

CULTURAL VALUE CHAIN: STRATEGIES FOR ACTIVATING CULTURAL VALUE IN MADE IN ITALY PRODUCTS AND SERVICES.

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APPROACH, APULIAN WOOD-FURNITURE SECTOR, ECONOMICS**

ABSTRACT | The research is part of ‘Made in Italy circolare e sostenibile’ macro-project, financed by PNRR, with the objective of promoting innovation in Made in Italy production chains. The ‘New and consumer-driven business models for resilient and circular SCs’ project aims to develop circular and resilient supply chain strategies to support the furniture sector. The contribution presents the first outcomes of the ‘Cultural value chain. From local traditional production districts to a new country of origin effect’ project, focusing on the discipline of design and its critical role in the cultural valorisation of goods. The objective is to identify a strategic design-driven approach to support the competitiveness of local production systems by valorising the identity of culture-based products and services. The concept of the *cultural value chain* emerges as an interpretative key, placing cultural value inside supply chains. The research investigates the change in the Italian manufacturing sector, emphasising the reconfiguration of industrial districts and the innovative impact of the digital revolution; in fact, the decentralisation of production phases by leader companies activates possible innovative dynamics in the industrial context and presents opportunities for micro-enterprises. In particular, the research focuses on the context of the wood-furniture supply chain in the Apulia, with a specific attention on the upholstered sector, presenting case studies to support the critical reasoning exposed. The discussion highlights the need to shift the focus towards social and cultural well-being, with design called upon to support socially sustainable enterprises. The thesis argued is that design should assume a central role in the development of new design strategies oriented towards the *cultural value chain*, considering cultural capital as a key element for the competitiveness of local production chains.

1. Introduction

The paper is part of the 'Circular and Sustainable Made in Italy' macro-project financed under the PNRR, which intervenes in encouraging the innovation of Made in Italy production chains, with particular reference to 2F Furniture and Fashion. Specifically, the project to which 'New and consumer-driven business models for resilient and circular SCs' refers deals with the research of circular and resilient supply chain strategies in order to support the Made in Italy fashion, furniture and automotive ('3A') sectors. On the other hand, the objective is to face the challenges of SMEs for a sustainable and resilient reconfiguration of global value chains by adopting strategies of re-shoring, redesigning and enhancing the cultural dimensions of local supply chains.

In particular, this contribution presents some of the outcomes of the "Cultural Value Chains: From Local Traditional Production Districts to a New Country of Origin Effect" project. The research, assuming a critical point of view, for the discipline of design, with reference to the role of the entire supply chain in the identification of the cultural value of goods, photographs the current panorama of the Apulian wood-furniture supply chain and analyses the case studies related to the context of investigation, with the aim of useful exploration for the future design of sustainable project strategies consistent with the peculiar capacities of the entrepreneurial fabric of reference.

The broader objective of the study is to identify the design-driven strategic approach to support the competitiveness of local, resilient and circular production systems, enhancing the role of the identity of culture-based products and services, also in relation to the social context and target communities. In particular, criteria are defined for locating cultural value in supply chains, in what we call the *cultural value chain* (Di Roma et al., 2024). In this chain, the cultural value generally attributed to the product is identified in the stages and actors associated with the entire process, although each stage of the entire supply chain contributes to implementing the value. The contention is that the growth of economic value in the supply chain (Porter, 1998), is also valid in cultural terms and that knowledge of the value of the product is expressed in every part in the final product.

The concept of 'made in supply chains' constitutes a paradigmatic element in the identification of the cultural capital associated with the supply chains of goods and services, finding its foundation in the complex structure of the industrial and manufacturing sector, characterised by the presence of numerous small and medium-sized enterprises specialised in various production phases, source of the considerable competitive advantage associated with the distinctive Italian territoriality (Bettiol et al., 2010; Accetturo et al., 2013). In fact, following the period of delocalisation in the 2000s, the phase of re-investment by national and international companies in the re-localisation of supply chains in their own territories has led to a reconfiguration of industrial districts that is very different from the historically consolidated one. This reconfiguration, significantly enriched by the innovative impacts of the digital revolution (Bertola et al., 2018), has been facilitated and characterised by the presence of a production structure rooted in the territory, characterised by a relevant social and cultural heritage (Porter, 1998; Berger, 2013). This phenomenon assumes great relevance with respect to recent trends concerning innovation in the manufacturing sector, considered a crucial driver of value and competitive advantage: innovation is seen as a fundamental element to improve product quality and promote customisation, as each industrial production process can generate new opportunities for learning and innovation, derived from practical experience (Bettiol et al., 2022).

In order to respond to the growing need for flexibility, the district's leader companies implement a process of decentralisation of the production phases outside, concentrating on the design, marketing and coordination of external production. A clear division of labour is thus determined, on the basis of which the commissioning companies are essentially engaged in creative activities and administrative management, while subcontractors take care of the production specialisation lines in the various phases, guaranteeing a high degree of production elasticity (Cagliano et al., 2000). The innovative dynamics occurring at the top of the industrial context can thus act as a driving force for micro-enterprises, but can sometimes also represent an obstacle or limitation to their natural growth. The introduction of complex and systemic

innovations radically transform the entrepreneurial formula and organisational model of traditional district companies, such as the regeneration of processes, the renovation of management models and the adoption of new managerial tools (Guelpa & Micelli, 2007). The difficult possibility of updating their know-how and production infrastructures in a short time, as well as the difficult access to economic measures to support them compared to industrial players, characterise small manufacturing companies. Despite the fact that innovation is one of the most efficient competitive drivers, it is considered not to be the only way in a context where the risk of leaving behind or causing micro-enterprises to fail is high.

The research, therefore, reflects broadly on the problem from an economic and political point of view as it reflects on the relationship between the local level of technical know-how and supply chain management, and cultural value. It is believed that in the context of the Italian company system, which is characterised by the capillary presence of small individual companies, in which the wood-furniture sector in Apulia is an emblematic case, it is necessary to shift the focus towards the social sphere, in work practices, as well as towards instances of innovation which, often guided by markets or politics, place these companies in a disadvantaged position. Therefore, today's design discipline has the responsibility, through oriented design, to support manufacturing companies with the construction of sustainable design strategies. These must belong to the capacitive strings of the company to adopt models and carry them forward over time, in favour of a socially sustainable enterprise.

The structure of the article, outlining this perspective, includes the general framework outlined, the analysis of the reference context and the *cultural value chain*, the focus in relation to the Apulian wood-furniture supply chain (and in particular in the upholstered product considered among the most complex and characteristic of Italian design), the enunciation of case studies drawn from the new local entrepreneurship, the conclusions and the prospects of the research.

2. Reference Scenario

The success of the 'Made in Italy' phenomenon during the 1980s and 1990s was characterised by the adoption of new organisational configurations by Italian companies across the country. These models, characterised by flexibility and resilience, were based on the division of labour between different companies operating in the same sector rather than between individual workers within the same production process, giving life to the first industrial districts (Bettiol & Micelli, 2005; Sforzi, 2008).

The national law no. 317/1991, subsequently modified by law no. 140/1999, initially defined industrial districts as homogeneous local production systems characterised by a high concentration of industrial enterprises, mainly small and medium-sized and a high degree of productive specialisation. However, an indication that reflects only two of the organisation's essential requirements such as location in a limited territorial area and reference to a specific product or production sector. It neglects two fundamental aspects of districts, namely the 'network' production model, which is based on the organic interdependence (Pyke & Sengenberger, 1991) between different companies, linked together within the supply chain (Grandinetti & Passon, 2004), and the opportunity to benefit from a relational issue characterised by the sharing of a common 'industrial atmosphere' (Marshall, 1890; 1919), that is, a shared culture and language (Marchi & Nardin, 2008). This vision of the district characterised it as an intersection between productive and social dimensions (Beccatini, 1991), facilitating inter-organisational relations, reducing transaction costs (Dei Ottati, 2003) and facilitating knowledge transfer (Camuffo & Grandinetti, 2011).

This organised strategy allowed companies to better adapt to market fluctuations by specialising and managing their production processes through collaborative networks, providing greater flexibility and operational efficiency (Beccatini, 2007). The industrial district model has represented and still represents a fundamental pillar within the Italian economic system (Varaldo, 2003), having allowed small and medium-sized enterprises to develop an intense specialisation of products, then of production processes and, more recently, a redefinition of business models in a national and international context.

In this last perspective, the emergence of new countries in the global market, such as Asia, Brazil and more recently China, has led to a phase of modernisation of industrial strategies and the business model. These include the relocation of production to countries with low labour costs and the redefinition of supply networks resulting in different forms of labour organisation on a transnational scale. In this globalised scenario, we try to understand the extent to which small and medium-sized companies insert themselves into supra-local value chains, such as Global value chains (Gvc), in order to achieve long-term competitive advantage. The challenge frequently resides in the continuous development of new business ideas, creating competitive trajectories and offering strategic and response alternatives to competitors (Romano, 2004). The reorganisation of the division of labour at the global level (Ponte, Gereffi & Raj-Reichert, 2019) particularly emphasises the role of some enterprises in defining the governance of relations between Gvc actors and coordinating large-scale inter-firm networks. Many studies in the literature emphasize the positive impact that the development and upgrading of Global value chains can have on the growth of local companies and production systems in terms of employment, market development and innovation processes, encouraging upgrading processes both at company and territorial levels (Bettiol et al., 2018). However, despite the benefits of opening up to the global context, the internationalisation of activities can undermine the internal cohesion of the cluster due to the substitution of local suppliers with international ones, potentially causing leakage of knowledge and expertise at the territorial level. From this perspective, internationalisation may have a negative impact on innovation processes by separating production from innovation, an element that traditionally constituted a fundamental binomial for the success of many industrial clusters in the past.

The change required is systemic (Varaldo, 2003), since the ability of companies to relate to the external environment depends both on their operational capacity to diversify their offerings and on their strategic capacity to fit into transnational production and distribution networks. This systemic aspect is particularly relevant for small and medium-sized enterprises considering their district context that over time has made them repositories of competitive production skills and knowledge, to the point of transforming them, in recent times, into nodes of a distributed network of specialised operators beyond the local context (Micelli, Chiarvesio, Di Maria, 2010). In these enterprises, corporate intangible assets play an essential role in product, process and organisational innovation processes, distinguishing and characterising the enterprise and its offer with resources that are difficult to replicate or monetise (Romano, 2004). Image, cohesion, trust, production organisation, technological know-how, product reliability are the resources influencing the strategic orientation of the company and its identity.

In the context of the systemic context, the creation and perpetuation of organisational capabilities are based on learning processes that support the introduction of innovation. Leader enterprises are distinguished by their ability to introduce complex and systemic innovations that profoundly revolutionise the business formula and organisational model of traditional district enterprises, such as the regeneration of processes, the renewal of management models and the adoption of new managerial tools (Guelpa & Micelli, 2007). By initiating these processes of change, industrial players outline original evolutionary paths that influence the overall development of the local system towards the transition from a closed local network model to one that is more permeable to the competitive environment and interconnected with international economic circuits (Grandinetti & De Marchi, 2012). A binomial of innovations takes place, those complex and systemic innovations typical of industrial players, and the more punctual process and product innovations characteristic of the district context. Therefore, in this increasingly competitive arena, access to innovation, considered one of the fundamental pillars for business success, is not uniform between leader companies and small and medium-sized enterprises operating within production chains. Disparities in financial resources, access to knowledge networks and investment capacities create a significant gap. Leader companies, often characterised by a solid financial base and an extensive network of strategic partnerships, can afford to invest in long-term research and development, creating new technologies and advanced solutions that maintain their position of advantage in the market, as well as acquire knowledge from outside and internalise it. Furthermore, industrial players often have better access to external economic measures to support them, such as public funds or investments. On the other hand, small supply chain companies, despite their crucial role in the local economy and value chain, have difficult access to innovation due to their limited financial capacity, lack of connections, difficulty in updating

knowledge and external resources. These structural changes come within the production chains, where leader companies adopt new processes for which small companies are unable to adapt their workforce and skills. In fact, the updating of specific know-how with specialised skills and training is not easily accessible or sustainable in the short term.

The transmission and preservation of cultural knowledge represent crucial elements for the continuous evolution of the district and for the development of Italian small and medium-sized enterprises. Thus, the focus shifts from new technological innovation to that of cognitive capital and the entire organisational structure, exploiting the social human capital of the context in which it operates (Varaldo, 2003). The impact of this change influences the capabilities of the company not only in the operational phase of the production chain, but also, and above all, in many other areas, such as vision, strategies and tactics.

The research, therefore, reasons on the relationship between the local level of technical know-how and supply chain management, and the cultural value, and considers the need to shift the focus towards the entire supply chain, characterised by the capillary presence of small individual companies, towards socially sustainable business design-oriented strategies. Design must, therefore, today think about what is the longest dimension of time that can, through oriented design, support such enterprises that otherwise only have the prospect of being excluded from the possibility of following the industrial players: to build sustainable projects from the point of view of what are the capacities of the company to adopt models and carry them forward over time and with a certain degree of comfort and "well-being", in favour of a socially sustainable enterprise. New project strategies reconfigure a new concept of value, especially at a time like the current one, where innovation in a sector with a high degree of tradition is considered to be mainly associated with the result of a renewed focus on technology, towards an environment of dialogue between innovation and socio-cultural aspects.

3. Cultural Value Chain

The identification of Made in Italy (MII) as a product characterised by a high cultural value and permeated by that country of origin (Schooler, 1965), has historically distinguished the furnishing sector, connoting it with values such as attention to detail, quality of workmanship, elegance, and lifestyles referring to practices of use (Fortis, 1998), however, attributed mainly to the finished product. From an opposite perspective, which is not always effectively valorised, the MII manifests itself in supply chains and knowledge that are peculiar, distinctive and exclusive to Italy, closely connected to the territory of reference. In this context, the circular and sustainable approach to product and process innovation considers the entire chain of goods and services intermediate to the production of the finished product, such as sub-supply of materials, sub-supply of production processes, sub-supply of services, thus recognising the crucial and distinctive role of know-how historically consolidated in the territories.

To this chain, management associates a value chain (Porter, 1985) consisting of the activities that generate value in the economic sense of the amount that the end customer is willing to pay. Involving all production processes from raw materials to end use, this value is transferred and perceived in products and services, creating a competitive advantage. A value system is thus effectively created if, through the synergetic operation of actions supported by the company, an increase in profit is generated.

The research argues that the growth of economic value at each stage of the supply chain is also translated in cultural terms, coining the original concept of *cultural value chain*. The cultural value socially attributed to the product is identified in the downstream stages and actors associated with the entire process, taking a value-oriented perspective on the finished product. However, each stage of the chain is considered to contribute to the overall value of the good. In this context, knowledge of the value of the product is therefore incorporated into every part of the final product (Losciale et al., 2024). Therefore, a supply chain approach is adopted rather than an individual product approach, shifting the focus to the know-how that characterises all material processing and production steps associated with the finished product (Martinuz & Soldini, 2021). It is thus proposed to value the satisfaction of the social wellbeing of the community,

dissociating it from the exclusive objective of generating profit that does not consider the solidaristic, civil and social interests of the entire community (Mollona et al., 2021).

The expression *cultural value chain* is declined with respect to the dimensions that are responsible for creating value for the customer, considering the concept of value associated with the philosophical ideals that guide actions (Tappolet & Rossi, 2015). However, these are tangible and intangible elements on which people implicitly or explicitly base their value judgements, and thus about what they like or prefer (Figure 1). In fact, in this context, the term 'culture' refers to the values, principles, customs, practices and habits shared within a social group, in line with the contemporary design trend oriented towards the recovery of the local dimension of production, especially in traditional manufacturing contexts. This approach attaches importance to redefining the relationship with objects from a cultural perspective (Di Roma, 2020).

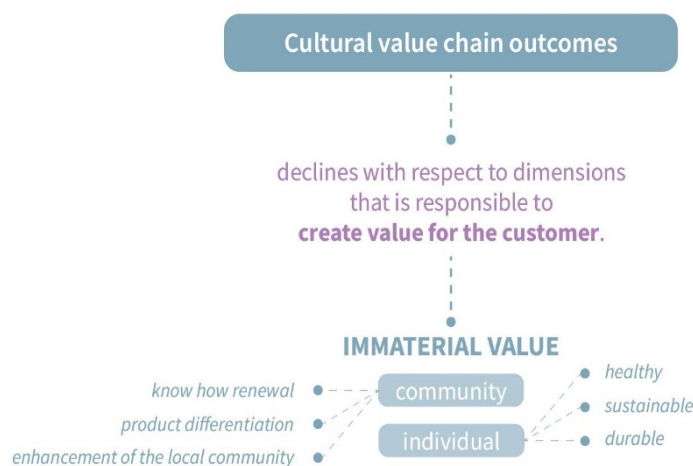


Figure 1. Cultural value chain outcomes.

The definition of the *cultural value chain* thus considers the complex relationships and social practices found in tangible and intangible artefacts (Landowski & Marrone, 2002), which thus become "cultural products" (Volonté, 2009), enriched in terms of meaning, experience, aesthetics, sharing, participation and having the role of main actors in defining the collective identity of social communities. This concept is rooted in the territory as a spatialisation of social facts (Dematteis, 1995), a mine of culture, knowledge and practices that give rise to an authentic tradition of know-how. Each territory is associated with a cultural capital understood as a "capital that incorporates, preserves and provides cultural value in addition to whatever economic value it possesses" (Throsby, 1999).

The strategies of the cultural value chain focus on implementing aspects of social and cultural sustainability aimed at preserving, maximizing, and highlighting the cultural value of a product or service across all phases of the primary production chain. Consistent with the circular economy, which promotes the efficient use of resources throughout its entire lifecycle through sustainable strategies (such as reuse and recycling), the cultural value chain operates on culturally sustainable strategies feasible in all phases of the primary production chain but which impact the value aspects attributed by users to products and thus the durability of the asset. The circular economy and the cultural value chain are both approaches aimed at maximizing the value of resources, both material and cultural, through sustainable practices and a long-term vision.

The furniture and fashion industries, including in the historical sectors of the MII, traditionally associated with the concepts of authenticity, excellent craftsmanship, high production skills and quality (Temperini et al., 2016), are therefore considered paradigmatic cases demonstrating the fundamental role played by *cultural value chains*. Specifically, these are also representative of local production systems: supply chains located in specific geographical areas characterised by the material and immaterial cultural heritage of traditional

communities of practice and relevant in the MII sectors for their characteristic production traditions, local know-how, social proximity, tacit knowledge, small business dimension, incremental innovation and flexibility of the production process (Quadrio Curzio & Fortis, 2000; Rullani, 2000; Beccatini, 1998).

Currently, as a result of globalisation processes and dramatic global events, local production systems are under significant competitive pressure (Benini, 2019; Giumelli, 2019). These systems are called to review the assumptions on which their value is based: intangible values such as knowledge, culture and creativity are emerging as sources of competitive advantage (Sbordone, 2020).

In the following section, this paper analyses the emblematic case of the wood-furniture supply chain in Apulia, demonstrating the capillary presence of small and medium-sized enterprises with a district character in the area and the need for new strategies oriented towards a *cultural value chain*.

4. Research Methodology

The research methodology included an initial phase of framing the general theme concerning the broad phenomenon of Made in Italy, with its peculiar characteristics and evolutions. Subsequently, a non-systematic but traditional literature review aims to explore and define the concept of the cultural value chain as a design-driven strategic approach to enhance the competitiveness of local production systems in Italy. In support of the proposed theoretical approach, based on the importance and uniqueness of cultural identity in Italian products and services as well as the peculiar distribution and size of local enterprises, the research proposes the macro case study of the Apulian wood-furniture supply chain, considered an emblematic example.

The research addresses the proposed case by elaborating raw data from updated reference databases (AIDA) and translating them into information, utilizing original infographics. It discusses the emergence from this analysis of the widespread presence of SMEs in the territory, a characteristic extendable to the entire Italian territory, and the challenges faced by SMEs in adapting to the dynamics of the global market. Subsequently, aware that the emerged peculiarities require ad hoc strategies accessible to the dimensions of the companies involved, it is believed that the role of design can promote innovation and sustainability in the cultural value chain. Therefore, the research aims to identify strategies that leverage cultural heritage and knowledge to create competitive advantages for Italian companies. As a result, a wide-ranging excursion into case studies in the Apulian wood-furniture sector was necessary, involving new entrepreneurship, such as startups, in order to enable thinking towards the design of such effective strategies (subject of an upcoming scientific contribution). This allows reflection on how to reference models do not come from established macro-enterprises but rather from smaller-sized ones, which support realistic and goal-oriented innovation models. The selection of case studies drew from mappings conducted in the reference territory, as presented in online reports (A.R.T.I. report, 2023), and from an exploratory analysis on traditional web search engines, also at national level.

5. The Wood-Furniture Supply Chain: The Apulian Case

The wood-furniture sector represents a complex of activities that covers the design phase, through production, to the marketing of products in an extended production chain. This chain includes both the primary sectors (wood industry for furniture and construction, production of semi-finished products and furniture components) and the subsequent sectors of the furniture industry (furniture for domestic and professional use, lighting equipment, and furnishing accessories). The wood furniture sector has shown signs of vitality and unprecedented growth over the last ten years, with a turnover of more than €478 million on international markets in 2022, an increase of 57% compared to 2019, the year before the crisis (Redazione Sistema Puglia, 2023).

The production chain, known for its marked specialisation in the manufacture of armchairs and sofas, is mainly made up of the core component, represented by the enterprises identified in "Divisione Ateco 31", relating to the "Manufacture of furniture", and some sub-categories of Group 16.2 within "Divisione Ateco 16", called "Manufacture of products of wood, cork, straw and plaiting materials" (ARTI Outlook Report, 2023).

A Unioncamere Puglia report shows a total of 3,438 companies operating in the Apulian wood-furniture sector at the beginning of 2020, of which 1,891 work in the wood industry and 1,547 in the production of furniture and sofas, with a total of approximately 18,740 employees. Contrary to what would be expected from the number of companies, it is the production of furniture and sofas that provides more employment and not wood production (12,805 people compared to 5,935 in wood) (Figure 2). For the region of Apulia, wood furniture is basically the manufacture of sofas and armchairs, with 569 companies alongside the 909 furniture production companies (bedrooms, kitchens, offices, outdoor furniture and intermediate production of parts and accessories or intermediate finishing or processing activities). Also upstream in the supply chain are the 640 building carpentry enterprises, 385 involved in the manufacture of doors and windows and 313 in wood carpentry (Figure 3).

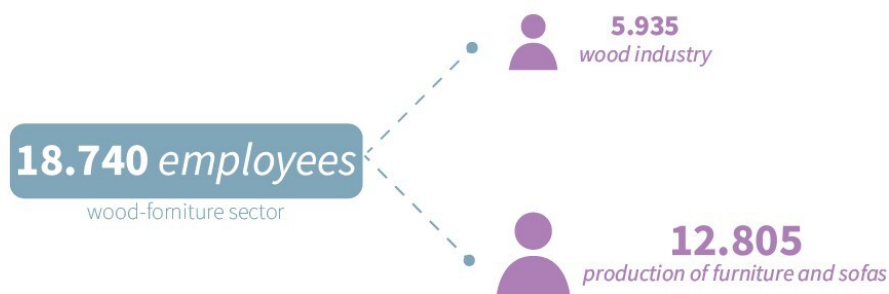


Figure 2. Apulian wood-furniture division.

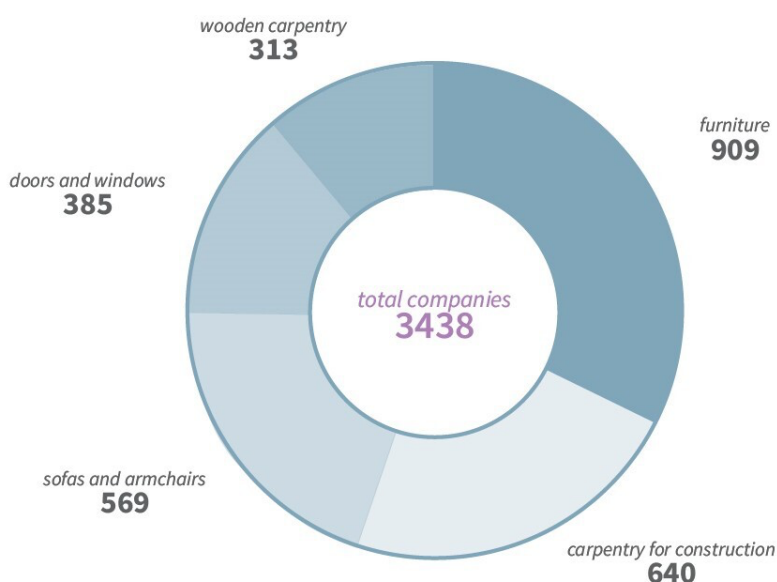


Figure 3. Division of companies by type of manufacturing in the Apulian wood-furniture sector.

Also dating back to the year 2020, the wood-furniture sector consists of 3 large companies, 22 medium-sized companies, 410 small companies and 2,992 micro-enterprises (Figure 4), which are basically represented by craftsmen and subcontractors involved in the intermediate processing of furniture factories: upholstering of living room frames or making tapestries, cutting and planing wood, manufacture of veneer sheets and panels, making wood packaging, etc.



Figure 4. Size of companies in the wood-furniture sector in Apulia (turnover and number of employees).

The Apulian supply chain shares with the national one a production offer largely made up of micro and small enterprises: in the mobile component, about 99% of the total number of enterprises in 2020, a figure substantially in line with the 98% at the national level. It is noteworthy that the greater resilience of the mobile component of the regional production chain is attributable to the positive performance of micro and small enterprises, which have shown an increase in the number of employees between 2012 and 2020. The situation at the regional level presents a significant contrast to the national average situation, which is characterised by a marked decrease in the number of employees employed in enterprises of a similar size. This trend is accompanied by a significant reduction in employment in medium-sized enterprises, while there is a significant increase in the number of employees employed in large enterprises.

The upholstered furniture sector constitutes one of the specialised segments within the wood-furniture industry. It includes the entire cycle of design, production and marketing of armchairs, sofas, seats and chairs made using techniques and materials that guarantee softness and adaptability to body shapes. This sector, within the wood-furniture industry, is configured as a supply chain characterised by several peculiarities according to the "Mappatura del settore legno-arredo in Puglia: analisi di settore e traiettorie di sviluppo, 2014" such as the relative difficulty in industrialisation, with relatively low barriers to entry for competitors, the high labour intensity and orientation towards containing production costs, the high impact of transport costs, the significant presence of both large leading companies in the sector and small and medium-sized companies generally specialised in subcontracting and sub-supplying.

In Apulia, most of the companies specialised in the production of upholstered furniture are concentrated in the Murgiano industrial district, identified by the regional administration through a study commissioned to IPRES (1999) as an area with a high specialised production vocation. According to AIDA data collected between 2019 and 2022, there are 196 companies spread over the regional territories of Apulia (163) and Basilicata (33) with a total of 5,819 employees.

From a dimensional point of view, there are 2 large companies, with a number of employees greater than 249, 11 medium-sized companies, with a number of employees between 50 and 249, 100 small companies, with a number of employees between 10 and 49, and 83 micro-enterprises, with a number of employees less than 10. Of these, most of the companies, in particular 180, have an annual turnover of less than 10 mln (144 of them even less than 2 mln), 13 companies have it between 10 mln and 50 mln and only 3 exceed the latter (Figure 5).



Figure 5. Murgia upholstered furniture district (location and size of companies).

The wood and furniture production chain in the Apulia region, in line with national trends, has undergone structural changes over the years that have influenced, at least in part, the sector's growth and development prospects. Some key processes that have exerted and continue to exert a significant impact include:

- For the furniture component, a relocation to Eastern European economies and then to areas outside the European Union, which have significant competitive advantages, especially in terms of lower labour costs.
- Changes in demand characteristics, with the entry of low-cost brands, including the notable impact of IKEA, characterised by distinctive style lines, affordable prices, products that can be easily assembled without assistance and innovative distribution and sales methods.
- Changes in sales channels, with an increasing presence of online trade.

Nevertheless, it is possible to detect a low propensity to innovation on the part of the sector, which is also confirmed by the marginal presence of start-ups and innovative SMEs not only at Apulian but also at national level, despite the important tax breaks and public funds specifically earmarked for them.

5.1 Case Studies

The paper broadens the exploration of case studies from new entrepreneurship, such as start-ups, in order to reflect on how the emergence of the new enterprise relates to the current state of established enterprises in the area, supporting realistic and oriented models of innovation. In addition, the reported cases were studied and selected because they enable critical reasoning about design aimed at social and environmental well-being and the enhancement of territorial and identity dimensions.

According to the WOOD AND FURNITURE report produced by ARTI (2023), at the end of the third quarter of 2023, there were only two startups in the Apulian region in the wood-furniture sector, a number that extends to 10 for the entire Mezzogiorno area and 50 for the entire Italian territory. Most of these companies operate in the furniture manufacturing sector, accounting for 50 percent of startups in Puglia, 80 percent in the Mezzogiorno and 82 percent nationwide.

Notably, Revì recovers and gives new life to furniture and furniture objects. According to the principles of the circular economy, it recovers, revitalizes, and puts products back into circulation, attributing to design the means through which to extend the life and redesign the identity of furniture and objects that would

otherwise be discarded or neglected. The project, developed by an eco-designer in the own homeland, aims to work independently, while also valuing the skills of others, without negative impacts on the environment. Fully realized in 2019, it makes each artifact unique and creates an inducement for all craft workers who contribute to the outcome. Revì is committed to recovering manual labor and revitalizing craft skills, which are in decline, by enhancing local know-how (Figure 6).



Figure 6. Artefacts from the Revì start-up

[<https://economiecircolare.com/dallo-scarto-alla-nuova-vita-revi-e-il-design-per-tutti/>].

Legno di Puglia is the first company that uses as raw material the enormous variety of wood species that the Apulian territory offers, through the design of furniture elements. A promoter of Puglia's first wood supply chain, the company has triggered a process of enhancing the value of the tree heritage in a land that stands out for its low quantity but high biodiversity, among the highest in Italy. The start-up recovers the trunks of those trees that for various reasons are cut down and would have as their destiny only destruction and processes them to design artifacts of high craftsmanship value. In addition to the artifacts, the creation of the first Xylotheque in Italy with a regional vocation enhances and enables the knowledge and dissemination of Apulia's woody heritage through the exhibition of the different woody species (Figure 7).



Figure 7. Artefacts from the start-up Puglia Wood [<https://www.legnodipuglia.com/>].

On a national scale, the case studies of start-ups Wood-skin and Draw Light are considered interesting because the former empowers design thinking, and the latter focuses on stimulating awareness and knowledge through immersive technologies to promote change toward holistic wellness (although it involves the textile industry, it is believed to be assimilated to the context of interest). Through a manufacturing process patented by Wood-skin, sheets of rigid materials are modified into programmable composite materials by milling to create panels that can fold along origami-like "digital hinges." These materials can go from flat to three-dimensional form, and the process is reversible. The company produces optimized elements with minimal material waste because the production process can be studied and tested virtually: a simple assembly mechanism allows local workers to install the finished cladding themselves, limiting intermediate substructures (Figure 8)



Figure 8. Wood-skin start-up artefacts [<https://wood-skin.com/products-and-services>].

Get in SYNC Shade is an immersive installation designed for White Show Milan. The goal is to inform and tell, through sensory involvement, about the most polluting phases of textile production: fabric development and the dyeing and finishing phase on average account for more than 30 percent of the total impact of a garment. Get in Sync Shade was therefore preparatory to an additional sensory experience involving contact with unconventional but responsible fabrics, dyes, and fibers such as chocolate and coffee. It raises community awareness of the environmental and social impacts that certain common materials possess, stimulating change (Figure 9).



Figure 9. Get immersive experience in SYNC Shade [<https://www.drawlight.net/>].

6. Conclusions and Research Developments

In recent years, the analysis has revealed a weakening sense of belonging to the local and territorial community, attributed to the changes occurring in the districts, which have led to clusters characterized by a limited number of leading companies with a cosmopolitan outlook (Grandinetti & De Marchi, 2012), compared to medium-small enterprises.

The criticality of the current situation stems not only from globalization and relocation phenomena but also from the structural limitations of the district model. This inherently emphasizes the theme of flexibility, without questioning the typically industrial serial approach, with innovations and modular programs (Chiarvesio & Grandinetti, 2002) that generate moderate standardization incapable of competing with global logics (Tapscott & Williams, 2006). Subcontracting relationships among district enterprises, characterized by an exclusively productive culture, have transferred a rigid mentality that, along with dimensional, economic, and political obstacles, hinders access to innovation.

The analyzed case studies explore the current strategies proposed by startups in the wood-furniture sector to enhance cultural and territorial aspects, linked to the theorized concept of the cultural value chain. Specifically, Revù values and revives manual labor and the resurgence of declining craftsmanship skills and know-how from a product perspective. Differently, Legno di Puglia enhances the Apulian wood supply chain through the design of furniture elements with high artisanal value, as well as through the dissemination of knowledge about Apulian wood heritage through the first Xyloteca in Italy with a regional vocation. The startup Wood-skin focuses on social sustainability through digital product design, allowing local workers to install the finished covering themselves, limiting intermediate substructures. Lastly, Get in SYNC Shade, through an immersive experience, raises awareness in the community about the environmental and social impacts of some common materials.

It is believed that design today has the task of providing tailor-made design strategies for small and medium-sized businesses, spread throughout the Italian territory, enhancing their capital of experience and knowledge. To support this, the research envisages a future phase of field analysis in the current Apulian upholstered furniture supply chain, through a direct qualitative study of small businesses and their stakeholders. The research, therefore believing that sustainability is found in the valorization of the cultural value chain, is working on designing strategies that start from the knowledge of local know-how and production characteristics and develop innovative product models based on them.

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