, Jensen (2022) examined the evolution of prices for Old Master, Near Contemporary, and Contemporary art over a period of almost a century (1860s-1950s). His analysis revealed the unexpected market performance of contemporary artists as early as the 19th-century, with prices rivaling those of Old Masters. In the 19th-cent, the Paris Salon, one of the most influential exhibitions of paintings in France which operated as a gatekeeper of the art world for over two centuries (Galenson & Jensen, 2002), also held a central position. Due to the substantial documentation available on this major event and the increased accessibility of data online, the Salon has become a key research topic for scholars, yet there is no equivalent for tapestries. Unlike French paintings, French tapestries were not annually gathered and exhibited in an institutional venue, delineated in space and time. The absence of an umbrella institution such as the Academy of Fine Arts also explains why systematically recorded datasets, providing detailed ekphrasis on the displayed works, are unavailable for this medium. The first quantitative analysis of the Salon was conducted by White and White (1965), who dissociated an academic system based on the Salon in the first half of the nineteenth century from a decentralized dealer-critic system in the second half of the century. More recent studies have employed econometric methods to analyze data from the Salon. Seave Greenwald (2019), for instance, used the Whiteley Index (1673–1881) to examine genres displayed during these annual exhibitions. She argued that the increased number of landscape paintings and rural genre paintings could be attributed to the rise of provincial artists colonies and increased access to the rural periphery of Paris by trains. Seave Greenwald and Oosterlinck (2022) also investigated the evolution of portraits exhibited at the Salon. While relevant for paintings, their methods would not work for tapestries, as this genre is rarely encountered. Additionally, de Beyssat et al. (2023) have explored the factors that influenced the likelihood of a painter to win a medal during the Salon. They found that nepotism (or having one's master serving on the jury), gender (with discrimination against women), and the hierarchy of genres affected this probability to varying degrees, depending on the context. The two first predictors strongly related to individual artists viewed as the suppliers of unique works of art, a production system that prevailed in the nineteenth-century academic system, but that contrasts with the collective nature of tapestry making. While textile art has historically been regarded as a predominantly female handicraft, evidence of this is primarily limited to written testimonies or affiliations that enable network analysis, though hinder more advanced quantitative analysis. Using a difference-in-difference model, Etro et al. (2020) demonstrated how the end of the Ancien Régime, ruled by the Salon, and the progressive entry of the Impressionists affected the Impressionists' market value, compared to insiders. Their findings indicate that prior to 1880 and the liberalization of artistic policy, the inclusion of a painting by an outsider in the exhibition resulted in a 30% increase in value. As we will show in Section 1.2, the tapestry business was regularly subject to regulation, with edits and ordinances aimed to protect local production and control quality in this market segment. In this respect, and conditional to enough ex-ante and ex-post data, domestic tapestries could be used as a treatment group to examine the impact of legal treatment (i.e., the passing of legislation) on the tapestry

trade. More recently, in an effort to shift academic focus away from official institutions like the Paris Salon, Saint-Raymond (2023) has examined two other peripheral artistic events: the *Union artistique de Toulouse* (1861–1909) and the *Société des Artistes Méridionaux* (1907–1939). The findings of this study indicate that despite Toulouse’s ambition to provide a primary market platform for regional artists, Paris remained highly influential. While several tapestry centers were based outside capital cities, no alternative events of this genre could guarantee the promotion of more local production.

This brief review of recent publications on the economic history of paintings suggests that the transferability of existing methods or research questions to the market for tapestry is challenged by a lack of data as well as the medium’s idiosyncrasies; however, they still offer possible research avenues. To understand tapestry making in its original context, it is essential to consider the contextual factors that shaped the industry, as well as the economic forces that influenced the medium’s production and consumption. The next section further introduces tapestry’s supply chain during the Early Modern period and underlines the complexities of its making.

2. Supply Side: Tapestry as a Complex Medium and Capital-Intensive Enterprise.

Historically, tapestries were valued differently than paintings, resulting from the laborious process and high production and materials costs involved in making tapestries; consequently, the tapestry industry was one of the most capital-intensive industries (Campbell 2002; 2007; Brosens 2014). Tapestry making was strongly reliant on the skills of craftsmen and required collaborative efforts among multiple actors. In several respects, the tapestry industry—especially as it was organized in major production centers such as Brussels—can be regarded as an early form of creative industry, just as sixteenth- and seventeenth-century tapissiers were precursory examples of art entrepreneurs facing economic challenges. In Paris, the commercial dimension of the tapissiers’ profession was explicitly stated in the 1765 edition of the *Encyclopédie*, which defined a tapissier as a “merchant who sells, makes, or leases tapestries and furniture” (cited in Brosens, 2005, p. 6). Tapestry producers and their spouses (or widows), played a pivotal role in this collaborative and complex creative process. Even when they worked in a royal manufactory (such as the Gobelins in Paris), tapissiers were independent entrepreneurs who directed one or more workshops. The most powerful Flemish tapestry producers belonged to the urban social and political elite. Brussels producers such as Jan Raes and François van den Hecke, for example, held a number of key positions in the city administration (Brosens, 2004). City governments understood that a healthy tapestry industry could be important for the local economy and developed various forms of direct and indirect financial and logistical support (Brosens, 2022). Adventurous and enterprising producers sometimes moved to other cities or countries to establish new workshops (Delmarcel, 2002). They also often negotiated with local or central governments to gain financial or logistical support in their new location (Brosens, 2004). The combination of high demand uncertainty and potential market failure indeed required state intervention—through taxes or regulation—to compensate for costs and to ensure the viability of those workshops. As a result, taxes had to be paid at every city gate and land border. The rate of assessment was a function of the origin and, thus, the quality and value of the tapestries; the more valuable the pieces, the heavier the tax. Provenance was signaled primarily by the city marks woven into the narrow, dark outer edges of the tapestries. This identification became generally mandatory in 1544, when an imperial edict by Charles V tried to place production and trade in the Southern Netherlands into clear regulatory standards. Besides the city mark, tapissiers’ monograms and names could also shed light on the place of

production. Perhaps unsurprisingly, tapestry entrepreneurs proved particularly creative in masking or changing the provenance of their work while in transit.

Despite these occasional state interventions, embarking on tapestry making remained a risky venture. In his *Introduction to the Higher School of the Art of Painting*, Samuel van Hoogstraten (1627–1678) suggested that the main risks associated with the tapestry business were the weaving process’s slowness and the inherent difficulties of craftsmanship (1671, pp. 340–341, cited in Brosens, 2014, p. 19). Unlike paintings, which could be completed in a reasonable amount of time, tapestries took months or even years to complete, with an average production rate of half a square meter per month in the best workshops. Given the monumental size of fine tapestries, the execution process was highly time-consuming and costly. Owing to the time-intensive nature of tapestry production, it was common for several years to elapse between the commissioning of a tapestry set and its delivery and payment. Inevitably, the vagaries of time, such as the death of a commissioner, a successors’ unwillingness to meet financial obligations, fluctuations in the workforce, financial constraints, a dearth of raw materials, or political instability, could compromise the recuperation of capital and expose tapestry merchants to precarious debt scenarios. Such critical situations were experienced by several prominent Brussels tapissiers, including François van den Hecke, Pieter Coeke van Aest—who was indebted to Augsburg bankers—the Fuggers, and Albert Auwerckx—who faced difficulties in dealing with Fernando de Aragón (1644–1713) (Brosens, 2014). Recent research on the entrepreneurial profiles of tapestry producers suggests that, in such an uncertain business context, establishing trust to counteract information asymmetries and creating reputational signals was crucial for success. Trust could take the form of mutual solidarity, durable cooperation through structural alliances, information exchanges, and resilient behaviors in the face of economic obstacles. Judocus de Vos (1661–1734), a Brussels tapissier and dealer, is a compelling example of how developing and maintaining strong social networks while allowing for flexible cooperation among small firms was key to the industry’s success (Brosens, 2012). Many tapestry workshops, and especially those established by émigré entrepreneurs, however, remained small in scale and short-lived, not only because the producers depended almost entirely on the goodwill of a few rulers—who rarely, if ever, managed to effectively provide sustainable support and enforce import bans (to protect the newly established workshops)—but also because the network of actors necessary for the survival of the industry was often too small and weak (Brosens, 2011).

Concretely, how was the supply side of the tapestry market organized, and how were tapestries produced? Usually commissioned by and after consultation with a tapissier, an artist drew or sketched several scenes that together formed a series. Series could depict historical icons (e.g., Caesar), saints (e.g., Joseph), mythological figures (e.g., Achilles), novel characters (e.g., Don Quixote), themes (e.g., the twelve months of the year), or non-narrative decorative scenes (e.g., bucolic landscapes). Any subject was eligible—as long as there was a market for it. The number of scenes within a series varied from two to twenty or more. The artist, usually assisted by collaborators in the studio, then enlarged the drawings or sketches into cartoons with the dimensions of the final product (Brosens, 2009). Sometimes, artists decided not to jump immediately from designs to cartoons, but first made cabinet-sized paintings. This intermediate stage allowed them and the tapissiers to better assess the effect of the composition. Evidently, the pictorial quality of the cartoons, and thus the artist’s talent and experience, largely determined the woven end result. When the cartoons arrived at the tapestry workshop, the tapissier and his weavers moved into action. They carefully studied the color palette of the cartoons and tried to find matching equivalents in their stock of dyed wool and silk threads. This meant that wool and silk dyers, together with tapestry designers and cartoon painters, largely determined the final quality of the tapestry. Over the centuries, only a limited number

of dyers were able to produce the wealth of colors and shades required by tapestry producers. Though the number of basic ingredients were limited (e.g., wool or silk, pure water, organic dyes and fixatives such as urine), the composition of the various dye baths and the duration of the processes were extremely complex. Dyers anxiously kept recipes and preparations secret, passing them on to the next generation as accumulated capital (Brosens, 2004). Tapestries of the highest quality included threads wrapped in a thin layer of silver or gold foil. These metallic threads gave tapestries a breathtaking, vibrant dynamism and brilliance that other media could never offer. Once the tapestry producer and his weavers had chosen and sorted the wool and silk threads, and possibly the gold and silver threads, weavers rolled them onto shuttles and began preparing the looms.

A typical workshop counted two to twelve looms, with no formal restrictions. Antwerp, Brussels, and Oudenaarde tapestries were woven on low-warp looms. A low-warp loom is a horizontal loom that consists of two wooden beams measuring 4 to 5 meters long and running parallel about 60 centimeters apart. A shallow bin was placed between the beams. Preparing the looms began by measuring the cartoons. If a cartoon was 4 meters wide, for example, weavers used uncolored woolen threads that were 4 meters long. These formed the warp threads. Warp threads were laid side by side and coiled on one of the beams. The number of warp threads per centimeter depended on the anticipated quality. The more warp threads per centimeter, the more options weavers had to produce detailed works. Brussels pieces could count up to ten warp threads per centimeter. Consequently, a 3-meter-high Brussels piece may consist of three thousand warp threads forming the underlying, invisible structure of the tapestry; the total length of warp threads of a 4-meter-wide tapestry is 12 kilometers. The next step in preparing the loom was to connect the two beams by unrolling the warp threads by about 60 centimeters (i.e., the distance between the beams) and connecting them to the second beam. Finally, the cartoon was cut into vertical strips, each approximately 60 centimeters in width, and the first strip was placed in the shallow bin that was located below the warp threads. High-warp looms, mostly used in France and Spain, are vertical looms that also consisted of two beams connected by warp threads. The strips of cartoons were placed behind the weavers, who viewed the cartoons through the warp threads in mirrors (which were therefore on the other side of the looms). When the logistics were settled, the weaving proper could commence. Two to four weavers sat side by side at the loom. Weavers operating low-warp looms sat with their bellies against the beam on which the warp threads were rolled. They had both hands free to shift the shuttles containing the colored weft threads between, under, and over the warp threads. This was because the warp threads, which had to move up and down to give the shuttles free runway, were connected by loops to pedals operated by the weaver's feet. When the shuttles passed under the warp threads, they touched the strip. Consequently, the strips quickly began showing signs of wear. Since it was usually the intention to weave a series several times—after all, the investment in the cartoons had to pay off optimally—tapissiers had their cartoons regularly restored. Successful series, such as Raphael's *Acts of the Apostles*, had more than fifty editions woven throughout the sixteenth, seventeenth, and eighteenth centuries. On a high-warp loom, weavers used one hand to operate the shuttle and the other to open and close the warp threads. As the shuttles never came into contact with the strips, the cartoons were not damaged and thus required less maintenance. When the first strip of the cartoon was woven, it was taken out of the bin and replaced with the next strip. The part already woven was rolled up on the beam, freeing up warp threads again so that the tapissier could weave the second strip. Strips followed each other in this way until the whole cartoon was woven. Tapestry weavers produced about the area of one clenched fist per day. Therefore, it could easily take six to eight months to weave a 3 × 4 meter tapestry. The most experienced and talented weavers executed the heads and more complex details of the compositions. A dry shearer then took the tapestry in hand and removed the protruding fluff that hindered the reading of the piece. An *afzetter* (finisher) could

accentuate some elements and contours, but only with dry paints that would not damage the wool and silk or would not start to bleed when the tapestry was washed. Finally, weavers could add a linen cloth to the back of the finished tapestries; this lining was meant to protect the work from moisture and dirt.

Labor costs were not negligible in this process, and workers' compensation could differ based on one's position, with wages being calculated on a monthly, daily, or per unit of measurement basis (e.g., per *ell* or per *aune*).¹ The workshop head traditionally received higher wages compared to other practitioners, regardless of their valuable crafts skills. In fifteenth-century Italy, Müntz (1878, p. 15) found that, from 1436 to 1475, some master tapissiers earned between 3 to 5 livres per month. In Rome, the six tapissiers who worked for Nicolas V received 4 ducats per month, plus an additional 3 ducats for accommodation and maintenance fees. Brosens (2014, pp. 19–20) has reported that by the turn of the eighteenth century, producing one Brussels tapestry cost a workshop director at least 500 florins in wages; the labor cost of a set of eight tapestries could easily reach 4,000 florins. This price was higher than the cost of a coach, the primary method of transportation used elites, around 1,000 florins. Labor costs thus constituted another significant portion of the tapissier's annual budget, with prices varying according to the worker's profile and skills.

The main outcome of this long and costly production process was the creation of sizable woven works of art that offered a range of formal, material, aesthetic, and functional characteristics. Buyers, each driven by their individual motivations and preferences, sought out these attributes. Drawing on written sources from archival records and data, Section 3 first examines the main rationales behind historical buyers' decisions to commission and acquire fine tapestries. In Section 4, we further explore the historical evaluation of fine European tapestries by discussing the objective qualities of these goods that could have, to some extent, influenced buyers' willingness to pay.

3. The Demand Side: Buyers' Motivations for Commissioning Tapestries.

Archives reveal that, from the fifteenth century through the late nineteenth century, the demand for tapestries was mostly driven by four main factors: ostentation, devotion, lifestyle (i.e., mobility, insulation/acoustics), and national identity (Standen, 1981).² While one may argue that paintings served similar functions, tapestries, as decorative and applied arts, met more specific needs of historical social elites.

3.1.1. Ostentation.

According to Turner (2013), tapestries were an early form of conspicuous consumption asset, commensurate with the owner's income. The commissioning of fine tapestry by princely, royal, papal, and imperial courts was triggered by desires to decorate elite structures with symbols of power and wealth (Brassat, 1992). While paintings could serve similar ends, self-glorification through tapestry differed in essence, as stronger symbolic meanings and visual effects supplanted literal self-representation in ways that only tapestry could offer. This need was accentuated in the late Middle Ages with the growing demand of courts, which led to the development of production centers such as Arras through the support and favor of the Dukes of Burgundy. As early as the fourteenth century, tapestry dealer Nicolas Batailles (c. 1330/1340–

¹ The *ell* is an old European unit of measurement for length, originally defined as the length of an arm. An *aune* is a traditional unit of measurement that was commonly used in European countries in the medieval and early modern periods. It was used to measure the length of cloth and varied in length depending on the region. In France, an *aune* was equal to roughly one meter, but in other countries, it could be shorter or longer. The use of the *aune* as a unit of measurement declined in the nineteenth century with the introduction of the metric system.

² The notion of escapism, developed by tapestry historians, and typical of the nineteenth century, will not be discussed in the scope of this paper.

c. 1405) was commissioned by the French court to acquire works costing up to 1,000 francs, a sum Guiffrey (1886) has described as pharaonic, although common in Batailles's business.³ Additionally, in fifteenth-century Italy, Lorenzo di Piero de' Medici (1449–1492) was actively involved in the transaction of silk and wool tapestries that could exceed 1,000 aunes (Müntz 1878, p. 13). In 16th-century France, Mazas (1828, p. 255) reported that King François I (1494–1547) was an enthusiastic tapestry collector who owned several prestigious pieces. These tapestries were exhibited during major occasions and festivities, and were valued at 22,000 escudos, which was a considerable sum of money at that time.⁴ The commission of *Los Honores* (1520–1525) for emperor Charles V, a major *tenture* (wall hanging) composed of nine Flemish tapestries, was another compelling example of woven works being used for personal glorification (Delmarcel, 2002). The most impressive collection of fine tapestries was, notably, that of King Henry VIII (1491–1547), who invested considerable sums in woven works of art (Campbell, 2007). In 1649, the *Abraham* set from his collection alone was valued at 8,230 pounds sterling. The collection comprised a total of 2,770 items, including 300 sets of several pieces, 65 pairs, 160 individual tapestry hangings, and hundreds of smaller furnishing items (Gross, 2020).

These collections not only resulted from commissions, but also from diplomatic gifts offered on special occasions such as weddings, funerals, anniversaries, or military triumphs. To commemorate his victory after the battle of Othée (Liège, 1408), Jean the Fearless (1371–1419), for example, commissioned Riffard Flaymal, an Arras-based tapissier, to create a tapestry worth 3,080 gold francs. Similarly, two tapestries, known as the *Seven Joys of the Virgin* and the *Passion of Christ*, were offered to the Bishop of Liège who negotiated the Arras Peace (1435) that ended the conflict between the Armagnacs and the Burgundians (Guiffrey, 1886). At the wedding of Charles the Bold (1433–1477) in 1468, a *tenture* composed of six pieces depicting the *Passion of Our Lord* was sold to Philippe the Good by Pasquier Grenier to adorn the walls of the ducal chapel. Similar practices endured centuries later, with Napoleon I (1769–1821) commissioning a set of fine tapestries celebrating the apotheosis of his sovereignty. In other words, tapestry's uniqueness resided in its capacity to reflect the owner's social status and quest for prestige in a magnitude that no form of painting could offer.

Monarchs and other prominent historical figures also publicly displayed their most exquisite tapestries during outdoor festivities, such as joyous entries. Reciprocally, inhabitants could adorn the facades of their homes with woven hangings to celebrate the arrival of a monarch and his procession (Müntz, 1878, p. 8). Tapestries, due to their size, indeed had a profound, lasting visual impact on visitors. It was Jehan de Haynin, Lord of Louvignies, who reported that he had experienced an emotional shock upon viewing a series of tapestries depicting military events from 1448 (Evans, 2012). In late fifteenth-century Mantoue, *panni d'oro* (golden cloths) and *verdures*⁵ were hung in a theatrical setting, alongside Andrea Mantegna's cartoons depicting the *Triumph of Caesar*. Another important function of tapestries was thus their ability to provide temporary, luxurious accessory for festive events. When not on

³ See, for example, the *Histoire de Lyon de Bourges*, 1,000 francs (in 1388); *Histoire des douze apôtres et des douze prophètes*, 3,400 écus (in 1392); *Histoire de la vie de Saint Denis*, 800 francs (in 1399), *Histoire de Bonne renommée*, 3,000 écus.

⁴ Guiffrey (1886, pp. 39–40): “This king, as stated by Brantôme, was also very lavish in his furnishings: the two beautiful tapestries that are still in existence testify to this. One of them depicts the Triumph of Scipio, which was often seen hanging in the grand halls on the day of major festivities and gatherings. It cost 22,000 escudos at that time, which was a considerable sum. Nowadays, it would not be obtainable for less than 50,000, as I have heard, because it is entirely embroidered with gold and silk, and the artistry is exquisite, with the characters being portrayed better than anyone had seen before. At the meeting in Bayonne, the lords and ladies of Spain were greatly impressed by it and had not seen any like it in their own king's court. It was also a masterpiece from Flanders, presented to the king more as a gift from the artist than from the emperor, who had heard about the generosity, curiosity, and magnificence of this great king, and believed that he would receive much more from him than from his own sovereign. As for myself, I can say that it is the most beautiful tapestry I have ever seen.”

⁵ In the language of tapestries, a *verdure* is a hanging whose design primarily features vegetation such as trees and foliage, with limited depictions of animals or human beings.

display, textile hangings were preserved in dedicated rooms, known as *gardes-meubles*, carefully rolled up in wooden chests.

While the acquisition of tapestries for personal ostentation and self-glorification initially emerged among the upper echelons of society, the practice was rapidly taken up by the nobility as well. According to Turner (2013), noble and gentry families in Elizabethan London possessed approximately forty to fifty hangings produced in continental centers. Even among the lower classes, textile hangings—which were more akin canvas than to fine woven pieces—were a coveted asset. According to Jacques Savary des Bruslons in his *Dictionnaire du commerce* (1741), artisans or people of lower statuses were also eager to own such goods.⁶ The existence of a vertically segmented market was thus already a reality in the Early Modern period, and, regardless of their quality, textiles were used as a sign of social status.

2.1.2. Devotion.

In the deeply religious context of the first Modernity, tapestries depicting biblical scenes were, as religious paintings, understood as devotional objects. Cathedral and church walls were embellished with immense tapestries that exacerbated, in an unparalleled manner, the magnificence of the Catholic Church (Cavallo, 1993; Campbell, 2002; 2007). Unlike altarpieces relatively smaller scale, tapestries' extraordinary dimensions could provide a unique sense of grandeur to religious devotion, with woven figures and scenes discernible even from considerable distances. Tapestries commissioned for the cathedrals of Tournai (*Saint Piat and Saint Eleutherius*, 1402), Aix (*Story of the Virgin and Jesus Christ*, 1511) or Arras (Pinchart 1877) are evidence of the medium's benefit to religious edifices, whose imposing stone walls necessitated large textiles. The 1683 inventory of Paris's Notre-Dame Cathedral listed more than sixty pieces of fine tapestry. It was also common for churches in the capital to receive woven pieces through donations or bequests, and such pieces would have been displayed during religious celebrations, such as *La Fête Dieu* (Guiffrey 1886, p. 451). Tapestry-covered altarpieces and antependia were also integral parts of religious furniture (Jarry, n.d.).

In addition to the large-scale, luxurious tapestries that conveyed the Catholic Church's ideology, smaller, devotional woven panels were specifically designed for private devotion (Cleland, 2009). According to Evans (2012), reducing the size of tapestries was the main formal transformation the medium experienced, along with iconographic standardization. The popularity of this format, rarely exceeding 60 square centimeters, grew from 1470 to 1525 and declined after 1530. More affordable than their larger equivalents, devotional tapestries remained more expensive than painted panels due to their material costs. This specific production allowed the medium to enter the free market, with on-spec production⁷ intended to reach a broader audience of pious consumers who found direct utility in this small, portable format. To mitigate the risk of producing commissioned luxury tapestries only, certain merchants diversified their stock by specializing in these devotional works, which were faster to produce and sell (Evans, 2012).

2.1.3. Lifestyle (Mobility, Insulation, and Acoustics).

Evans (2012) has suggested that the success and popularity of tapestries across Europe were greatly influenced by the mobility of the Burgundian court. As Müntz (1880) emphasized, the rollability of tapestries set them apart from regular panel paintings and made them a unique

⁶ Cited in Guiffrey 1886, p. 4: "There are few artisans or people of lower social status in Paris who do not make it a point of honor, upon establishing themselves, to have a Bergame tapestry in their room. These tapestries are also known as the tapestries of Rue Saint-Denis or Porte de Paris (a corruption of the original name), because more of them are sold in this area than in any other in Paris."

⁷ "On-spec" is an abbreviation of "on speculation." In contrast to commissioned work, this term encompasses goods produced for the free market without targeting definite buyers and assurance of profit.

medium that met the lifestyle of a mobile elite. Tapestries could easily be taken down from walls, rolled up, and unrolled in new locations. This allowed owners to adorn their multiple residences with transportable ornaments (Standen, 1985).

In addition to their decorative function, tapestries were used for wall insulation and acoustic enhancement. The medium's large size particularly suited the residences in which Catholic and royal elites, as well as noblemen, lived. Stone castles, mansions, churches, and chapels often consisted of several large, cold rooms with high ceilings, and were difficult to warm or decorate solely with paintings. The dimensions and materials of tapestries could fulfill such a vital need by insulating any room and creating a warmer, even more intimate atmosphere while limiting sound resonance. Unlike the Southern regions, where frescoes took on this decorative role, the northern climate, characterized by higher degrees of humidity and cooler temperature, prevented northern populations from using this technique or covering raw walls with wood claddings. In this respect, thick wool-woven wall hangings became the most effective in containing heat durably (Guiffrey, 1886, p. 71; 100). The insulation function of tapestries thus also resulted in part from the geographical context in which they were originally produced. Most tapestry hangings were also executed *sur mesure* (tailor-made) to match the configuration of a given room and fulfill insulation roles effectively. Hangings that did not fit perfectly could later be cut and adjusted. The appraisal value of textile furniture, therefore, strongly depended on their format and purpose, according to a degressive logic. Pope Paul II's 1464 inventory revealed that 25 regular religious and 32 profane tapestry hangings were respectively estimated at 563 and 459 gold ducats, while 38 upholsteries (*spalleriae sive banchalia*) were appraised at 370 ducats, 20 *portières* (fabric or tapestry curtains used to close a bay or hide a door) at 247 ducats, and a set of basic carpets at 25 ducats (Müntz, 1878, p. 10).

2.1.4. National identity building mechanisms.

The use of tapestry for exhibiting individual and political power perpetuated throughout the centuries, with nineteenth-century wealthy American collectors most prominently facing the need to build a national identity. Fascinated by the heritage of the *Ancien Régime*, which they admired during their travels to Europe, American elites gradually turned their attention to antique European tapestries. The wealth accumulated by industrialists such families as the Rockefellers and Mellons; bankers such as, J.P. Morgan and George Blumenthal; and aristocrats, such as Isabella Stewart Gardner, allowed these major figures of American history to build prestigious collections of fine and decorative arts with which to furnish their primary and secondary residences. Despite the decline of the tapestry industry, the nineteenth century was marked by the revival of the Middle Ages, with the deployment of a neo-gothic tradition that would lead to the reevaluation of medieval and Renaissance tapestries (Emery & Morowitz, 2003). This movement was also promoted by pioneering figure of the Arts & Craft movement, William Morris (1834–1896), who helped revive the art of tapestry on the other side of the Atlantic.

In this national identity building process, decorators and dealers specializing in European tapestries played a crucial role in supplying collectors with the finest wall hangings. At the turn of the nineteenth and twentieth centuries, a couple of dealers working in this market segment gained considerable reputation. Antiques dealer Jacques Seligmann (1858–1923), based in Paris and New York, enabled these objects to gain new visibility (Seligman, 1961).⁸ The archives of French & Cie also reveal the company's dominant position in this market (Budd, 2020; Bremer-David, 2003/4). The firm was active between 1907 and 1959 and traded over 4,000 tapestries, contributing to the creation of a durable taste for woven works of art

⁸ Jacques Seligmann & Co.'s archives (1904–1978) are digitized and accessible in the Archives of American Art.

among the wealthiest American families. The company was funded by Samuel Mitchells (1880–1959), who built upon the business of the Washington–based wool merchant Charles Mather Ffoulke (1841–1909). Knoedler’s stock books reveal approximately sixty transactions of fine tapestries made with French & Cie, a majority of which depicted history, religious, or mythological scenes. Despite the mention of the depicted scene, however, the works’ dimensions, origins, or any quality signals were surprisingly not recorded.⁹

Under the impulse of these dealers, major European tapestries entered private collections. Nelson Rockefeller (1908–1979), for example, grew up surrounded by tapestries, as his father John had purchased the *Unicorn* series in 1922, and quickly became an avid tapestry collector (Gardner-Troye, 2017). Isabella Stewart Gardner, after a trip to Paris, developed a strong interest in European textile arts that led her to acquire tapestries as well (Bremer-David, 2003/4). Following the example of J.P. Morgan, George and Florence Blumenthal positioned themselves as the most active collectors. The Blumenthal’s taste for medieval art—especially tapestries—led them to design their home according to their collection’s characteristics. Germain Seligman argued that “every capital work of art was to be chosen before the actual building began . . . so that it would fit ideally into the place planned for it both in physical proportion and in relation to the aesthetic scheme” (Seligman, 1961, p. 84).

Inevitably, the American appetite for European tapestries quickly outstripped the available supply. This situation stemmed from the fact that antique pieces were less expensive than modern productions, and that a newly imposed 20% tax on all imported works further limited their availability in the United States (Müntz, 1880, p. 484). This shortage contributed to a temporary restimulation of modern tapestry production that mimicked the style of antique works (Gardner-Troye, 2017). Local manufacturers began to flourish in the United States, with Baumgarten & Co. being one of the most active. The company’s founder, the famous interior decorator William Baumgarten (1864–1928), was aware of the potential of tapestries in aristocratic American families and decided to capitalize on this demand by launching his own manufactory and creating a new appetite for “freshly-woven old tapestry” (Brosens & Maes, 2019, p. 29; Müntz, 1880, p. 383).¹⁰ In order to maintain high quality standards and preserve traditional European craftsmanship, Baumgarten recruited skilled tapissiers from the continent to meet the demand of a country in search of cultural narratives. This renewed tapestry supply led to the production of highly naturalistic tapestries, reminiscent of painted works, that became known as tapestry-paintings. According to several stakeholders, this reinterpretation of the medium altered its essence and gradually led to the decline of the entire tapestry industry.¹¹

⁹ Data collected from the Getty Provenance Index. Out of the sixty records, only four specify the origins of the work (Mortlake) or a prototypical pattern (*millefleurs*). On average, the duration in stock was 14.5 months, with a median of 4 months and 39 successful transactions out of 60, suggesting the relative illiquidity of this medium compared to paintings. As demonstrated by David et al. (2022), paintings recorded in the contemporary art dealer Goupil’s stock books sold within approximately two months after entering the ledgers. Fractional ownership was also a common practice for tapestries, with Knoedler having a 2/3 ratio in 83% of cases, just like paintings. The Knoedler stock book also reveals the high-quality pieces that the dealer was engaged with. More than 55% of them belonged to Georges Hoentschel (1855–1915), a distinguished interior decorator and collector of eighteenth-century decorative arts, and J. Pierpont Morgan, who were acknowledged as the most active American buyers of European tapestries. The quality of the traded goods explains why Knoedler’s tapestry buyers were mostly composed of eminent art dealers, including French & Co. (NY) and Parish Watson & Co. (NY). The total purchase price of the Hoentschel collection of tapestries was 1,300,500 USD (lots 13823–13856), for a total of thirty-six items, each costing 36,125 USD. Knoedler’s percentage of share was 33%, contributing to a total sum of 433,500 dollars, a significant amount at the time. Exploratory tests were conducted on the dataset, especially to detect what variables could affect the probability for a piece to sell. Current experiments did not lead to any convincing findings.

¹⁰ “For more than twenty years I went to Europe almost every year, to seek a desirable supply of goods for our business. . . . Later when tapestries became better known and more desired, when old tapestries were brought into the country and bought by our wealthy citizens at an outlay of large sums of money, the demand for modern tapestries also received an impetus, which it had not had before.” William Baumgarten, “Tapestry Making in America. Lecture by William Baumgarten, before the National Sculpture Society, New York, April 10th, 1894, *The Decorator and Furnisher*, 24 May 1894, pp. 57–60 (58). Cited in Brosens & Maes, 2019, p. 29.

¹¹ See for example: “A degree of perfection that one would believe impossible to attain [...] Today, a tapestry from the Gobelins is no longer a tapestry; it is a copy of a painting made with wool and silk; it is even, I dare say, something more than a mere copy, and perhaps it would be allowed to describe it as a translation.” See Guillaumot, n.d., p. 327 (cited in Caen, 2016, p. 137). In 1827, French economist Adolphe Blanqui lamented that: “The Gobelins tapestries do honor only to the talent of the weavers in charge of weaving them: they are pale copies of our most beautiful paintings, and heavy, thick hangings, constantly threatened by moths, useless to the public, who could not buy them because they are

The role of tapestry as an ideological medium, along with its insulatory and acoustic properties, thus persisted in nineteenth- and early twentieth-century American homes of the elite. The collecting practices of the aforementioned families were so crucial for the country’s cultural identity that many of them became generous benefactors of cultural institutions. Many of these tapestries became the basis of the MET’s collection, primarily through donations, bequests, and loans (Stranden, 1985; Cavallo, 1993, pp. 14–17; Caen, 2016).

4. Historical Price Determinants of European Tapestry.

Tapestry was acclaimed for its exclusive material, formal, and aesthetic properties, all of which contributed to the medium’s position as one of the finest art forms. In addition to archival sources relaying commissioners’ motivations, old collection inventories and sales catalogues allow us to better understand what information was purposefully provisioned to prospective buyers. The presence or absence of such information is informative of what dealers or people in charge of inventorying collections considered worth mentioning or not. Variations in information supply across sources and periods may indeed reflect either different levels of importance attached to certain characteristics or varying degrees of knowledge about the recorded goods. To take the research one step further, this subsection combines written testimonies with empirical data extracted from collection and sales inventories (i.e., appraisals and sales prices). Our paper relies on data from the GPI, using the word *tapestry* and its derivatives or translations as search terms (e.g., *tapisserie(s)*, *tapestry-ies*, *arazzo-arazzi*, *wandteppich-e*, *wandtapijt-en*, *tapisserieën*). Each dataset was cleaned, cross-checked to remove duplicate entries, and examined in detail to evaluate its potential for statistical analysis. The eighteenth century is the first century to be reasonably documented for tapestry in the GPI. Three distinct datasets were collected: eighteenth-century French and British sales catalogues representative of the secondary market (1703–1800; $n=255$), a French collection inventory (1781–1783; $n=44$) and an Italian collection inventory (1733–1783; $n=71$). Additionally, we compiled into one dataset the 131 records of French sales of tapestry provided in the appendix of E. Müntz’s *General History of Tapestry* (1878–1885; $n=131$). Table 1 summarizes the main information supplied in these sources. We insist on the fact that, if a characteristic was encountered in a dataset on at least one occasion, not all records were furnished with this information.

Table 1. Information Provisioned in Tapestry Archival Sources

Datasets/available information	18th-century sales ($n=255$)	18th-century French inventory ($n=44$)	18th-century Italian inventory ($n=71$)	19th-century sales ($n=131$)
Owner	NA	yes	yes	NA
Intermediary (i.e., seller)	yes	NA	NA	yes
Buyer	yes	no	no	no
Destination/residency	NA	yes	yes	NA
Location/room	NA	yes	yes	NA
Number of items per lot	yes	yes	yes	yes
Origins/manufactory	yes	yes	yes	yes
Cartoon designer/tapissier name	yes	no	no	no
Technique/material	no	yes	no	no

too expensive, and who pay without hope of enjoying them.” See Blanqui, 1827, pp. 248–49 (cited in Caen, 2016, p. 139). In 1844, French writer Gautier also complained that “these woolen copies resemble the paintings themselves so much that I mistook them for stripped originals.” (cited in Caen, 2016, p. 138)

Genre	yes	yes	yes	yes
Number of figures	no	no	no	no
Size	yes	yes	yes	yes
Number of ells	yes	no	no	no
Condition	yes	no	yes	no
Quality signals	yes	no	no	yes

The information most consistently provided across all sources was the tapestry’s genre (i.e., scene depicted) and size. The origins of the work (i.e., the city where it was produced), was occasionally mentioned, but sometimes in very low proportions. For example, in the Italian collection inventory, only four of the seventy-one pieces were identified as “from Flanders.” Another piece of information regularly found in archival sources and included in each of our models was the number of items offered for sale or mentioned in an inventory description. In eighteenth-century inventories, the average number of items per lot was equal to 2.82 (with a minimum value of 1 and a maximum value of 16). Owners, intermediaries, buyers, destination, location, names, materials (e.g., gold, *petits points*, linen), condition, number of ells, and quality signals are inconsistently mentioned across sources, with many lots specifying none of this information. The total number of figures per composition was never detailed; this information is more likely to be found in commission contracts. As the Table 1 suggests, the most exhaustive source was the eighteenth-century sales catalogue, as this valuable document developed into fully-fledge marketing tool over the course of the century (Van Miegroet & Radermecker, 2023). However, unlike paintings, tapestry lots were rarely annotated with prices (51 out of 255) and only eighteen lots were marked sold (over a timespan covering 1763 to 1800), making such a dataset, statistically speaking, nearly unexploitable.

Still, wherever feasible, and by crossing qualitative sources with quantitative data, we attempted to further explore the demand side by examining five key attributes of tapestry: authorship and city brand name, technique and materials, size, genre, and condition. In line with previous research dedicated to the history of art markets (e.g., Etro & Pagani, 2013; Etro, 2018), we employed a hedonic pricing model to analyze some of our datasets, specifically exploiting either appraisal or sales prices. To account for fluctuations in historical value, prices and currencies have been standardized and converted to natural logarithms. The standard equation is as follows:

$$\log p_i = \alpha + \sum_{j=1}^m \beta_j s_{ij} + \sum_{k=1}^r \gamma_k x_{ik} + u_i$$

In this model, the logarithm of the price of a tapestry i is represented by $\log p_i$. s_{ij} incorporates the main variables of interest that relate to tapestry’s main characteristics (e.g., origins, genre, size, conditions, etc., depending on the sample), and x_{ik} are external controls (e.g., number of items per lot, periods, etc.). u_i denotes a random disturbance. Data limitations prevented us from systematically including all variables that should be accounted for in such models. The model specifications were thus adjusted according to the available data in each sample, which means that the opportunity to work with larger datasets or to include additional covariates could not only increase the explanatory power of the models but also possibly distort current findings. While the models presented in this section offer the highest adjusted R-squared values, the results must be interpreted with caution. For the dataset related to French tapestry inventories (Tables 3a–b), we regressed on the logarithm of the appraisal price the size (1 if the surface was superior to 50 square aune, 0 if otherwise), the genre (1 if the depicted topic related to ostentatious subject matters [i.e., history, mythology, allegory], 0 if otherwise), and the number

of items per lot (continuous variable). For Italian inventories (Tables 4a–b), we were able to control for more covariates with consistent findings. More specifically, we included the surface of the tapestry (1 if the surface was superior to 5000 square inches, 0 if otherwise), the genre (1 if the topic related to the aforementioned ostentatious subject matters, 0 if otherwise), the number of items per lot (continuous variable), and also the work’s condition (1 if it was considered used, 0 if otherwise) and time period (first and second half of the eighteenth century). For nineteenth-century sales reported by Müntz (Tables 5a–b), we controlled for the surface of the tapestry (1 if the surface was superior to 50 square meters, 0 if otherwise), the genre (1 if the topic related to ostentatious subject matters, 0 if otherwise), the number of items per lot (continuous variable), quality signals (1 if any quality signal was mentioned in the description of the piece, 0 if otherwise), the production center (1 if the works was produced by the Gobelins in Paris, 0 if otherwise), and the time period (1850–1875 and 1875–1900). Despite their inherent differences (e.g., measurement units, prices, etc.), current findings tend to be credible and consistent with evidence found in archival records. The main results are presented in the tables below, with descriptive statistics provided first.

Table 2. Summary Statistics: 18th-Century Tapestry Sales ($n= 255$)

	Production Center	Frequency	Percentage (%)
	Antwerp	1	0.39
	Brussels	14	5.49
	Flemish	39	15.29
	Gobelins	33	12.94
	Mortlake	1	0.39
	Rome	2	0.78
	Savonnerie	3	1.18
	Unspecified	162	63.53
	Authorship		
	Reference to designers/tapissiers	14	5.41
	Unspecified	241	94.59
	Attribution		
	Copy after	5	1.96
	Unattributed	250	98.04
	Genre		
	Allegory	13	5.10
	Figures/imagery	25	9.80
	Genre	15	5.88
	History	41	16.08
	Landscape/decorative	37	14.51
	Mythology	6	2.35
	Religious	24	9.41
	Unspecified	94	36.86
	Quality Signals	97	38.03
	Seller		
	Abel-François Poisson de Vandières, Marquis de Marigny	7	2.75
	Antonio Verro	6	2.35
	Charles Lennox, 2nd Duke of Richmond	20	7.84
	Etienne François, Duc de Choiseul-Stainville	5	1.96
	Francis Egerton, 3rd Duke of Bridgewater	6	2.35
	Fulham Manufactory	7	2.75
	Henry de Nassau D’Auverque (Grantham)	20	7.84
	James Brudges, 1st Duke of Chandos	8	3.14
	John Mercer	5	1.96
	Charles Joye	7	2.75
	Miles Nightingale	5	1.96
	William Stanhope	11	4.31

Talbot Yelverton, 1st Duke of Sussex	13	5.10
Other sellers	135	52.94
Intermediary		
Anonymous	28	10.98
Christie's	17	6.67
Cock	57	22.35
Gardner & Fox	14	5.49
Langford	10	3.92
Phillips	8	3.14
Prestage	23	9.02
Other auction houses	98	38.43
Decade of Sale		
1690–1700	16	6.27
1701–1710	113	44.31
1711–1720	0	0
1721–1730	45	17.64
1731–1740	95	37.25
1741–1750	69	27.05
1750–1760	63	24.70
1761–1770	14	5.49
1771–1780	48	18.82
1781–1790	31	12.15
1791–1800	59	23.13
Total Observations	255	

Table 3a. Summary Statistics: 18th-Century French Collection Inventories (n=44)

Tapestry Location A	Frequency	Percentage (%)
Antechamber	3	6.82
<i>Chambre</i>	11	25
Other rooms	6	13.64
<i>Salle à manger</i>	3	6.82
<i>Salon</i>	4	9.09
Vestibule	3	6.82
<i>Cabinet</i>	1	2.27
<i>Garde-meuble</i>	9	20.45
Unspecified	4	9.09
Tapestry Location B		
First floor	7	15.91
Second floor	2	4.55
<i>Rez-de-chaussée</i>	6	13.64
Unspecified	29	65.91
Owner		
Abel-François Poisson de Vandières, Marquis de Marigny	29	65.91
Henriette-Anne d'Angleterre	10	22.73
Jeanne Antoinette Poisson, Marquise de Pompadour	4	9.09
Other owners	1	2.27
Beneficiary		
Abel-François Poisson de Vandières, Marquis de Marigny	4	9.09
Jean-Baptiste d'Arnay	8	18.18
Other beneficiaries	32	72.73
Origins		
Auvergne	1	2.27
Brussels	2	4.55
England	2	4.55
Fabrique galeries du Louvre	1	2.27
Flanders	3	6.82
Gobelins	9	20.55
Savonnerie	3	6.82

Unspecified	23	52.27
Authorship		
Reference to designer/tapissiers	1	2.27
Unspecified	44	97.73
Subjects		
Figure/imagery	1	2.27
Mythology/allegory	12	27.27
Genre	6	13.64
History	4	9.09
Landscape/decorative/hunting	4	9.09
Religious	2	4.55
Unspecified	15	34.09
Technique/Materials		
Gold/ <i>petits points</i> /needlework	4	9.09
Unspecified	40	90.91
Size		
Surface > 50 (aunes) ²	10	22.73
Surface < 50 (aunes) ²	34	77.27
Quality Signals		
	8	18.18
Total Observations	44	

Table 3b. Hedonic Pricing Model: 18th-Century French Collection Inventories (n=44)

Dependent Variable = ln(appraisal price)	Coefficient (s.e.)
Surface > 50 (aunes) ²	0.930* (0.537)
Ostentatious subjects	0.870* (0.435)
Number of tapestry items	0.165** (0.0790)
Constant	5.308*** (0.372)
Observations	44
R-squared	0.3460
Adjusted R-squared	0.2969

Note: Coefficients are estimated using an OLS Hedonic Pricing Model. Robust standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1.

Table 4a. Summary Statistics: 18th-Century Italian Collection Inventories (n=71)

City	Frequency	Percentage (%)
Ferrara	14	19.72
Palestrina	12	16.90
Rome	38	53.52
Other cities or unspecified	7	9.86
Residency		
Casa in via del Corso	6	8.45
Palazzetto parimente posto dentro detta Città di Palestrina	10	14.08
Palazzo Caffarelli	7	9.86
Palazzo alla Giara	8	11.27
Other cities or unspecified	40	56.34
Room		
Antechamber	12	16.90
<i>Appartement</i>	2	2.82
<i>Chambre</i>	37	52.11
<i>Garde-meuble</i>	6	8.45
Unspecified	14	19.72
Owner		
Barberini	15	21.13

Bradamante Bevilacqua	10	14.08
Francesco d'Aste	6	8.45
Giacinto Sacripanti	5	7.04
Nuñez, Vincenzo, Marchese	7	9.86
Other owners	28	39.44
Beneficiary		
Olimpa Sannesia (Marchesa of Calcagnini)	8	11.27
Nuñez, Antonio (Marchese)	7	9.86
Carlo Maria Sacripanti (Cardinale)	5	7.04
Other beneficiaries	24	33.8
Unspecified	27	38.03
Origins		
Flanders	4	5.63
Unspecified	67	94.37
Genre		
Devotional	16	22.54
Figure/imagery	4	5.63
Landscape/decorative	14	19.72
Ostentatious subjects	9	12.68
Unspecified	28	39.44
Size		
Surface > 5,000 (in.) ²	63	88.73
Surface < 5,000 (in.) ²	8	11.27
Bad Condition	25	35.21
Total Observations	71	

Table 4b. Hedonic Pricing Model: 18th-Century Italian Collection Inventories (n=71)

Dependent Variable = log(appraisal price)	Coefficient (s.e)
Surface > 5000 (in.) ²	1.258** (0.0682)
Ostentatious subjects	1.077** (0.465)
Used conditions	-0.656* (0.364)
Number of tapestry items per lot	0.218*** (0.0682)
Period: first half of the 18th century	ref.
Period: second half of the 18th century	-1.021** (0.478)
Constant	2.576*** (0.353)
Observations	71
R-squared	0.3964
Adjusted R-squared	0.3398

Note: Coefficients are estimated using an OLS Hedonic Pricing Model. Robust standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1.

Table 5a. Summary Statistics: 19th-Century Tapestry Sales (Müntz, 1878) (n=131)

School	Frequency	Percentage (%)
Anonymous	56	42.75
Beauvais	12	9.16
Brussels	6	4.58
Flanders	19	14.50
Gobelins	29	22.14
Other schools	9	6.87
Quality Signal		
Attribution (after/style of)	27	18.32
Date/epoch	24	20.61
Other quality signals	10	7.63
Signature/marks	22	16.79
Unspecified	48	36.64

Genre		
Decorative (patterns, landscapes, genre scenes, etc.)	61	46.56
Ostentatious subjects	47	35.88
Religious	8	6.11
Unspecified	15	11.45
Surface		
Surface < 50 (m) ²	89	67.94
Surface > 50 (m) ²	29	22.14
Surface not mentioned	89	67.94
Period		
1850–1875	59	45.04
1875–1900	72	54.96
Total Observations	131	

Table 5b. Hedonic Pricing Model (n=131)

Dependent Variable = log(sale price)	Coefficient (s.e.)
Surface > 50 (m) ²	-1.261*** (0.352)
Ostentatious subjects	-0.0134 (0.194)
Quality signals	0.0229 (0.145)
Gobelins	-0.0867 (0.232)
Number of items	0.226*** (0.0399)
1850–1875	Ref.
1875–1900	1.043*** (0.236)
Constant	7.395*** (0.236)
Observations	131
R-squared	0.3626
Adjusted R-squared	0.3318

Note: Coefficients are estimated using an OLS Hedonic Pricing Model. Robust standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1.

Consistent with subsection 2.1, our datasets reveal that the main identified sellers, intermediaries, or beneficiaries active in tapestry collecting in the eighteenth century belonged to a social elite (dukes, cardinals, marquises, etc.), with well-known names such as Abel-François Poisson de Vandières (brother of Madame de Pompadour), Henry de Nassau D’Auverque, or members of the Italian Barberini family among them. Descriptive statistics from eighteenth-century French and Italian inventories also confirm that tapestries were predominantly found in castles, spanning from the *rez-de-chaussée* (ground floor) to, at least, the third floor. They were hung in various rooms, including vestibules, living rooms, dining rooms, antechambers, *chambres* (bedrooms), and *gardes-meubles* (storage rooms), with higher frequencies in the latter two. Supplemented with more data, such information could yield similar analyses to those conducted for paintings by Loughman and Montias (2001), Etro and Stepanova (2016), or Etro (2018), by controlling for the owner or buyer’s characteristics and the destination and strategic placement of tapestries in both private and public rooms.

Before discussing our main characteristics of interest, it is worth noting that the variable denoting the number of items per lot is found to be statistically significant in the three models, indicating that as the number of goods increased, so did the price. However, no specific conclusion pertaining to tapestries can be deduced from this finding, as the overall value of a lot would logically increase with the inclusion of additional goods.

4.1.1. Authorship vs. City Brand Names.

A striking observation is that only a few lots across all datasets provide information regarding the cartoon designer (e.g., David Teniers, Antoon Van Dyck, François Boucher, Charles

Cozette), and the tapissier's name is never mentioned. In contrast to paintings, the distinction between *disegno* and *executio* was notably more pronounced in tapestry making, leading to a fundamentally different understanding of authorship (Brosens, 2019). The vast majority of tapestries fell into the category of indeterminate works of art (Lupton, 2005), as they could rarely be attributed to a single artist. As mentioned earlier, tapestry making was a cooperative process that involved multiple stages and required the expertise of various artists and artisans. Despite their specialized knowledge and skills, the identity of these individuals often remains unknown, making weaving an inherently anonymous craft.

Despite this characteristic, the notion of authorship was not completely absent from the medium's valuation, especially for the finest pieces. As shown by the *Acts of the Apostles* by Raphael, the costs associated with the first stage of tapestry production—i.e., the conception of the cartoon—could be substantial, and was often commensurate with the cartoon designer's reputation. Significant amounts of money were also paid for cartoons designed by renowned painters such as Bernard van Orley (e.g., *The Legend of our Lady of the Sablon*; *The Revelation of Saint John*, 1520–1530), Pieter Coecke Van Aelst (e.g., *Story of Saint Paul*; *Seven Deadly Sins*), Giulio Romano (e.g., *The Story of Scipio*; *Fructus Belli*), Michel Coxie (e.g., *Story of Samson*), Peter Paul Rubens (e.g., *Triumph of the Eucharist*, 1627–1629), or François Boucher. The associations between tapestries and the names of renowned designers was thus a guarantee of quality and prestige, with higher prices observed for works executed after a composition by an established artist. In addition to the designer's name, some tapestries could also be assigned to a particular workshop, with several tapissiers' names identified in city archives (e.g., van Aelst, de Pannemaker, Gietheels, van Thieghem, Leyniers). Yet, as mentioned earlier, associations between a work and its tapissiers remained exceptional in collection inventories and sales catalogs. The data contained in these records are most often limited to the work's center of production and the scene depicted, suggesting either a lack of information, expertise or, most likely, a lower interest in authorship when it came to tapestries, as compared to, say, paintings.

In fact, the history of tapestries is arguably more deeply rooted in several leading production centers that were associated with varying levels of savoir-faire. While Arras and Tournai emerged as notable centers in the fifteenth century, Brussels and Antwerp established themselves as international production and trading hubs in the sixteenth century. From 1662 onward, the Gobelins manufactory in Paris became a major production center under the patronage of the French monarchy, known for offering the finest quality works (Gaborit, 2006; Chevallier et al., 2007). Other weavers and workshops were active in peripheral locations, such as Aubusson, Beauvais, and Oudenaarde, which each had different specializations, quality standards, and target groups. Table 2 shows that, in the eighteenth-century secondary art market, works produced in Flanders and Paris (i.e., Gobelins) were the most frequently traded goods in the high-end market, with ostentatious subjects and religious scenes prevailing. This situation persisted in the nineteenth century, as evidenced in Table 5a. While some workshops specialized in fine tapestries, others focused on lower-end, decorative works that met the expectations of individuals from lower economic strata, who still wanted to adorn their homes with tapestries. Standardization through the reuse of borders and staffage figures was the most efficient way to deliver more affordable goods (Evans, 2012).

Each production center had, therefore, its own reputation, which was determined by several factors, including the region's economic situation, regulatory frameworks imposed by local authorities, historical traditions in the textile industry, and competition. As a result, the name of each city served as a quality signal and was used to promote a good's value. Archives provide evidence of price differences among cities. For instance, Vanwelden (2006) reports that records of tapestries exported from Antwerp to the Iberian Peninsula between April 1, 1552 and

May 27, 1552 suggest that Brussels tapestries were valued between 7.5 to 18 guilders per ell, or three times the price of Oudenaarde, Enghien, and Tournai tapestries included in the same cargo. On all merchandise shipped, mass-produced Oudenaarde *verdures* dominated, representing 65.7% (45,886 items). In contrast, fine Brussels works only accounted for 7.7% (5,391 items), with a scarcity effect commensurate to quality. Similarly, Brosens (2005, p. 13) has used eighteenth-century Parisian inventories to show that tapestries merely designated as “de Flandres” were priced lower, on average, than those associated with a specific city name. Works with generic origins such as “French” or “Flemish,” or those without specified origins—known as “homeless tapestries”—lacked this specificity. Tapestries from Flanders (representing 34%) were valued slightly higher than French tapestries (representing 27%), with estimated total values of 16,112 and 12,895 livres, respectively. As signatures on tapestries were rare, especially before the sixteenth century, city-of-origins marks (which were woven in the self-edge of tapestries), became valuable labels for creating product differentiation. Even though our sources do not specify the presence of such marks (as was the case for signatures on eighteenth-century paintings), tapestry enthusiasts still valued these marks and monograms, whose identification was facilitated by ready-made lists provided by connoisseurs (Müntz, 1876, pp. 360–380).

The obligation to affix a city mark on tapestries was often the result of direct intervention in the tapestry market by public authorities, through the passing of ordinances intended to prevent counterfeiting. Due to the high production costs of tapestry making, some entrepreneurs and weavers employed deceptive strategies to increase profits. These included low-quality wools or substituting handmade dyes for pigments directly affixed to warps. Controlling for quality and fighting against opportunistic behaviors were thus major concerns of the industry, and of the Brussels tapissiers in particular. Complaints were recorded against Brussels workshop directors—who painted parts of tapestries to artificially enhance the pictorial effect of the work—and illegal copying and pilfering of existing cartoons (Brosens, 2014). This situation prompted cities to take controlling measures to prevent abuses that could potentially damage the reputation of a city’s longstanding know-how and brand name. In 1525, the magistrate of Brussels issued an edict prohibiting the use of liquid substances to create more nuanced features, while ensuring that the tapissiers had exclusive rights on the models to prevent illegal copying by competitors (Wauters, 1878). For identification purposes, the 1528 edict also mandated that tapissiers include a red crest between two woven *Bs* in a lighter wool than the background, either in the selvage or lower braid. Among the nine stipulations of Charles V’s imperial edict in 1544, were the selection of raw materials, the protection of artistic skills, and a prohibition on retouching. This latter edict also classified tapestries into three levels of quality: works priced below 5 stuivers per ell, between 6 and 22 stuivers, and above 23 stuivers (Evans, 2012). Like Brussels, Aubusson implemented stringent regulations pertaining to tapestry production. Several edicts, including those of 1665, 1732, and 1733, imposed various constraints on tapissiers. Among others was the requirement to weave *Aubusson* and the weaver’s initials into the border of each piece. An inspector would then affix a lead seal at the end of the process. These strict regulations were put in place to secure the tapestry market and the reputation of its stakeholders (Brosens, 2014; Evans, 2012).

The mention of a city name, thus, reduced uncertainty about quality and helped buyers assess the work’s value. Additional specifications, such as “common,” “fine” or “Gobelins,” could also assist them in assessing quality, with the latter representing the highest degree of quality. Despite the importance of the city brand name, our eighteenth-century datasets unfortunately do not specify prices (Table 2) or the size of our datasets prevents us from controlling for each production centers. When controlling for the Gobelins (Paris), the most represented workshop, multicollinearity occurs with ostentatious scenes, as this workshop was

notoriously specialized in that kind of iconography. For nineteenth-century sales, none of these two variables appear significant. As the nineteenth-century is known for being a period of decline in tapestry making and consumption, especially in France, it is likely that this production center was no longer valued as it used to be in the Golden age of tapestry.

4.1.2. *Techniques and Materials.*

While only four lots provided information pertaining to tapestry's weaving technique or materials, ignoring these crucial attributes runs the risk of misunderstanding tapestry's past valuation mechanisms. Historiographer of Louis XIV, André Félibien (1619–1695), who occasionally commented on woven art pieces in his works dedicated to the royal collection, claimed that the evaluation of a tapestry depended principally on the quality of the model, the craftsmen's weaving skills, the dyeing standards, the choice of materials and textile fibers, and the fineness of the weave. According to Félibien, the aesthetic experience offered by European tapestries was contingent on the weavers' ability to transfer a graphic composition onto a vibrant and textured textile support (1679; 1690). Depending on the work's destination and the human and material resources allocated to its production, quality could vary greatly. In contrast to painting, the assessment of tapestry's fineness depended on the number of warps per measurement unit. Past inventories and catalogues occasionally provide this specification, evincing that the higher the number of warps per ell, the higher the appraisal or sale price. According to Guiffrey (1886), the average price for the best seventeenth-century French tapestries was around 200 to 250 livres per aune, with, for example, 210 livres paid per aune for the *Story of Alexander*, compared to the 40 livres paid per aune for lower-end pieces. Similarly, the tenture depicting the *History of the King*, produced by the Gobelins for Louis XIV, was valued at 400 livres per aune, while at the same time, Aubusson works were barely paid around 15 to 20 livres per aune. Arguably, the number of warps per ell or aune was strongly correlated to labor costs, as fine weaving required more workforce and workload to achieve the expected degree of fineness. Other cities, such as Felletin, which specialized in the lower-end market, supplied pieces decried at times for their poor-quality standards. In 1718, for example, some tapissiers criticized the workshop's output as being more suitable for baiting worms than for being admired by humans. These tapestries were priced at a meager 30 to 40 livres per aune (Guiffrey, 1886, p. 114).

Furthermore, the materials used to produce tapestries (e.g., pigments, animal or vegetal fibers, and metallic threads) also held an intrinsic value. Wool was the most common material used in tapestry making, while lower-end woven hangings could include non-textile materials like organic fibers or straw.¹² Fine-quality wool was sourced from countries such as England or Spain. Handmade wool dyeing by professional dyers using traditional methods were additional expenses that inflated the price of tapestry (Cavallo, 1993; Campbell, 2002; 2007). The finest pieces could also include additional materials such as silk and silver or gilded threads. Silk was highly valued for its ability to enhance the naturalistic effect of a weaving, owing to the subtlety of its fibers and colors (Turner, 2013). Gold was a rare addition to tapestries, reserved for the most exceptional pieces (e.g., *Life of Christ* [1524–1531], Vatican Museum, Rome) and creating magnificent effects. The cost of these precious materials was considerably higher than that of wool, not only due to their intrinsic value, but also to import costs, with silk coming from Italy or Spain, and silver- and gilt-metal-wrapped silk threads being imported from Venice or Cyprus (Campbell, 2002). According to some export documents, silk-woven tapestries imported from the Southern Low Countries to England during the first half of the sixteenth century cost four times more than those woven with coarse wool (Campbell, 2002; 2007). Archival evidence

¹² Note that Bergame and Saint Denis tapestries, as well as those from *La Porte de Paris*, were typical examples of low-end goods, fabricated with a variety of cheaper materials such as cotton, hemp, ox, cow or goat hair, mixed with wool and silk (Guiffrey, 1886).

from seventeenth-century German tapestry workshops illustrates the difference in price between wages and materials. Compared to a master's salary, estimated at 300 thalers for six months, 22 livres of Italian gold threads would have cost 396 thalers, as opposed to 71 thalers for 6 livres of silk. These amounts contrasted with regular warp yarn in wool, which was valued at 25.5 thalers (Müntz, 1878, p. 12). The number of warps per ell also correlated to the inclusion of fine materials. The *London Port Book Rates*, dated 1507, distinguish three levels of quality based on this criterion: "Tapestry or verders without sylke," which were valued at approximately 5 ducats per ell; "tapestry or verders with cades," estimated at 1 scudo per ell; and "tapestry or verderes with sylke," at 1 scudi, 8 ducats per ell. Additional evidence from the mid-sixteenth century confirms this scale of value, with coarse tapestries made with wool increasing in value from 8 ducats per ell to 1 or 2 scudi per ell; tapestries made with gold, known as Arras, could be valued at 40 scudi per ell (Evans, 2012).

4.1.3. Size.

Prior research has demonstrated that the dimensions of an artwork already influenced price formation in earlier periods, with larger oil paintings commanding higher prices (e.g., Etro & Stepanova, 2016; Etro et al., 2020). As discussed in Section 1.2, tapestries' impressive surface area was determined by the social prestige and wealth of their patrons, commensurate with the size of their domestic interiors. The height—which fluctuated, on average, between 2.5 and 4 meters—was generally the same for all scenes within a tapestry series. The width of the scenes within a series, however, usually varied. Small compositions tended to be 1 or 2 meters wide, while large scenes could reach up to 8 or even 10 meters in width. *The Battle of Westrozebeke*, woven in 1384 by order of Philip the Bold, was a stunning 41 meters wide and 5 meters high, with a total surface of 205 square meters. Estimates indicate that weavers could produce approximately one square yard of coarse tapestry per month, while the production of the finest tapestries could take up to half a square yard or even less per month (Campbell, 2007). Larger-scale tentures were thus highly prized due to the considerable efforts involved in their production, with additional labor and materials costs reflected in their final prices. Empirical evidence supporting this argument can be found in Tables 3b and 4b, which reveal that woven works recorded in eighteenth-century French and Italian collections with dimensions exceeding, respectively, 50 square aunes and 5,000 square inches were, on average, more expensive than smaller pieces (with respectively 0.930* [0.537] and 1.258** [0.0682]). Consistent with the evolution of lifestyles and the reduction of living space, Table 5b reveals an opposite trend for nineteenth-century France, with lower prices for tapestries larger than 50 square meters (-1.261*** [0.352]), as the covering function of tapestry was also gradually replaced by more affordable substitute goods, including industrial wallpapers and brocade fabrics (Müntz, 1880, pp. 346–348). In his *Encyclopédie méthodique* (1825), art critic Quatremère de Quincy predicted this phenomenon by suggesting a correlation between the decreasing size of living spaces and presence of decoration.¹³ The anxieties expressed by representatives of the Gobelins manufactory in the nineteenth century also reflected their concerns about the growing threat of new decoration trends (Caen, 2016).¹⁴ More broadly,

¹³ "Soon everything became smaller, even in the homes of the great and the rich. The furnishing and decoration of the apartments were obliged to be limited to the size prescribed by the architecture. Tapestries depicting figures were replaced by silk fabrics, gilded woodwork, whimsical arabesque ornaments more or less insignificant, and finally by the use of inexpensive wallpaper, which replaced all kinds of embellishments from ancient times." See Rotours, 1830, p. 17 (cited in Caen, 2016, p. 144).

¹⁴ In 1801, Darcet, chemist at the Gobelins, claimed that "the wealthy will no longer hesitate to prefer to adorn their homes with these national copies, instead of covering them with those papers that the craze for imitating England has introduced among us; which our frivolity finds so convenient to renew without much expense, but which the observer, friend of his country, has seen with regret as one of the most beautiful branches of our national commerce and industry fall." Guillaumot, n.d., p. 13 (cited in Caen, 2016, p. 143). Similarly, Guiffrey, the eighteenth-century director of the manufactory, complained that "the cheap wallpaper, which is periodically replaced according to changes in taste, had killed off the sumptuous and durable tapestry, passed down within the same family from generation to generation and seemingly endless." Paris, 1901, p. 155 (cited in Caen, 2016, p. 143)

tapestry's monumental, heavy, and textured compositions began to contrast with modern lifestyles and individual preferences, making those cumbersome goods rather obsolete.

4.1.4. Genre.

European tapestries enjoyed great success due to the variety of their compositions, ranging from historical scenes to mythological and allegorical stories, as well as biblical scenes from the Old Testament and strictly decorative patterns such as verdure and *feuilles de chou*,¹⁵ *millefleurs* ("thousand flowers"),¹⁶ armorial tapestries, Rococo grotesques, floral patterns, and Chinese fantasies. More than painting, tapestry was inherently linked to the history of style, with successive reinterpretations leading to syncretic productions that reflected shifting preferences across the ages (Massagia, 2013; Brosens, 2019). Genre and style are, however, often strongly associated with specific time periods and production centers. For instance, the Louis XIV style is commonly associated with the seventeenth-century and the Gobelins manufactory, while the Gothic style is representative of late medieval tapestries, renowned for their exceptional quality (Cavallo, 1993). Over the course of the seventeenth century, the *goût moderne* (modern taste) gradually competed with the *grand goût* (grand taste), leading to the emergence of new types of compositions, such as low-genre scenes in the style of David Teniers, or more decorative, frivolous, and lighthearted series. In the hierarchy of genres, less-sophisticated or merely decorative compositions tended to be less esteemed, as was the case of fifteenth-century armory or floral tapestries, which were priced from 8 to 10 or 18 to 24 francs per square aune (Guiffrey, 1886, p. 32). By contrast, ostentatious tapestries that depicted historical, mythological, and allegorical scenes were highly prized by buyers, given the powerful symbols and meanings they conveyed. Results displayed in Tables 3b and 4b indeed suggest that, until the end of the eighteenth century, ostentatious iconography was priced higher than other topics (0.870* [0.435] and 1.077** [0.465]). Interestingly, with the devaluation experienced in the nineteenth century and major social shifts observed in French society at that time, this variable is not significant in Table 5b (-0.0134 [0.194]).

4.1.5. Condition.

The material condition of a tapestry was also considered an important factor in their appreciation. E. Müntz (1880, p. 484) emphasized this point in his *Trade and prices of tapestries*, stating that, all other things considered, a tapestry was mostly worthy because of its state of preservation. Müntz also warned buyers against unscrupulous practices aimed to make tapestries look older or to mask the effects of damaging restoration. As works made up of textile fibers, tapestries were particularly sensitive to the effects of time, collectors' display practices, and historical events. Frequently occurring forms of damage includes dye fading, light and microorganism attacks, distortion, soil and stains, broken warp yarns, missing wefts, holes, and weak slits, which could eventually lead to critical damages or even destruction (Brosens & Maes, 2019). Given their portable nature, these goods were often rolled up, transported, and displayed in a manner that also could harm their material integrity, especially a consequence of hanging tensions; silk threads were particularly vulnerable to rapid degradation. Evidence also suggests that certain tapestry series were deliberately burned or dismantled to retrieve gold and silver threads (Massagia, 2013; Standen, 1985), while others were purposely cut into several pieces given their enormous dimensions and weight. This latter form of damage was notably the case of the *Bataille de Roosebecke*, which experienced such a fate in 1402 (Guiffrey, 1886).

¹⁵ The term *feuilles de chou* (cabbage leaves) derives from the exuberant presence of foliage that closely resembles leaves of the cruciferous family. These patterns are typical of Aubusson, Oudenaarde, and Enghien.

¹⁶ *Millefleurs* tapestries are late medieval works that usually offered a background in which numerous small flowers and plants are depicted, typically against a green backdrop to create the impression of a field of grass. The *Lady and the Unicorn* series is a prototypical example of a millefleur-style tapestry.

The use of tapestries for purposes other than covering walls—as carpets or curtains for stages, doors, and windows—could also contribute to different patterns of deterioration. Eighteenth-century Italian collection inventories provide valuable information on the condition of the works and their degree of use, with some descriptions insisting on mediocre states of conservation (e.g., *e in cattivo stato* [in bad condition], *di niun valore* [worthless], *ordinarij vecchi e rotti alti* [ordinary, old, and torn], *mediocri* [mediocre], *assai usato* [very used], and *in pessimo stato* [in very bad condition]). As shown in Table 3, a “used” condition had a direct impact on appraised value (-0.656* [0.364]), although the degree of use a work had could be accepted as an inherent feature of ordinary tapestries, commensurate with age.

5. Contemporary Price Determinants of European Tapestry: From High-Value to Low-Value Goods.

Our exploration of tapestry’s past valuation mechanisms tends to support the assumption that, just as paintings, objective attributes of the medium contributed historical market values. Our empirical analyses also tend to reflect the perceived declining value of the medium over time, especially in France and Italy, for which the second half of the eighteenth century already showed a decrease in value (see Table 4b). Four main reasons are usually attributed to the downfall of tapestry: i) the political instability and successive economic crises that followed the French Revolution and subsequent dissolution of the nobility, lowered purchasing power, and subvention cuts within governments; ii) technical innovations derived from industrialization coinciding with the invention of water-powered jacquard looms, mechanical dyeing and weaving techniques, and the commercialization of industrial wall-papers;¹⁷ iii) the accelerated taste and style shifts of the nineteenth and twentieth centuries, which had direct effects on interior design and lifestyle; and iv) the subsequent disappearance of production centers and depletion of craftsmanship (Caen, 2016; Massagia, 2013; Jarry, n.d.). All factors considered, these cultural and economic phenomena have played a role in the depreciation of characteristics that had formerly driven the demand for tapestries. The most affected attributes were undoubtedly the tapestry’s ability to meet the needs of ostentation and lifestyle. The use of woven tapestries for self-glorification or as diplomatic gifts was no longer commonplace, apart from notable exceptions such as the *Triumph of Peace*—designed by Antwerp tapissier Peter Colfs—which was offered by the Belgian government to the United Nations in 1954 (Brosens & Maes, 2019). In terms of conspicuous consumption, contemporary and modern art has now taken on the role of Veblen goods to satisfy the self-esteem and self-actualization needs of wealthy individuals that tapestry once fulfilled. The reduction of housing space, equipped with more efficient central heating systems, also challenged the medium’s original insulatory and acoustic functions.

These major shifts have led to a significant decrease in tapestry’s perceived value, with direct effects on economic value. Despite the medium’s former status as a luxury good, the resale market for tapestries has become a marginal segment. The incorporation of high-end tapestries into public collections has also contributed to contracting a market where top-quality works rarely encountered. A closer examination of recent sales catalogues confirms that the functional characteristics of tapestry are no longer viewed as a unique selling point and have even become obsolete in contemporary auction houses’ discourse. When it comes to tapestry’s

¹⁷ In 1777, a magistrate in Brussels involved in the textile business made a prescient claim regarding the future of the tapestry industry. In his words, “the decline of tapestry is a necessary consequence of the changes that, for a number of years, have been felt in our tastes, our fortunes, and our customs. Luxury, which has spread to all states, has extended our needs to too many different objects for us to still be able, like our ancestors who lived in only four walls except for two or three rooms, to consider furniture of such high value. Furthermore, wall-paper, together with an infinite number of small items of furniture whose low cost and infinite variety suit the needs, whims, inconstancy, tastes, and fortunes of all classes, have introduced such a necessity to vary and change furniture according to use that our fortunes no longer permit us to bear the expense of tapestry, risking seeing it go out of fashion the next day.” See Wauters (1878) and Guiffrey (1886, p. 382).

formal, material, and aesthetic characteristics, certain details are no longer used in appraisals— notably, the number of warps per measurement unit or the labor costs. Providing this specific information indeed requires a certain level of expertise that may not be worth the investment in light of current market values for antique tapestry.

To conclude our investigations on the valuation of European tapestry over time, we looked at recent sales at Christie’s and Sotheby’s (2010–2020). Unlike old sales catalogues, contemporary sales catalogues offer a more comprehensive and consistent set of exploitable information that has allowed us to better understand contemporary pricing mechanisms. The increased availability of information results from recent advances in scholarship within tapestry studies but also reflects the growing importance of certain factors in art valuation, such as the certification of authorship and origins. Our working sample totals 602 observations, with an average price of 56,192 USD and a median price of 17,780 USD. By contrast, the average and median prices of Flemish old master paintings produced in the same context and sold in the same period via the same auction houses are estimated, respectively, at 312,016 USD and 49,921 USD (Radermecker, 2021). Based on in-depth research into sales catalogues and condition reports, we adjusted the traditional hedonic pricing model to better capture tapestry’s idiosyncrasies. More specifically, our preferred model controlled for a series of covariates related to authorship, production centers, aesthetics, and quality. We included a continuous variable ranging from 1 to 9 to account for the number of information snippets contained in the designation (medium, origin, production center, century, title, style, workshop, designer, material, etc.), the production center (with “France” [baseline], “Antwerp,” “Aubusson,” “Beauvais,” “Bruges,” “Brussels,” “Flanders,” “Gobelins,” “Oudenaarde,” “Paris,” and “other cities” [including Soho and Mortlake for British tapestry]); four categorical variables for the attribution qualifiers (“by” [baseline]; “attributed to”; “workshop”; “after”); a dummy variable whether the cartoon designer’s or weaver’s name was mentioned; five categorical variables for the period of production (“16th century,” “17th century,” “18th century,” “19th century and later,” and “other period or not mentioned”); a dummy variable for whether the piece was part of a larger series; seven categorical variables for the scenes depicted (“chinoiserie,” “pastoral scenes,” “feuilles de choux/verdures,” “armorial/heraldic tapestry,” “game park/wild park scenes,” “millefleurs,” and “other topics or not mentioned”); seven categorical variables for styles (“classical,” “gothic,” “Renaissance,” “Teniers style,” “Louis XIV,” “Louis XV,” and “other style or style not mentioned”); a continuous variable expressing the work’s surface in square centimeters; three categorical variables for the work’s format (“fragment,” “cushion,” and “*portieres/entre-fenêtres*”); and dummy variables whether silk or metal threads were included in the wool. To further assess the work’s quality, we developed a “condition scale” (continuous variable), which took the value of “0” in the case of a reported bad condition (i.e., when the condition report mentioned holes, strips, patches, stitches, dirt, stains, etc.); “1” if no comment was made on the work’s condition; and “2” if the work was considered to be in a good condition (i.e., when the condition report mentioned a stable condition, cleaning, lining, presence of Velcro, reparation, restoration, reweaving, etc.). We also created a “color scale” (continuous variable), with “0” indicating bad colors (i.e., entirely or partly muted, oxidized, faded, or discolored); “1” for no comment made on coloration; “2” for balanced colors; and “3” for so-called good colors (i.e., vibrant, decorative, or strong). When the cataloguer explicitly commented on the quality of the weaving or the accuracy of the picture, we used a dummy variable to account for this extra information. Other standard hedonic variables were included, such as provenance, exhibitions history, literature, expert opinion, lot position, references to similar pieces preserved in museum, and information on previous sales, with most of these variables being converted into dummy variables, taking the value of “1” if the condition was met and “0” if otherwise. Finally, we controlled for the auction house’s name and the year of

the sale. Table 5a describes the dataset, while Table 5b displays the main results of our preferred model.

Table 6a. Summary statistics – Christie’s and Sotheby’s sales of European tapestries (n=602)

Summary Statistics	Frequency	Percentage (%)
Authenticity		
Designation scale	<i>continuous</i>	--
Antwerp	15	2.49
Aubusson	96	15.95
Beauvais	26	4.32
Bruges	5	0.83
Brussels	134	22.26
Flanders	114	18.94
France	20	3.32
Gobelins	34	5.65
Oudernaarde	24	3.99
Paris	17	2.82
Other cities	117	19.4
16th century	144	23.92
17th century	202	33.55
18th century	174	28.90
19th century or later	59	9.80
Century unspecified	23	3.82
By/signed	21	3.49
Attributed	14	2.33
Workshop/marks	80	13.2
After	77	12.79
Spatiotemporal designations	407	67.6
Reference to the designer	15	2.49
Part of a series	333	55.32
Aesthetics		
Allegory	47	7.81
Bible stories	54	8.97
Chinoiseries	14	2.33
Genre scenes	25	4.15
Mythology	95	15.78
Pastoral	29	4.82
<i>Feuilles de choux/verdures</i>	68	11.30
Armorial scenes	18	2.99
Game park/wild park	31	5.15
History	56	9.30
Landscape	12	1.99
Millefleurs	8	1.33
Unspecified topic	145	24.9
Classical (style)	18	2.99
Gothic (style)	11	1.83
Louis XIV (style)	24	3.99
Louis VI (style)	21	3.49
Renaissance (style)	7	1.16
Teniers (style)	15	2.49
Other styles or unspecified	506	84.05
Surface (m) ²	<i>continuous</i>	--
Fragment	36	5.98
Cushion	14	2.33
<i>Portière/entre-fenêtre</i>	13	2.16
Quality		
Silk	187	31.06

Metal threads	49	8.14
Condition scale	<i>continuous</i>	--
0 – Bad condition	61	10.13
1 – Condition not mentioned	38	6.31
2 – Good condition	503	83.55
Color scale	<i>cont.</i>	-
0 – Faded/muted colors	127	21.10
1 – Color state not mentioned	269	44.68
2 – Balanced colors	81	13.46
3 – Good colors	125	20.76
Quality of the weaving	363	60.30
Accurate reproduction (picture)	42	6.98
Provenance	218	36.21
Exhibition history	21	3.49
Literature	119	19.77
Expert opinion	116	19.27
Lot position	<i>continuous</i>	--
Reference to similar pieces	195	32.14
References to prior sales	110	18.27
Sale Context		
Sotheby's	327	54.32
Christie's	275	45.68
Paris	63	10.47
London	360	59.80
New York	179	29.73
2009	33	5.48
2010	99	16.45
2011	84	13.95
2012	72	11.96
2013	57	9.47
2014	35	5.81
2015	42	6.98
2016	34	5.65
2017	53	8.80
2018	27	4.49
2019	29	4.82
2020	37	6.15
Total Observations	602	

Table 6b. Preferred Model: Christie's and Sotheby's Sales of European Tapestries (n=602)

Hedonic Controls	Coefficient (s.e)
Authenticity	
Designation level	0.0779* (0.0408)
France	<i>baseline</i>
Antwerp	0.432 (0.287)
Aubusson	0.128 (0.207)
Beauvais	0.549** (0.261)
Bruges	0.595 (0.421)
Brussels	0.155 (0.214)
Flanders	0.348 (0.212)
Gobelins (Paris)	0.856*** (0.252)
Oudernaarde	0.345 (0.260)
Paris	0.611*** (0.282)
Other cities	0.345* (0.207)
Century unspecified	<i>baseline</i>
16th century	0.824*** (0.208)

17th century	0.129 (0.201)
18th century	0.0617 (0.203)
19th century and later	-0.228 (0.219)
Spatio-temporal designations	<i>baseline</i>
By	0.153 (0.206)
Attributed	0.234 (0.233)
Workshop/marks	0.813* (0.476)
After	-0.0293 (0.128)
Mention of cartoon designer	0.514** (0.238)
Part of a series	0.432** (0.184)
Aesthetics	
Other topics or unspecified	<i>baseline</i>
Chinoiserie	0.561** (0.237)
Pastoral	0.0460 (0.158)
<i>Feuilles de choux/Verdures</i>	0.0376 (0.117)
Armorial scenes	0.298 (0.203)
Game park/wild park	0.0916 (0.165)
Millefleurs	0.603** (0.302)
Other styles or unspecified	<i>baseline</i>
Classical (style)	-0.245 (0.219)
Gothic (style)	1.116*** (0.260)
Louis XIV (style)	0.0378 (0.190)
Louis XV (style)	-0.347* (0.207)
Renaissance (style)	0.0275 (0.322)
Teniers (style)	0.0270 (0.231)
Surface (m) ²	6.39e-06*** (8.12e-07)
Fragment	-0.623*** (0.150)
Cushion	-0.351 (0.233)
<i>Portières/entre-fenêtre</i>	-0.155 (0.235)
Quality	
Silk	0.190** (0.0836)
Metal threads	0.836 (0.0849)
Condition scale	0.225*** (0.0649)
Color scale	0.136*** (0.0356)
Quality of the weaving	0.296*** (0.0783)
Accurate reproduction	0.362** (0.148)
Provenance	0.146* (0.0801)
Exhibition history	0.183 (0.196)
Literature	0.434*** (0.102)
Expert opinion	-0.147 (0.126)
Lot position	-0.000300* (0.000153)
Reference to similar pieces	0.303*** (0.0926)
References to prior sales	0.140 (0.103)
Sale Context	
Christie's	<i>baseline</i>
Sotheby's	-0.118 (0.202)
London	<i>baseline</i>
Paris	0.375** (0.148)
New York	-0.0555 (0.0895)
2009	<i>baseline</i>
2010	0.144 (0.172)
2011	-0.0346 (0.189)
2012	-0.128 (0.187)
2013	-0.393** (0.189)
2014	-0.349 (0.216)
2015	-0.619*** (0.213)
2016	-0.528** (0.217)
2017	-0.535** (0.208)
2018	-0.792*** (0.234)

2019	-0.782*** (0.236)
2020	-0.452* (0.249)
Constant	7.315*** (0.351)
Observation	602
R-squared	0.6723
Adjusted R-squared	0.6333

Note: Coefficients are estimated using an OLS Hedonic Pricing Model. Robust standard errors are in parentheses; ***p < 0.01, **p < 0.05, *p < 0.1.

In line with recent findings on the contemporary market for anonymous old master paintings (Radermecker, 2019; 2021), provisioning buyers with as much information as possible in the work designation increases their willingness to pay, with higher prices fetched by works scoring higher on the designation scale. City brand names still send valuable quality signals to buyers, with Beauvais and the Gobelins manufactories (Paris) appearing as significantly positive. As mentioned earlier, the latter was and still is associated with the highest standard of quality (Campbell, 2007). The significance of the “workshop” variable also supports the idea of a local place branding effect (Kotler & Gertner, 2002), with some tapestry workshops being formerly associated with greater reputation. Yet, buyers’ obsession with names still affects decorative arts, as the mention of a cartoon designer is statistically significant. Being part of a series is also valued from the standpoint of demand, with this feature signaling a certain standing to buyers. Pieces from the sixteenth century or earlier command, *ceteris paribus*, higher prices than those produced in a later context. While one may argue that older works are not only rarer, but also associated with higher levels of craftsmanship, this finding remains surprising given that older pieces are most often heavily restored and may even be considered fakes by tapestry specialists, especially as wool and silk is known not to survive beyond four centuries. The coefficients and signs taken by some variables related to aesthetics also reveal that specific ornamental and iconographical patterns continue to appeal some buyers, especially “chinoiseries,” “millefleurs” (highly representative of the famous *Lady and the Unicorn*), “Gothic” and “Louis XV” tapestries.

Size, too, remains a significant price determinant, with larger formats reaching higher prices. Despite potential storage issues, it is likely that tapestry enthusiasts and museums revalue the medium’s monumentality and integrity, as further evidenced by the lower prices fetched by tapestry fragments. Materiality also plays a role in the valuation of antique tapestries. Tapestries containing silk are, on average, 20% more expensive than tapestries woven in wool alone. The inclusion of metal threads aimed to accentuate certain details of the composition is not particularly valued, given that this feature is the privilege of a minority of prestigious pieces, most of which are preserved in museums. The natural oxidation of metal may also alter the appeal of their original effect.

As demonstrated in the results table, both the condition and color scales also show a significantly positive correlation at the 99% level of confidence. This is strong empirical evidence that condition still matters today and that buying a tapestry that requires minimum post-purchase intervention is essential to buyers. Restoring an antique tapestry, or lining it with Velcro, are costly operations. Cleaning is also essential, as textile fibers absorb all kinds of odors, including smoke and dust. Strong odors may be repulsive to buyers, and such actions need to be undertaken ex-ante to increase the good’s marketability, in a context of limited demand. The guarantee that the work is “ready to be hung”—a verbatim specification encountered in several condition reports—is, therefore, an important quality signal for buyers. Colors also used to be an important criterion in tapestry appraisal, and the positive sign detected by the “color scale” variable suggests that this parameter is still valued on the market. The insistence of cataloguers on the vibrant, shimmering effects of tapestries’ colors is crucial for

buyers, as also corroborated by a tapestry dealer who claimed that people want instant colors, and many are concerned with fading colors (Reyburn, 2018).

Finally, comments on the quality of weaving—or the weaver’s ability to reproduce an accurate composition—still make a price difference in this market segment. It is, therefore, surprising to see that lot essays most often focus on the works’ composition and production center, instead of elaborating on the human and technical aspects that underlie the art of weaving and contribute to the overall aesthetic experience. In the context of the revitalization of handcrafts and renewed interest in textile arts, such emphasis could contribute to more efficiently promoting antique tapestries.

Conclusions.

In this paper, we have undertaken a preliminary exploration of the market for European tapestries and their valuation mechanisms, both past and present. Our aim was to shed light on a medium that has been relatively under-researched in both the fields of art history and cultural economics, in order to counter the prevailing bias toward paintings in these disciplines. Specifically, we have first introduced the supply side of tapestry production during the Early Modern period, before delving into the demand for these luxury goods. In examining the motivations of buyers (such as ostentation, devotion, lifestyle, and national identity-building mechanisms), as well as the key attributes of tapestries (including authorship and city branding, techniques and materials, size, genre, and condition) that influenced their market value, we have provided a preliminary overview of this unique market. In a final step, we have examined the characteristics that still impact the market value of tapestries in the contemporary auction market. These include factors such as designation scale, attribution qualifiers, production centers, cartoon designers’ and tapissiers’ names, style, material, size, condition scale, color scale, and fineness of weaving. Our study stresses the necessity of considering the market for other art objects in both historical and present contexts. Tapestries possess their own distinct formal, material, aesthetic, and functional attributes that set them apart from paintings, drawings, or prints. Consequently, the application of existing approaches and research questions related to the latter may not always be relevant when studying this medium, though they do offer alternative research avenues.

Our contribution, however, is not without limitations. We acknowledge that we have covered a wide span of time and have provided examples from various geographical areas. This broad context has prevented us from conducting more detailed analyses of the tapestry economy or drawing specific conclusions pertaining to particular periods or countries. The limitations of our datasets, such as their size and available information, may also challenge our current findings, although they remain consistent and credible in relation to previous research. Given the current state of knowledge, conducting in-depth quantitative analyses on predefined topics for the Early Modern period and the nineteenth century, such as the correlation between a work’s quality and its destination and location, the reception of tapestry size in relation to housing trends, the evolution of the relative value and price formation of paintings and tapestries, or accurately retracing the evolution of information supply in sales catalogues, is hardly feasible. As the market for European tapestries has never been studied from a cultural economics perspective, it was necessary to first introduce this market segment through a relatively rudimentary approach, focusing on the supply and demand sides and looking at the main motivations of buyers and the driving factors behind the medium’s market value. Future empirical research could examine later datasets, particularly the archives of French and Cie, who were active in New York in the first half of the twentieth century. Preserved at the Getty Research Institute, this archival collection may be of interest to cultural economists eager to

further explore the reception of European tapestries in the American context. However, such research would require in situ archival investigation to collect and make the thousands of tapestry records statistically exploitable.

In situations where data are limited, our paper demonstrates the necessity of combining historical narratives with empirical data to gain a comprehensive understanding of how this tapestry was historically valued. In the scope of this paper, relying exclusively on empirical data would have led to an incomplete and potentially misleading understanding of the historical valuation of fine tapestries, even if this situation implies a lack of full empirical control over all variables. In other words, incorporating methods from both art history and cultural economics not only helps challenge or support existing findings but also aids in the exploration of underexplored areas in the economic history of the arts.

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