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Milan as a case study

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INTRODUCTION

In the past decade, the attention of scholars and public institutions across the world has been on the ongoing economic change of cities. While the current popular imagination of cities is typically associated with modern skyscrapers that house the stock market and financial institutions, the urban territory is encountering a new, silent manufacturing revolution that has gone nearly unnoticed in this environment. This phenomenon takes the name of urban manufacturing, a simple yet not fully developed concept that is an object of focus by scholars and public administrations.

Urban manufacturing shapes countries in different ways, firing the interest on a sector that, for the most part, passed a period of crisis. Even though manufacturing is considered fundamental by public administration as a means to exit the financial crisis and create better social conditions, the peculiarity of urban manufacturing is its partial bottom-down approach. Once spotted by administrations of different cities, actions were taken in order to enhance a very beneficial movement for the community and the country.

Interventions are shaped differently between cities – utilizing their particular resources and talent, leveraging them to create new ones connected to them. For this reason, some cities like Barcelona tend to focus on the use of innovative technology, while others choose to develop a strategy based on the traditional, high-level craftsmanship traditional in their regions.

This thesis will explore the phenomenon of urban manufacturing and its actors, trying to understand how it is shaping in the city of Milan and, in particular, the role of Italian small and medium size manufacturers. For a fluent discussion, this work is divided in two parts.

The first part focuses on explaining the literature on the topic, drawing a picture of urban manufacturing in the literature and the opinion of scholars about the actors involved in the scene. Therefore, the first chapter will discuss the state of art about urban manufacturing, going through the definition of the phenomenon given by foreign scholars and drawing the picture of the main European and American examples through observation

by scholars. In the second chapter the main actors present in the city of Milan are presented and the literature regarding each one is analysed in order to understand the reality the main features of the particular manufacturing and artisanal firm present in Italy. In the third chapter, Milan is presented as a wealthy and well-working ecosystem for businesses in Italy.

Part two will present the study carried on in Milan during an internship in Milan city hall, where the close contact with policy makers allowed to gather a better insight on the topic. The fourth chapter will analyse five case studies to understand the reality of the city of Milan, the competitive advantage of each group of actors and the personal relationship they present with the city. Afterward, a discussion on the means by which artisans can develop toward successful small manufacturers will be presented. However, as these actors operate in the urban scenario, the final chapter will explore the role of the city and policies for the development, comparing with the literature the advantages and disadvantages of placing in the urban scene, as well as the successful features of Milan that can attract the growth.

PART 1

1 URBAN MANUFACTURING: A NEW TREND FOR CITIES

Cities are continuously increasing in size and population in recent years and the trend is likely to continue, according to the main observatories' predictions. The *UN World Urbanization Prospects* forecast that in 2050, 68 percent of world's population will live in urban areas¹. The growth of cities leads to various problems, which concern policy makers of different level institutions and are object of many studies conducted by scholars. Firstly, cities are affected by traffic and pollution, due to the overpopulation. The raise of rent and housing prices harm the standard of living of their population. Lastly, issues arose from the loss of jobs and the consequent social inequalities spread throughout the suburbs areas. For this reasons, their economy and the shape of their future growth is a fundamental object of analysis for a sustainable development.

However, cities are also what is defined a melting pot of ideas, new trends, advancement and talents. Exactly in cities, observers are detecting the growth of a "renaissance of manufacturing", which is questioning the classic paradigms of factories isolated far from service-oriented city centers. However, this change is involving small and medium dimension actors, leaving out of the debated the classic multinational manufacturing corporation and in some cases questioning its survival as well.

This chapter will briefly explore the evolution of urban economy in the past few decades. The first paragraph highlights the shift from a manufacturing-based economy to a knowledge-based economy. Afterward, the focus will be on the renaissance of manufacturing in the city and its possibility to be a mean to solve social inequality and city resilience problems. In the following section, the state of art about urban manufacturing will be explored, as well as an analysis of the advantages and disadvantages identified by scholar from the presence of production within the city.

¹ ourworldindata.org/urbanization

1.1 The evolution of urban economy

Cities faced many transformations along time. With the birth of manufacturing, from artisans to big industry, they have been production centers, leaving the agricultural economy to the countryside. However, this setting is not suitable to cities anymore. The natural visual association with big buildings and stock market activity that occurs to the average thinker is due to a process consistently started in the 1980s and 1990s. Since before, manufacturing started to move in the countryside, which became productive and industrial areas of the most developed countries. At the same time, the so-called FIRE services (finance, insurance and real estate) took over cities. The economy characterized by a predominance of capital and intellectual activities is named knowledge-based economy and it began in the 1980s and 1990s to be a particularly feature of developed countries' capitals. The new focus on the knowledge-based economy brought many high-paid jobs in urban areas and lead to an important requalification of city centers.

As services were completely centralized in few cities around the globe, some of them (namely London, New York and Tokyo) were seen by scholars as the mean to connect the globalized world, creating a network based on the services they supply (Sassen, 1991). Further, thanks to the local branches of these services that sustain manufacturing and other companies all over the globe, the network would have increased and allowed a deep connection. These theories focus on the idea that the financial sector creates the network, and therefore it also benefits the middle class in services or small entrepreneurship jobs.

Contemporarily, in the 1980s and 1990s, the delocalization phenomenon took place. Big industry moved their production from high-income countries to low-income ones, leaving research and development functions, design and administrative function to the headquarters in advanced countries. With the division of production from research and development and design function, the connection between these two aspects became blurred. The dissociation between product manufacturing and design has been a big issue which is just recently started to be recognized by scholars as potentially problematic (Ferm&Jones, 2017). In the meanwhile, manufacturing was seen as inevitably in decline (Grodach&Gibson, 2018) and not suitable for advanced cities development anymore.

Though, from the knowledge-economy setting of cities, many problems are developing. First, the establishment of non-diversified economic activities due to the focus on knowledge-based economy and eventually creative economy caused important inequalities between an intellectual, well-educated class and the less educated class, which was unsuitable to enter the creative sector or the FIRE sector (City of Making, 2017; Grodach et al., 2017). Consequently, income inequalities lead the middle and lower classes out of the central city, amplifying the gap between the two categories.

With the financial crisis, a loss of trust hit the financial sector, triggering new consumption trends and needs, as well as a renewed interest in manufacturing from policy makers.

The idea of globalization itself has been questioned since then, together with the belief that financial capitals were connecting the world. The nodes theory studied the previous decade faced a crisis with the crisis of global cities and this led some scholars to propose the idea that global manufacturing companies were able to connect the world as before financial services did (Kräfte, 2014).

Despite negative opinion developed about manufacturing, like the idea of it as a declining sector or the opinion that would like to experience again a golden as unrepeatable past (City of Making, 2018), manufacturing remains relevant for countries.

In its report, the European Commission states that every new job in the manufacturing industry create from 0.5 to 2 new jobs in other sectors in Europe, generating positive repercussions on traditional services. Furthermore, services created from manufacturing seems to be less volatile than the one generate by tourism (Grodach et al., 2017), a relevant but not sufficient sector for many European countries. Most important, manufacturing and the related export activities have the ability to attract investments in cities and regions, creating more qualified jobs and boosting important investment in R&D (Hoelzel & Green Leight, 2013).

In the last thirty years the economy of developed countries has been a knowledge-based economy, therefore land use focused consequently. Previous industrial areas within cities have been abandon as factories were closing or leaving. Among time, the intervention of policy makers and different other authorities brought these areas to a new life, usually

as requalified residential areas or mixed-use areas. Mixed-use lands usually characterize for hosting partially residential parts and partially commercial activities. Both of them are non-productive activities. In this scenario, the cost of rent and housing becomes higher, forcing small companies to move outside the city.

For this reason, the focus of a huge part of the academic literature about urban manufacturing at this stage is dealing with the question on which public policies should be implemented for a better destination of former industrial lands to attract productive companies again.

Attracting manufacturing companies requires certain structural conditions. Among them, for example, a proper regulation in terms of environmental issues, which is required to rule the production of pollution and waste created by manufacturing companies. The production of noise needs to be regulated as well. Moreover, companies need closeness to transportations and proper infrastructures. Looking at the issue of urban manufacturing from the industrial prospective leads to believe that the proper place for the reborn of manufacturing is outside cities, paradoxically eliminating what is revolutionary about the new approach on urban manufacturing. For this reason, scholars who are studying current cases of urban manufacturing indicated small manufacturers as the proper main subject for this. In fact, urban manufacturing studies seem to recognize small, innovative manufacturing as business relevant for cities, even if for some scholars it is not certain that they are suitable to generate proper employment (Ferm & Jones, 2016).

1.2 Defining the phenomenon of urban manufacturing

This paragraph explores the meaning of urban manufacturing and the various shapes the literature gave to the phenomenon, trying to understand if it is possible to draw a univocal definition of it.

Defining urban manufacturing is not simple and can lead to several problems. The first problem to be underlined is the use of the term “manufacturing”, which can be used in more industrial meaning as well as associating it with an artisanal spirit. These different meanings lead of course to different definition of the phenomenon and different interpretation of the policies revolving around it. The impossibility of a comprehensive classification is also due to the use of “manufacturing” and “industry” as synonymous

indicating the production of goods, while in others the word manufacturing includes both industry and arts and crafts (City of Making, 2018).

An important part of the literature about urban manufacturing focuses on the traditional manufacturing industry of country or a region, using the term “urban” according to the agglomeration of cities and their area or region, therefore indicating urban policies that should be applied to reinvigorate or attracting manufacturing companies back in the region.

The other, more unexpected considerations regarding urban manufacturing are harder to define. Considering the law, activities classified as manufacturing activities do not give an exhaustive classification in light of scholars’ considerations². It is important to enlarge the boundaries of the law, as the activities nowadays entering the scene in the cities can have much more blurred distinction than the one stated by the law (City of Making, 2018). In many urban manufacturing analyses based on the United States’ cities cases, different norms and classification are used, proving that there is still confusion among the literature about urban manufacturing.

Despite traditional manufacturing in the form of big industries are still relevant, they lost attractiveness compared to the past (City of Making, 2018). Therefore, urban manufacturing is shaping differently and taking many directions, which are still under observation.

In the report *City of Making*, written by a group of researchers about the past and the future of manufacturing industry in three main European cities, the authors decided to apply five principles to the identification of urban manufacturing firms. These principles are the following:

“[An activity constitutes urban manufacturing if it]:

- 1. Involves the transformation of physical materials;*
- 2. Employs labor, tools and/or machines;*
- 3. Results in a product;*

² Some studies refer to the the *Statistical Classification of Economic Activities in the European Community* (NACE)

4. *Involves 'making' at scale as part of a business model: this discounts the one-off production usually associated with the creation of art pieces or hobbyists making for themselves. However, it may involve a process which produces low volumes or highly bespoke products;*

5. *Is embedded in its urban context: the activity involves a web of supporting services, such as logistics, finance, design, and is linked to a market. These factors make it difficult for the activity to be disentangled from its urban context."*

Along with the production of goods, the scholars recognize that activities such as *"logistics, recycling, waste processing, repair, craft, construction, design"* have a strong link with manufacturing industries and support urban manufacturing.

In an article of 2011, Adam Friedman, discussing the importance of urban manufacturing, identifies urban manufacturers as *"small companies that produce very high value, design-oriented products"*.

Urban manufacturing, cultural production and link with tourism

In their study, Grodach et al. (2017) suggest a link between the new interest in urban manufacturing and small manufacturing with a city-regional dimension and the creative industries. In particular, *"an emerging discussion around cultural economy stresses the importance of cultural production specifically in relation to small urban manufacturing and craft-based industries"*.

Furthermore,

"Cultural industries often require specialized craft and manufacturing skills and services. [...] Moreover, important niche markets with strong local and culturally specific profiles develop around the products of small manufacturers and craft producers".

Cultural production is defined as *"the material prototyping, manufacture and assembly of physical goods infused with cultural or semiotic meaning"*.

A slightly different approach to small manufacturing in the cities is the one of Grodach & Gibson, who link small manufacturing to cultural economy.

Another angle about cities and urban manufacturing is offered by some scholars who link the renaissance of city's manufacturing to the cultural economy, both as a fact already in place as well as a mean to create more equilibrium in the city and country balance of payment (Grodach et al., 2017).

Cultural economy regards the production, distribution and consumption of goods and services based primarily on aesthetic or symbolic value, so it includes sectors in the visual and performing arts music, fashion, design and media. Even though the authors acknowledge that the discipline recognize the current changing nature of urban manufacturing and the growth of the phenomenon, they state that few specifically linked it with cultural industries. This topic is relevant as cultural economy is tight to cities and it is either recognize as part of the wider knowledge-based economy typical of the city or as a marketing tool to attract tourism in the area.

Though, attention to cultural economy does not mean attention to cultural production activities, which is yet necessary, especially the branch related to small urban manufacturing and craft-based manufacturing industries. Start linking cultural production to manufacturing can give direction to public policy to enhance a side of city's potential to grow in a more sustainable way. It could provide *"stable, higher quality and more accessible employment then tourism and consumption oriented-redevelopment"* that has been recently the focus of cities' marketing campaign (Grodach et al, 2017). As tourism is a fluctuating phenomenon, which depends on trend and can't be consider as stable as manufacturing, focusing on the potential of urban manufacturing can positively influence the balance of payment.

1.3 Production and consumption patterns of urban manufacturing

A further analysis of urban manufacturing focuses on the observation of the type of production relevant for the urban context, trying to depict which activities are indicated by scholars as the heart of the phenomenon.

Firstly, in cities operate high-level artisans and craftsmen that will be presented in chapter two. Their production of bespoke, high-quality products or other craft-based products usually allocate in the historical city center and have a long time bound with not just the city but the area in which their workshop is (Cavalli et al., 2014). The revived

interest on craft production is part of the urban manufacturing phenomenon (Grodach *et al.*, 2017).

Along with craft, scholars observe the presence of innovative manufacturing, which is the focus of most of the literature about urban manufacturing. The so-called “industrial renaissance” of cities incorporates the value of circular economy and industry 4.0. therefore, the allocation in cities of advanced manufacturing companies is boosted by the presence and support of structures like Fab Labs, where small companies can learn and experiment (Widen *et al.*, 2011). Partially, this wave comes from the *Maker Movement* spread in the past few years. These businesses experiment with innovative technologies such as additive manufacturing, therefore requiring the proper structures to support their work (Grodach *et al.*, 2017).

But the reason and the interest on innovative manufacturing is not limited to an academic or ideal interest. It is related to new consumption trends which are shaping since the 2008 crisis and are especially evident in cities (City of Making, 2018).

Consumers’ patterns changed from the past. The request of on-demand, customized products as an alternative to large-scale production is a trend now widely recognized in the academic literature (Ferm & Jones, 2017; Bianchini & Maffei, 2013). Moreover, the shopping center model, which moved consumers from the urban areas to the big malls, is suffering a partial crisis, while the smaller distributive in the neighborhoods matches the refuse of the previous pattern of detachment from the links between product and process (Bianchini & Maffei, 2013).

This trend has been named “mass customization” to indicate the production of typical mass market goods personalized according to customers’ requests thanks to the intervention of digital technology and the ability to conjugate a traditional know-how with a cutting age design. In other words, it means “*individually tailoring items at a scale*” (City of Making, 2018). Mass customization aims to produce goods on a large scale but satisfying customers request and producing in short runs. In this business model, the producer takes elements from craftsmanship and others from mass productions (Barbiaz *et al.*, 2007).

Therefore, the location of small size manufacturing firms in the urban area allows for a direct contact with the consumer and the possibility to build a dialogue with him,

designing and creating the customized product. It is possible to recall here the artisan spirit recognized by the literature when analyzing the concept of craftsmanship beyond the purely *handmade* idea (this concept will be explored in depth in the following chapter). At the same time, urban manufacturers strategically use the web and social media to be able to expand their market and communicate further from the border of their physical location (Bianchini & Maffei, 2013).

Furthermore, within the modern consumption structure, consumers became more demanding in terms of delivery and services (Ferm & Jones, 2017). They request fast delivered goods and many times expressing the need for authenticity, local, fresh, but also personal. In cities there is a more receptive structure on the market side and on the services to support the request.

Cities appear to be suitable especially for small medium enterprises. Regarding their type of production, literature includes all the possible combinations. The most interesting typology is this new manufacturing which moves toward an innovative direction, formed by enterprises characterized by the use of advanced technologies and an important component of design in their products. At the same time, a part of the literature recognizes the presence of traditional crafts connected with the roots of manufacturing in the specific city (Grodach *et al.*, 2017).

In conclusion of this section, we can state that urban manufacturing is not univocally defined by the literature yet. Summarizing, it includes the traditional craft as well as innovative, small manufacturers with a strong digital technology and a design component. The second type of companies attracts more interests due to its potential of expansion and the sense of “new” it expresses, but the tendency toward one or the other depends on the city specific characteristics, its history and its resources, as well as the position of policy makers into it, as we will see in the section dedicated to city specific policies. Anyway, there is consensus among scholars regarding the importance of urban manufacturing for its potential to be able to overcome social inequalities and grant a sustainable development of the urban area, offering an alternative to the service and creative job market.

1.4 Cities and manufacturing

Since the first industrial revolution cities have been manufacturing centers. Manufacturing companies were located in cities and changed the structure of them, sometimes creating an unhealthy environment due to pollution and waste, overpopulation of suburbs and exploitation. With time and dimension growth factories dislocated in the countryside. Among the factors that pushed big industries further from cities there are also the cost of the land, which was indeed cheaper in the countryside and the expansion of commerce, which required closeness to transportation infrastructures (ports and railways). Afterward, the delocalization of factories toward other countries was justified by the cheaper labor force and the less restrictive environmental and workers' rights regulation. At the same time, the knowledge-based economy took over in cities, substituting the production-based economy. The consequent raise of the cost of living, the lack of well-paid manual labor and the destination of lands to mostly residential use shape the form of the modern city.

Considering this narrative about manufacturing industry, it seems hard to think to reallocate enormous multinational companies' plants near urban areas. Large scale manufacturers are not likely to re-shore in expensive big cities, even if trends of re-shoring are growing. Innovative technology might help the prototyping side but are unlikely to generate significant employment (Ferm & Jones, 2016). In fact, most urban manufacturing studies wish the creation of smaller companies, which can be very important for cities. For cities, it is beneficial to go beyond being just service related. Expanding the real-economy sector can grant the city a more sustainable development. Connection among cities might improve economic position inserting them in global value chains of manufacturing industries (Kräfte, 2014).

How urban manufacturing can come back to the city considering the premises from the past? There are factors strictly bounded with the evolution of technology that would allow small and medium size productions to relocate inside a city without disturbing the neighborhood well-being. For example, additive manufacturing permits a more silent production, addressing the noise issue. Furthermore, circular economy mechanisms currently in discussion are fundamental to enter a virtuous mechanism of waste reuse.

Central cities remain relevant for small and medium enterprises (Lester et. al., 2013). Studies show that in the US one-third of small manufacturing is already located in cities areas (Mistry, Byron, 2011).

Circular economy, which is part of the bigger sustainability topic and advanced technologies, both digital and not, appears to be among the most important changes that can allow manufacturing to enter the city again (City of Making, 2018).

About the dynamics of location inside the city, manufacturing does not necessarily need a suburban context, as cities can trigger cluster dynamics and the proximity to expertise, suppliers, clients and labor forces is tight to that. This is the main advantage of locating in the city and it will be analyzed in the next paragraph. The areas where manufacturing can locate inside the urban perimeter are older, inner-city industrial areas, where there are abandoned former industrial lands with old and renovated infrastructures. These spaces can offer a flexible arrangement that accommodate multiple enterprises, giving some advantages to small enterprises (Grodach & Gibson, 2018).

1.4.1 Benefit for manufacturer in the urban scenario

All the premises stated make us understand that locating manufacturing within a city is a controversial topic. Scholars identify some common reasons or advantages for manufacturing to be in the city. This paragraph will briefly analyze the position of the academic world on the topic, keeping into account that the definition of urban manufacturing is not precise; therefore, depending on the type of manufacturing considered, the advantages and disadvantages can to vary of some degree.

In their report, City of Making report team (2018) identifies three major factors critical for placing in the city instead of outsider areas: market, talents and knowledge (City of Making, 2018).

First, considering new consumers' trends, local market can be the main source of support for manufacturing activities. In fact, cities include a target of wealthy customers who request advanced production, personalized items and a package of product and services that is better supplied thanks to proximity. The high purchasing power and the potentially large market pushed activities to locate inside a city, especially the one at the

end of the production chain which deal with the final consumer. If this is the target characterize as the main market for the company, locating in the city is necessary to satisfy customers' needs (Bosma & Sternberg, 2014; Ferm & Jones, 2016). On the other side, the eventual closeness to suppliers brings advantages in terms of speed and efficiency.

Second, as regards talents, cities offer a pool of potential employees diversified and versatile. Manufacturing companies may profit from the availability of heterogeneous labor market at different costs. Specific skills might be costly but searchable just in urban areas due to the availability of different level of education and the attractiveness of a city in terms of quality of life (Bosma & Sternberg, 2014; Ferm & Jones, 2016).

Cities allow a knowledge spillover that is hardly replicable in other scenarios and that leads many opportunities. In the incubation phase especially, companies benefit from externalities coming from firms in different sectors (Bosma & Sternberg, 2014; Ferm & Jones, 2014). Connection with research and development centers and activities is essential, especially for high tech manufacturers infrastructure (Hoelzel & Green Leigh, 2013).

Other advantages have been presented. Many small manufacturers can benefit from the financial opportunities in urban areas, as well as modern infrastructure suitable to implement innovative solutions (Hoelzel & Green Leigh, 2013).

All these benefits in being in a city are connected to the agglomeration economy theory, even though it is not completely valid for manufacturing companies (Ferm & Jones, 2014). In fact, these companies benefit from their closeness in the beginning of their activities, while development of the production they tend to spread and turn to the peripheral locations where the cost of space is cheaper. Despite this, in case of mature economies all the other factors already exposed should compensate.

According to Grodach et al. (2017), specifically related to cultural production lead by small, flexible and regionally-specific manufacturers:

"This type of manufacturing can provide stable, higher quality and more accessible employment than tourism and consumption-oriented redevelopment. And, it is work that is not easily outsourced".

1.4.2 How a city can gain from the presence of manufacturers

As manufacturers can gain many advantages from urban areas, cities can benefit from the manufacturing presence as well. In their report *City of Making* (2018), the researchers identify three of these benefits: an improvement in the range of jobs, the economic stability and resilience that the city can gain and the support of diversity that generates from it (City of Making, 2018).

In a city there is an entire range of jobs called “back street jobs” that the city needs in order to function (Fern & Jones, 2014). These jobs include for example the supply of food, basic goods and services to residents and businesses present in the city. For this reason, the authors support the idea that industry in the city can raise the amount of jobs present in it.

When cities focus on cultural economy, they attract talents connected to the creative industry (Grodach et al. 2017). As said before, this causes a focus on knowledge-based economy. A pull of workers with no qualification to work in the creative economy have been pushed towards lower wages service jobs and different areas of the city have been affected by the gentrification phenomena. The request for cultural economy related jobs attracts talented workers from other areas but the city. The downside is that this pushes the low skilled middle class outside the inner-city. Industrial and manufacturing workers and member of residual inner-city working class and migrant communities are outmoded and need to be replaced. They have to settle for low-paid service jobs, unable to perform other kind of jobs. New manufacturing activities can be the mean by which middle class can get a better income and residential situation. Moreover, these jobs could give them the change of a progressive career and satisfaction with an important impact on social equality. A manual job can give people dignity if this is recognized by society and establish a good reputation of itself (Grodach et al., 2017; Fern&Jones, 2014). Furthermore, has humoristically written by Friedman³ in its article:

³ Cit.

“[The United States] need to nurture those jobs in the metropolitan areas where the majority of workers already live, in places they can commute to without spending \$50 on a tank of gas.”

In other terms, scholars support the idea that manufacturing and industry allow the city to be more diverse and economic and socially resilient (Ferm & Jones, 2016). Resilience is a central topic in the current debate regarding cities. According to the OECD⁴, a resilient city is a city that has the ability to absorb, recover and prepare for future shocks, being them economic, environmental, social or institutional. It promotes sustainable development, well-being and inclusive growth.

Diversifying sectors from just financial and business services grants a better response to shocks and helps diversity. Improving diversity and quality of employment as well as wages can be achieved thanks to manufacturing. Creating medium and high skilled occupation leads to better paid jobs. At the same time, the export of locally made goods can boost the overall richness and attractiveness of an area and push public policies toward the creation of new facilities and infrastructures (Hoelzel & Green Leigh, 2013, Ferm & Jones, 2016).

All the three reasons listed in the beginning are connected to each other because together they provide a solution to overcome the inequality crisis that affects large centers today and allow the city to have a more harmonious setting. Moreover, scholars express the idea that industry is able to make a city more interesting and vibrant, due to the innovation, the movement that it causes and the attraction it generates (Grodach et al., 2017).

Another point considered by scholars regards sustainability. Green industries that may arise in the city for availability of materials and know-how. The reduction of travel distances between production, services and market and the recycle of waste within the city are recognized as manufacturing activities by different studies, due to the close bound with production activities (City of Making, 2018; Ferm & Jones, 2016).

⁴ OECD, Resilient Cities - <http://www.oecd.org/cfe/regional-policy/resilient-cities.htm>

1.4.3 Potential harms and difficulties of urban manufacturing

Despite the mutual advantages cities and businesses would have in being in the urban area, attracting manufacturing in the city is not an easy task and can also present some downsides.

The cost of land is the most persistent problem. In general, entry costs for entrepreneurs might be high in large urban areas due to the high cost of living (Bosma & Sternberg, 2014). New and traditional small and medium sized enterprises seek an affordable and flexible space to set up their production, but they may not be able to find it due to the land use planned in the city. In fact, new urban policies tend to devote dismissed land to housing or mixed use (housing and retail), as they give a higher return on investment than industry in the short term. Requalifying an area through residential buildings attracts investors, whereas giving the land to a medium company or a small one to start a business may be not as attractive for external investors to engage in a proper requalification.

Other complications derive from structural features of manufacturing. In fact, production can cause noise and pollution, which cause annoyance from residents and commercial and retail landlords. Moreover, some practices may not be allowed by the city's environmental regulation. In the past, in fact, companies left the city scenario for areas with less strict regulation about environment and social rights. This topic requires the intervention of regulators as well. For example, creating an area free from restriction in terms of noise, timing, parking was fundamental to guarantee the success of Brooklyn Navy Yard area as manufacturing pole (Kimball & Romano, 2012).

An important point presented as regards the risk urban manufacturers is related to gentrification. If many manufacturers place in one area, it may help to regenerate the neighborhood, but taking a risk that, due to the new brand of the area, the original users are not able to afford these same areas anymore. In this way, their own success would lead them out of the city once again (City of Making, 2018; Ferm&Jones, 2014). If policy makers don't pay due attention, is that real estate markets can inflate hopes for residential development if the policy makers don't apply due policies to protect (also via public means) industrial land already present in the city (Ferm & Jones, 2016).

A more general problem, also bounded with politics, is the tendency to emphasize the development opportunities in high-tech, advanced manufacturing instead of opening to potential support of working-class jobs or new form of craft manufacturing (Grodach & Gibson, 2018). Plus, the (re)qualification of population for these kind of manufacturing jobs requires the public administration to set up a good mechanism for incentives and courses, helping small companies and people to enter it.

As public policies are so relevant in the decision regarding urban manufacturing and land destination, the next section will be dedicated to this topic and the cases of some cities that implemented different policies.

1.4.4 The primary role of public policy

Decision of public policy makers cannot be ignored in this topic, as it is up to them the requalification of urban area, financing some manufacturing activities and all the other choices related to urban setting. At which level public administration is entitled to take care of these decisions influences the decision makers involved. Depending on the autonomy of the various organs and the access to finance and private-public agreement, the intervention will shape differently according to the power of the city's administration, the region or the State.

Some authors support the thesis for which the decline of urban manufacturing is partially due to the lack of regulation and preservation of industrial lands (Ferm & Jones, 2017). In fact, a major part of the literature focuses on the issue of land conversion. Even if land conversion is a main critical point to understand urban policies, it will not be further part of this analysis. For this reason, the following section will explore practical cases of intervention that do not directly involve the discussion on land conversion.

In general, urban policies tend toward a mixed-use of the land in favor of housing and retailing businesses. The mixed use of lands is used by policy makers to help the transition to a post-industrial economy in cities, idea to which many are still attached (Grodach & Gibson, 2018). Thus, more advance proposals suggest a mixed use divided between residential, ICT and commercial and creative industries (Grodacht & Gibson, 2018), according to the new production tendency toward a mix of manufacturing and advance technologies. This kind of setting needs a proper management of noise, pollution,

traffic issues and a proper infrastructure to be maintained. Yet, these problems could be partially address by technology itself, which can for example mitigate the noise created by classic manufacturing process. In particular, additive manufacturing is consider to be the most representative technology in this field (City of Making, 2018).

Cities are seeking to intervene on these topics with original and experimental policies regarding advanced manufacturing, circular economy and sustainability. Partially, these policies converge on the plans for the creation of the *Smart City*, an ideally sustainable, autonomous and technologically integrated city.

According to studies, many policies incorporate mainly the new high-tech, innovation-driven advanced manufacturing economy, creating sometimes a blind side on low-tech and craft manufacturing (Grodach&Gibson, 2018). This is due to the lack of a unique opinion on what urban manufacturing is and the relatively novelty of the observations. There is in some case the attempt to include what is relate to the legacy industries and cultural and maker economy, depending especially on the direction the city is naturally taking.

Besides policies regarding zoning and land use, policy makers can support other areas of intervention; an important one is the workforce development and cross-industry interaction and collaboration between small manufacturers or business development. (Grodacht et. Al, 2017; Grodach&Gibson, 2018).

Workforce is not an easy area of intervention and not much is found in literature about this. The aim to requalify a worker toward advanced manufacturing can require more than an urban policy. Sometimes, for lack of public intervention the phenomenon of academy took place and we can expect that many bigger companies would create the proper workforce on their own. Yet this instrument is not suitable for smaller companies, which do not have sufficient financial resources to train. On the other side, for the new kind of manufacturing jobs, it is not easy to find courses or other educational institution, leaving room for public administration to intervene on the issue.

Enable small and medium size enterprises to access technology and information to support their growth is a key intervention. A common mean to do so is by financing incubator, creating manufacturing technology centers and maker spaces, as well as

workshops. These places are suitable to supply the necessary courses and a backbone for innovation and networking. Creating network occasions can also be explored as important business development. In a study of 2013, the author supports the idea that the new skills required by innovative manufacturing should be taught in urban schools. Furthermore, they suggest to plan the location for high tech manufacturing near universities and research centers, to enable the knowledge exchange positive for the growth of these realities (Hoelzel & Green Leigh, 2013).

As regards business development precisely, policies tend to intervene in four areas: marketing, access to resources, business networks and business costs. In fact, manufacturing seems not to enjoy a great reputation among students, potential employees and their families, because of an outdated image that can harm the will to enter the business. An example of intervention on this side comes from cities in the United States, which are developing marketing campaigns and innovation awards to “*sell manufacturing as a cutting-edge, knowledge-base industry*” (Grodach&Gibson, 2018). Another important example is a recent one which took place in France. To support the spread of awareness about traditional manufacturing –a backbone of the country, the government set up an interesting initiative called *La France Fab*, a itinerant village that shows through demonstration and workshop the importance of manufacturing and industry for the country and how the work is practically done (Il Sole 24 Ore, 17 luglio 2019).

1.5 City specific policies and interventions

The phenomenon of urban manufacturing is taking place in different cities of the world in the past decades. Many studies developed the topic related to different European and American cities. A particular interest has been shown for New York, San Francisco, London, but also Rotterdam and Amsterdam. What the researchers usually highlight is that manufacturing shapes in very different ways according to the city we are talking about, depending on the infrastructure of the city and its history, but also the potential to attract investors and encourage public-private partnerships.

In any city, the different public policies adopted are having different effects and it is interesting to look into them to try to identify the common practices and the different

one that are potentially applicable to other cases. The role of public administration at a city, regional or national level is very relevant, as we will see in these examples.

A clear example of this differentiation is given if we consider three cities, which are “good practice” and from which researchers are finding successful models. These cities are in New York, Paris and Barcelona (presentation Stefano Micelli and Centro Studi PMI, 2019).

1.5.1 New York and the Brooklyn Navy Yard

New York is the most studied case on the topic, due to the wide development of the projects going on in the area of Brooklyn, is one of the five boroughs of New York, which have been at the center of a very effervescent transformation in the past few years. Public administration policies for Brooklyn focus mostly on manufacturing and digital technology and in particular how digital technologies can relaunch manufacturing. The creative industry is approached as well, as it is very active in the district. Urban manufacturing is perceived as a way to create well-paid jobs in abandoned areas, therefore the city wants to drive the satisfaction of the local demand for goods toward local suppliers, creating a relaunch of production in the city. Different are the projects taking place there and objects of studies.

The first one regards the Brooklyn Navy Yard. The Brooklyn Navy Yard is an industrial park requalified by the city’s policy makers. The investment worth so far 2.5 billion dollars and should generate 30.000 work places. In spatial terms, the area involves is 450.000 square meters to be developed completely dedicated to urban manufacturing.

Brooklyn Navy Yard development was enabled by a specific management that took over in the 1980s’, the Brooklyn Navy Yard Development Corporation. With time, the requalification of the area attracted different kinds of urban industry: maritime (following the tradition), media, medicine, high-hand craft and green manufacturing. This last field is particularly important for the cutting-edge production and the green infrastructure, on which the authorities would like to leverage still now (Kimball & Romano, 2012).

The transformation of the area was possible thanks to a private-public partnership between the BNYDC and the City of New York. Their relationships are managed thanks to a long-term contract. Leaders from the community, from business, real estate and banking,

compose the Board of the corporation. This allowed a widespread expertise. Thanks to the collaboration with the City, a specific tax credit program was developed and innovative finance sources were put in place. This was an important step to create well-paid jobs in low-income communities, which was one of the main purposes of the project.

Another feature of the program is the promotion made by the BNYDC of the tenants both among the public and inside the yard, encouraging business-to-business activities. In this way, the supply of materials took place partially inside the Yard, boosting the demand and building a strong network.

A further important spot is the *Greenpoint Manufacturing and Design Center (GMDC)*, a space for small and medium enterprises, artisans and artists from the city.

These actors are involved because of their need for flexible places in the city, where they could also benefit from a cheaper space to operate. In fact, one of the main focus of the public policy in these areas are rent prices, which are controlled to keep them low and allow the birth of new enterprises (Kimball&Romano, 2012).

Other projects are taking place. *Futureworks NYC* is part of New York City Industrial Action Plan to bring traditional manufacturers closer to 21st century technologies, creating 2,000 job places. The investment for \$8 million will be allocated to create an incubator, run courses, programs and network and a makerspace, plus shops and the different infrastructures needed. Moreover, the plan *New York Works*, aims to create 100,000 job places, 20,000 of which in manufacturing and industry.

The City can move in such a powerful way thanks to its wide independence and the funds available, sum up with public-private successful partnerships.

1.5.2 Paris

Paris shows a different path than New York. The city in fact followed the top-down approach, characteristic of the French governance. In 2010 president Sarkozy allocate 26 billion to support a sustainable economic development and employment of the region. This initiative took the name of *Grand Paris*, but it is not the only one.

The city moves in two directions, one toward innovative start-up and technologies, developing accelerators and incubators, and the other one that looks at traditional

manufacturing mostly. In fact, the project *Paris Capital de la creation e des start-up* refers to these two souls. The municipality aims to become a creative tourism destination to put a spotlight on the master craftsmen typical of the country's tradition.

In fact, the title *Maître d'Art* is recognized by the law (as in Japan) and the city wants to enhance it to attract tourism. For this reason, in 2017 the initiative for a *Made in Paris* (*Fabriqué à Paris*) label was launch. Checking the website related to it, the public administration explicitly clarifies the intent to use the etiquette to certify to tourists and buyer that they are purchasing something authentically manufactured in Paris.

As we said in the theoretical part, cultural tourism can be very important for cities and can be easily link to the cultural production. Even if basing an entire economy on tourism can harm a country due to its volatility, it can be profitable for a city like Paris to be able to exploit the tradition of high level craftsmanship to attract visitors, both in economic terms as well as for the overall region image.

Moreover, the intervention of multinational corporations in the Paris case was important. In this case, the fashion company Hermès was a fundamental actor to requalify the entire area (presentation Stefano Micelli and Centro Studi PMI, 2019). The brand opened the production in north-east Paris in 1992 and the post-industrial area was completely renewed to create leather laboratories spread for 16,000 square meters. They are called *cite de métier*, to enhance the importance of craft tradition of Paris and France and its bound with luxurious production. In the same area, there is a place completely devolved training course on machinery and technologies and management of new manufacturing businesses. The focus on craftsmanship is important to France, in order to promote a new wave of exclusive and sophisticated luxury production.

Moreover, as many other European cities, Paris is engaged in the development of the Fab City as well. With the project *Paris Fabrik* the city aims to implement circular economy, support urban logistic and encourage the return of production in the urban area, especially innovative productions and businesses. Within the 2019-2022 edition of *Paris Fabrik* the formation of younger generation holds an important position with a series of initiative to make it come closer to the manufacturing reality.

1.5.3 Barcelona

Barcelona's focus is different compared to the other two cities. In fact, the aim of the city policy makers is to create a "digital city" and at the same time make Barcelona a Fab City. Starting from the 1990s, the city have been recognize as the Southern Europe's Hub for Innovation, supported by many projects.

Nowadays, an important project is *Make in BCN*, which focuses on promoting events related to Industry 4.0 and IoT technology, but also aims to realize the first model of Fab City in the world with the *Maker District*.

Within the plans for Barcelona Fab City the advance manufacturing is taken into account, even if the city's focus is not directly related to that. The city is able to sponsor big events related to innovation. This event impact manufacturing as well but it does not explicitly aim to this area. In fact, Barcelona lacks the explicit focus on manufacturing the other two cities have.

This city has many incubators, fab labs and maker spaces at its disposal, as well as training programs and new projects going on for tech start-up and innovative companies, like the *Pier 01*. This is very ambitious project within Barcelona Tech City, an area available as co-working, showroom, and space to develop projects for the innovative and tech start-up. A project closer to the advance manufacturing world is an incubator for 3D printing called *3D Factory Incubator*, a hub to help companies in their digital transformation.

The importance of these examples is in showing how each country and city is dealing with the topic of urban manufacturing, therefore, on which companies to attract and which businesses are going to be the central focus of their policies. This distinction comes both from tradition and from the vision for the future from administration and manufacturing actors. According to the potential strength of an area, one may focus more on technology while the other on luxury artistic crafts, influencing also which kind of crowd will be attracted by the city. In the next chapter there will be a presentation of the actors of urban manufacturing, both belonging to a traditional and to a new generation of crafters.

2 THE MAIN ACTORS OF URBAN MANUFACTURING

In the past few decades, a reborn interest over craftsmanship arose among scholars. The moment is not casual. After decades of mass production and centrality of finance, people observed the economic crash of 2008, which started a long economic crisis. The crisis enhanced the fragility of the modern economic construct and all the pattern of consumption proper of our society. Among consumers arose the need for a return to the values of truth and authenticity in their lives and the desire to understand what they were eating, drinking, using and touching. In this frame, crafts started to create interest, due to its natural opposition to the industrial and service sector models.

As it is known, craftsmanship has a long tradition in Europe. Many countries can claim excellence and tradition in some sectors or production. Despite this, within the years this ability has been partially abandon. Due to the upcoming industrial sector and the explosion of mass production lead by America in the Fifties and Sixties, consumers forgot that some goods used to be handcrafted, presenting high quality and endurance. These considerations do not want to appear nostalgic though. Mass production created a more affordable lifestyle for the population of western countries. After it, other social and political revolutions came, first of all market disclosure and globalization, which shaped the market of today.

On the other side, anti-globalization movements and the environmental issue that is currently at the centre of global debate brought a part of the population to question the structure of a globalized market and its principles, which are now reporting signs of crisis (Saval, 2017). Mass production is blamed for the current situation of pollution and the creation of the culture of disposable goods. The lack of awareness of the production process detached the consumer from the product, lowering the value of it and making it worthless and easily replaceable. The time necessary for the transformation process is not primarily rated by consumers, due to the normalization of fast supplied goods and services.

In this world, the value of craft drastically reduced, as well as its competitive advantage, putting ancient manufacturing sectors in a crisis.

However, in the last fifteen years or so, we observed a new interest and revaluation of artisans' work. The 2008 financial crisis led to mistrust in the financially-driven, globalized world. The fragmentation of global value chain prevented the consumers to understand easily where value was created. This new interest can be interpreted as part of a bigger picture, which includes elements such as the debate on local production, zero kilometre purchases and sustainability (both social and environmental). Crafts is usually associated with a less environmentally damaging activity and with values of social equality (Fox Miller, 2017).

2.1 A new generation of manufacturers is back in town

The revolution ongoing in craftsmanship expresses through different paths, according to the tradition of every single country. One ramification of it is the debate started in the United States and expanded in the world some years ago on the movement of the *Makers*. The *Makers* are a group of people who rediscovered the value of creation by their hands. The movement includes hobbyists as well as young entrepreneurs who then developed their own business activity from the experimentation with making. A string element of this group is the enthusiastic approach to technology 4.0 and to the idea of open access to it, sharing development and results throughout the world.

The *Maker Movement* aroused interest and questions of scholars in many branches, due to its revolutionary concept of the social construct proposed. Researching its characteristics, scholars followed the return of interest in making and manufacturing and the bond that was developing between making and cities. In fact, as the *Maker Fair*, the big meetings of the *Makers* are held in cities around the world. Observers identified cities themselves as a buoyant centre for the rebirth of small craft and manufacturing. The new urban manufacturing started to attract the interest of the academic world in the last decade and it is shaping in many different ways according to the country attitude and tradition. Its relevance is due to the social problems present in cities regarding inequality and lack of work for the lower layer of the population. Offering a suitable work alternative for people seems to be hope scholars put in the urban manufacturing phenomenon. At the

same time, the return of craft and manufacturing activities in cities of western country could help revitalizing city centres which are losing their historical workshops and their suburbs, where bigger manufacturing centres that closed or reallocated abroad left a big void.

Yet, the topic is very complicated and quite new in the literature to be able to draw a clear and unique state of the art. For this reason, during the research, the academic literature is considered alongside with newspapers observations and direct observations carried out during the research.

Craftsmanship is a relevant topic especially in Italy and Europe, where it still holds an important spot in the economic system. According to the European Union, small and medium enterprises and craftsmanship account for the 99.8% of European companies⁵. These companies are the object of different European policies, even if their effectiveness is still under discussion and development.

Looking closer to the case of Italy, in the country there are more than one million craft firms. Unfortunately, they are in a crisis state. In the first semester of 2019, 6,500 artisans closed their activity, a trend that does not seem to decelerate; in the past ten years 165,000 artisans bankrupted and closed their activity⁶. Many are the factors implied: the economic crisis and its still ongoing effects on consumption, the lack of credit and the higher cost of rent. An interesting data is that among the top three regions for number of closures, two are Emilia Romagna and Veneto region, which are among the most active regions of Italy in terms of manufacturing and export.

Despite the discouraging country data, the new interest for manufacturing is relevant, especially abroad. The academic world supported its importance in the developed economy as a mean to rebalance the social inequality enhanced by the crisis.

⁵ Data from report "STRENGTHENING CRAFTS & SMES FOR THE FUTURE OF THE EUROPEAN UNION" by Sme United (<https://smeunited.eu>). The data include SME without distinction among the mas craft or service.

⁶ Data from June 2019 according to the CGIA in Mestre (VE) - <http://www.cgiamestre.com/6-500-imprese-artigiane-in-meno-nel-2019/>

Scholars detected the current reborn interest in craftsmanship and called “*third wave*” of craft⁷, which characterize for being “*populated by small enterprises, producing a limited range and number of products characterised by high semiotic and aesthetic content*” (Fox Miller, 2017).

Despite this, there are still many realities that found their unique value and are able to perform positively and compete in the international market. About them we will give some testimony in the last chapter of this thesis.

2.2 The values of new and old craftsmanship

Define craftsmanship is not immediate. In the common rhetoric, a craftsmen or artisan is a highly specialized worker who builds products using his hands. However, analysing the work of scholars we find an open debate on the abstract definition of craftsmanship, probably due to the profound change of artisans and their role in the society. While in the past craftsmanship was entitle of the productive function of the society, this role is currently held by big industries spread around the world. Artisans are relegated to a marginal role. Anyway, there is no doubts that the fundamental characteristic of crafts is the work of transforming raw materials into final goods.

Of course, we can refer to the definition of craft given by the law, which is the indication of the status of craft firm for an Italian business defined by the Framework Law 443/1985⁸. According to the law, the artisan firm have to exercise an activity based on the production of goods or some kind of services. The law defines the artisan (art. 2) and the dimension that an artisan firm has to respect (art. 4). Afterward, it transfers to regions the responsibility to specify how artisans are regulated specifically per sector according to the

⁷ According to scholars, three are the wave of craft that enhanced the importance of this activity, even if in different declination. The first one allocates in the 19th century in England as some saw the potential danger in material abundance and standardization of goods that the industrial revolution brought. A “second wave” appeared in the 1960s and 1970s during the hippie period as a refusal to capitalism and the return to grow and create. The current “third wave”, as explained, is bound with the crises of Fordism in 1970s and the growth of new manufacturing models related to specialization and customization of goods (Fox Miller, 2017).

⁸ *Legge quadro 443 del 8 agosto 1985* - Di Majo, A. (2011). *Codice civile. Con la Costituzione, i trattati UE e le principali norme complementari*. Giuffrè editore.

feature of every territory and its peculiar characteristics (Cavalli, Commerci & Marchello, 2014).

Anyway, the definition given by the law is useful on a fiscal and regulatory level but it does not help for the purpose of this section, which is to investigate the abstract definition of an artisan, in order to capture the essence of its role in the society. Even if recognizing its value when placing a public intervention in favour of the artisan category, a better exploration of the law is delegated to a more proper work.

Artisans themselves embody values that give the perception of an alive entity. The classification of a person as an artisan gives a status that does not classify just the job of the person but an overall life choice. Part of the new generation of crafters fully expresses the revaluation of craft in this sense. The case studies observations about the new stream of craft detected the spread of innovative artisans and makers who turned themselves into that but coming from the service economy typical jobs. Various popular stories talk about the new craftsman as a former banker or manager willing to pursue a different personal and work life. People that lived this change declared that creating with hands gives a new meaning to the overall lifestyle, which starts to focus less on money and career itself and more on living a good life (Micelli, 2011; Fox Miller, 2017).

Following the literature on the topic, we can find various scholars who embrace and support this concept while exploring different types of craftsmanship.

Usually, the common concept of an artisan among the average consumer is just a man who make goods by hand, in smaller amount compared to a factory. Confine the artisan to the role of highly specialized labour can be misleading. This second category has its importance in the manufacturing world and it is highly value in some sectors due to the lack of specialized labour in the job market. Sometimes, the two roles overlap. Despite this, an artisan holds values that are not in common with average labour. In its profession, he lives a high level of autonomy in the process of making; a process that he owns deeply in every step. Furthermore, the artisan is open to the dialogue with the customer; more, the relationship established with every client is a unique and essential trait of its creation, as it allows the participation of the buyer in the decision process and helps its comprehension of the product (Micelli, 2016). Furthermore, craft has a social role due to its presence in the

society and the way the learning process is built, focusing on learning from others on the job as main way to transmit knowledge (Fox Miller, 2017).

The recognition of these artisanal values in the Italian literature is particularly important due to the fundamental role of craft for Italian production, a role that is seen with less prestige than it should for its great capabilities. A problem in the concept of craft from the policy point of view is recognized in the book *Futuro Artigiano* written by Stefano Micelli: *“in Italy we started to defend crafts but we started to from the issue of the dimension of a firm”*, merging them with the wider group of small enterprises. Nevertheless, this consideration misleads the policy regarding craftsmanship and its potential to grow. There is a distinction between being a small artisan and having an artisan spirit. The second one can be found also in big enterprises well developed and present worldwide, which make the craftsmanship one of their main characteristic. Therefore, the entities are variegated.

“There are artisans who produce artistic ceramics with traditional techniques and artisans who produce garbage bins thanks to small assembly lines. Both have a potential for growth, but in different directions. [...] They are both small, but each of them requires very different policies.”

(Micelli, 2011)

This consideration will be explored in this thesis, where different types of artisans will be analysed. In the next two sections we will present the two categories of which the quote talks about, namely master craftsmen and innovative artisans and manufacturers with an artisanal spirit, both realities present in Italy and that are in some cases thriving in the international competition.

2.2.1 Artisans and the lack of specialized labour

The debate regarding the lack of labour in high-specialization manual jobs just recently started to occupy a relevant place in the current debate among politicians, while it was on the radar of expert since a while in many countries.

In Italy, lack of labour in the handmade sector has been ignored for a long time. Just recently, it entered the political and social debate. In 2019, Altagamma⁹ presented a complete study on this, to which many scholars gave contribution to. The study reports forecasts on the lack of specialized labour that will threaten the most typical Made in Italy sectors in the next five years. According to the report, the lack of jobs in terms of highly specialized labour will account for 236.000 positions. The areas in which these specialized workers will be operating are fashion and design, automotive, hospitality and food. In particular, the biggest gap will be in the automotive sector, while material and product designers will be the most required specialization. Many artisans are suppliers of the main companies of the sector, thanks to their high expertise. The positions requested will tend toward the traditional artisan skills spacing to a more cutting edge mix with skills regarding innovative technologies (especially the use of 4.0 technologies).

Despite this, the perception recorded of high skilled workers is not necessarily positive. In fact, many associate a craftsman to a common manufacturing worker. Consequently, the job is not seen as a suitable option by families for their children and young people themselves do not easily approach the profession. In fact, analysing the current artisans, it is clear that it is family tradition that brings them closer to the profession. The research by Maurizio Dallochio with Fondazione Cologni (Dallochio et al., 2015), reports that half of the artisans interviewed learned their job from the family or following up, from someone in the territory¹⁰. The transmission of the know-how happens via informal ways, as they include the closeness of the territory or the family to the artistic crafts. Very few people learn the job by themselves or through specific schools, which are not very present in Italy.

The purpose of education is also (not only) to introduce younger generations to a suitable life path in terms of careers. Not necessarily this path lead a person to university. For this reason, it seems right to give young students a suitable alternative that can validate

⁹ Altagamma is a foundation born in 1992 which assembles Italian cultural and creative companies. The mission is to contribute to the growth and competitiveness of these companies in the world. Among its activities, the foundation includes publishing of report and case studies as well as exhibitions in collaboration with universities and other education institution as well as big companies.

¹⁰ Among the sample of 108 artisanal companies in Italy, of which 49.5% declared they learnt the job by family transmission.

themselves into life. As Robert Schwartz says, *“provide young people with the opportunity to experience becoming an expert in something”*¹¹. Creating an alternative to university is necessary to maintain an economy well-balanced. The perception among people about the manual labour collide with the need of the economy. The negative perception is most of the time wrong, as the profession of high level craftsman or master craftsman are rewarding in terms of salary and consideration in the sector in which he operates.

Regarding the effort for apprentice and training, Robert Schwarz (2016) stated that:

“Cost-benefit analysis have demonstrated that over a three years period the value an apprentice add to their bottom line more than offset the cost of training, including the apprentice wages”

Furthermore, the innovation in manufacturing requires a particular set of skills, both manual and related to the use of technology - a hybrid between traditional craftsmanship and new skills on the use of industry 4.0 technologies. These jobs are called exactly *“hybrid jobs”*¹². According to the definition given by researchers, they should be an evolution of the traditional manufacturing and craftsmanship jobs in the light of modern manufacturing revolution. Therefore, they require widespread skills in order to cover technical and communication issues, but also the use of innovative production tools. Adopting this perspective, the ongoing innovation of jobs leads to the opportunities for new career paths instead of just losing many traditional ones.

The education is trying to respond properly to the need to train for new manufacturers or for traditional artisans' work. In Italy, there is a educational institution which purpose should be to support high level professional training, called *ITS – Istituto tecnico superiore*. It was born in 2008 to overcome the lack of suitable alternative for young people who do not aim to graduation.

This type of education is very successful in other European countries, especially Germany, where around 880,000 attending students. The Italian case is very different, as

¹¹ The integration of education of academic and vocational education: a US perspective, Robert Schwartz in *Art and Crafts, Challenges and new economic outlook*

¹² According to the research conduct by *Fondazione Ca' Foscari* and *Unicredit* in 2018. The first time the term was used was in a research by Bentley University in 2016, where they analyzed 24 million jobs to find out that employees with strong soft skills coupled with hard ones were the most requested in the job market.

just less than 15,000 people attended the courses. With the Industry 4.0 plan, new funds have been allocated to increase the appeal of the technical specialization school. From a brief article in the newspaper *Corriere della Sera*, it is reported the rate of employment after diploma: 82.5% of the graduates finds job immediately.

The focus of the courses is the manufacturing sector important for the Italian system with an orientation toward the application of technology. The thematic areas are the following covered are, among others, *technology for Made in Italy* and *Innovative technologies for cultural activities and heritage/tourism*.

The issues regarding education and labour force are therefore different. On one side we encounter problems with the lack of courses on traditional artisanal jobs, while on the other side we see the change to develop a new type of jobs together with the resistance toward integration and innovation of traditional manufacturing companies. These many aspects will be better unfold during the discussion at the end of the thesis.

2.2.2 Master Craftsmen and artistic craft

Artisans are a variegated reality. This section focuses on the higher level of craft available in Italy as well as in many other countries, which is also the most related to the tradition of a territory: master craftsmen.

Italy shows an important heritage in terms of artistic craft, even though it is not as appreciated or protected as it appears to be in other countries. The law lacks in the recognition of the category and the possibility for a specific status entitled to master craftsmen. In this frame, Japan and France are the virtuous example, as their laws protect and preserve the artistic and historical heritage of craft. In both the legislation there is a proper definition for the particular type of crafts that is considered part of the country heritage.

Draw a distinction between artisans and master craftsmen is not immediate, as well as defining master craftsmen themselves leaving comparisons aside. The reason behind it is the particularity of their job. They are manufacturers who tend to work with their hands and traditional tools, but the content of their production is object of discussion. It is sometimes closer to an artist than a manufacturer. Nevertheless, define an artisan as an artist would be unadapt toward its job, as the master craftsman's creations are made to

find a use in people's lives. From the work of Alberto Cavalli (2014), we report this concept as follows:

"A production that cannot and do not want to be considered as 'art', due to the profound relationship with the object's functionality or the manufacture to which master craftsmen devote their lives and their job to"

The dimension of master craftsmen

The companies that could entitle themselves as master craftsmen are usually small, counting less than 50 employees (mostly, they consist in one or two artisans). Despite this, they can be very valuable. Of course, many are the possible approach to the issue of the dimension of master craftsmen and their chance to expand and access to resources. One is suggested by Maurizio Dallocchio (Dallocchio et al., 2015), who states that *"with network organization, SMEs in general and especially excellence craftsmanship firms can pursue the advantages of a bigger dimension without important financial operations."* Thanks to this, the craftsmen firms can pursue *"alternative development paths, maintaining their competitive specificities"*, these being high quality and customization of the product, together with a unique dialogue with customers. In fact, in its research, the author highlights how a bigger dimension is useful for artisans in terms of economic and financial capacity as well as for the approach to international markets. For the researchers, it is extremely important that these companies learn to expand, if they want to win in the international competition and exploit their potential.

The allocation of master craftsmen

According to scholars' observation, master craftsmen can engage in three main activities that place them at different stages of the value chain. The first one is to work as highly specialized labour inside big companies, as luxury fashion companies or high-level car companies. The second role artisans can assume is to be suppliers of these same companies, producing their craft without using their own label. In this scenario they are theoretically independent, even if the contractual power of the customer relegates them to a more subordinate role. At the end, they can continue the tradition as craftsmen selling to the final consumer. In this last case, usually the workshops places in the city centres, were they deal with the customers directly and can welcome their clientele. The three roles

are not mutually exclusive and a mixture of them can create different business models (Cavalli, 2014).

As most likely assumed, this category is deeply bounded with the etiquette *Made in Italy* and it is able to maintain the prestige created in the world. Thanks to it, international customers are continuously attracted to Italian (but also French, English, ...) master craftsmen, even if the sector is suffering a deep crisis.

2.2.3 The relationship between artisans and innovation in the contemporary age

Integrating technology into a traditional manufacturing process can lead an artisan to improve its offer without losing its main characteristic. If we consider the work of an artisan as a mix between know-how, tradition and innovation, we will understand that the specificity of its product is not necessarily in the handmade, but also in the culture behind, the material use, the design and the study engaged in the process of imagining, prototyping and manufacturing the product.

Makers

Literature about manufacturing revolution is usually tight with the evolution of the *Maker Movement*, which will be briefly exposed in this paragraph.

Doing-it-yourself is a concept that gained a vast audience in less than twenty years. People discovered the pleasure for creation using their own hands in many fields, from the more obvious like food or sewing to more advanced ones, like mobile apps or robotics.

Grouped together by scholars and the general culture, all these people took the name of *Makers* and formed the so called *Maker Movement*. A milestone of the movement is the 2005 publication of the first issue of *Make* by Mark Freuenfelder. The magazine was dedicated to its own and others' experiences in the DIY world. The magazine became the symbol of the movement, collecting stories of the founder and other activists. In 2006, the first *Maker fair* took place in San Francisco Bay.

Even though partially this movement is composed by a group of hobbyists, named of *non-technical hobbyists*, passionate who join the movement for personal enjoyment, among makers there is a strong group of *entrepreneurial* or *technical makers*, who seek to

prototype products that should be placed in the market (National League of Cities, 2016). They usually aim toward a small-scale industrial production. This ambition can be met thanks to the use of new technologies. In fact, makers' history is strictly bound with the birth and spread of the new technologies, which are especially represented by additive manufacturing (commonly associated to 3D printing) and robotics. Different case studies map the entrepreneurs who enjoy to create something by themselves and are able to work with these kind of tools. Another common background is the familiarity with coding or app development.

Their production can be then artisans-related or related to coding, programming or mobile app developing skills. Thanks to the new technology, they can prototype fast and lower entry cost. From the movement, many examples of social space to work and share knowledge are born, like the *Makerspaces*, where interested people can use machines on an hour-based fee, meet and develop their ideas, as well as learn thanks to the courses held to teach the use of machinery and software tools. Makerspace allow to lower entry barrier to the market and satisfy the need for sociality characteristic of the movement.

2.2.4 How artisans interact with technology

As history teaches, artisans were innovators. Technological development (as in the development of tools) was the mean to produce better, faster and more efficiently. In the past, artisans were many time force to create their own tools, using a special engineering sensitivity. With the evolution of the industrial society there was a shift of the research and innovation role toward the industrial sector, due especially to the higher budget and the access to professional R&D (like it still happens with the partnership of corporations and research centres). As Hugues Jacquet (2016)¹³ says,

“The shift deprived artisans of their role as pioneers of technical innovation, to benefit of other experts who became increasingly specialized”

Observers see technology as a potential opportunity for craftsmen. We can detect two main features small companies can exploit, related to technology (Micelli, 2016).

¹³ The arts and crafts and new technologies: a socio-historical approach, p. 89 – Arts and Crafts

Firstly, the development of the web technologies creates a consistent reduction of the cost of access to international markets. Among the reasons we include online platforms and the easy access to information. Platforms that promote crafts arose in the past ten years and are easily accessible to the average artisan. Some of them work as marketplaces where the artisans can pay a fee and advertise their product, taking care of the supply and shipment themselves¹⁴.

Seemly important is the accessibility of information online, as well as the lower costs to open a website; with a consistent strategy, the potential of the web can be deeply exploit.

The second factor involved is the diffusion of instrument for digital production, which is today available at lower costs. The skills necessary are more easily accessible thanks to many *Fablabs* and *Competence Centre* which run classes about their use. Even if they require a certain practice, these new instrument can be bought or rented at cheaper rates compared to the past. This phenomenon is called the “democratisation” of the productive processes, where the artisans could be big beneficiary if able to exploit the chance.

Therefore, technology has the chance to intervene on two sides. On one side, thanks to the web, companies that operates mainly in niche markets are able to enter the global scenario with much lower costs of entrance, whereas the revolution of industry 4.0 opens the chance for a new type of production. Thanks to innovative technologies, especially 3D printing and laser cutting, there is the chance to see a new and evolved generation of artisans with expertise regarding both tradition and the use of these new instruments.

These innovations lead to the birth of a hybrid artisan, who can be called *Artisans 4.0* (Micelli, 2011). More than a hybrid, they can be considered an evolution toward the next step of the market in some cases. The artisan 4.0 is one of the directions of evolution an Italian artisan or small manufacturer can take to become competitive in the modern market.

¹⁴ Other are specialized vertical marketplaces. Among the most famous we count Amazon Made in Italy (www.amazon.it/Made-In-Italy), Etsy (www.etsy.com), Artemest (artemest.com).

Production technologies pertaining Industry 4.0 allow to overcome one of the main barriers of Italian small manufacturers. Italian products are well recognized internationally and appreciated for their design and quality, as well as the fine expertise. Despite this, competition in large markets with players was impossible for a long time, because of the inability to provide mass market products at a cheap price. Thanks to new technologies, the cost of prototyping drop and the customization of each product is cheaper and therefore possible. The improvement of this process is due also to the chance for a faster connection with suppliers and the possibility to modify the projects easier than before (Micelli, 2016). Thanks to this, the small Italian manufacturer that are embracing the evolution are able to grow and export their product successfully, proposing a new business model that is commonly called mass customization. In fact, for SMEs is impossible to compete with low-cost producers on the cost and for this reason many traditional manufacturing companies turned their business model toward a specialized, high-quality production, which allocate itself in high value-added niche market (Bryson et al., 2008). From Grodach & Gibson (2017): *“small manufacturers and cultural production firms alike compete on innovative design, product differentiation and specialize in customize production. As a result, they tend to be highly place-bound and locally-integrated”* making it more difficult to outsource and also, according to some scholars, more resilient to wider market volatility. Production of small manufacturers and craftsmen are able to generate important niche markets highly local and cultural specific profile (Grodach&Gibson, 2017).

In this scenario, design has the fundamental strategic role to allow the company to compete for differentiation within the marketplace. In their paper, Bryson et al. (2008) state that design also allows to reduce the quantity of raw materials required, substituting them with less expensive ones.

The request for new, tailored made production representing originated probably as reaction to the standardization of goods and the alienation produced by globalized production practices (Maffei, Bianchini, 2013).

Lastly, we can briefly present three suggestions about the exploitation of the new opportunities deriving from ICT illustrated by Stefano Micelli (2016). Studying successful cases, he proposes a general model for successful innovation and improvement of business

model directed to many small artisans and manufacturers in Italy, based on successful case studies.

First, the companies should start engaging in the potential of storytelling as a way to attract the attention of international customers, as other countries were able to do. Then, to better achieve this goal and to actually reach the clients, they should engage in a web strategy, so be present and active online in order to raise awareness and reliability through communication strategies. The latter point proposition regards selling techniques, especially the e-commerce. E-commerce is an instrument with much potential and able to be implemented at different cost ranges. It holds a big potential for Italian artisans if they get the right resources to handle it.

Italian SMEs do not easily embrace the revolution, even though there are cases of cutting age companies able to embrace all the sides of this revolution and create a business model able to exploit it. We will explore difficulties and critics toward technology thanks to the interviews run and analysed in chapter four.

This chapter presented the two main actors of Italian manufacturing scene, artisans and innovative manufacturers, who will be explained in-depth during the analysis of the case studies. However, as this thesis concentrates on the concept of urban manufacturing as well, the stories of these actors have to be interpreted in light of a peculiar phenomenon that is capturing the interest of the academic world since the past decade: the return of manufacturing in Milan. In the conclusive chapter of the first part of this work, the case of Milan will be presented, highlighting its peculiarities and the diversified ecosystem present in the city and the ongoing public policies, preparing to move to a closer analysis of its actors in the second part of the thesis.

3 MILAN AS A CASE STUDIES: ECOSYSTEM OBSERVATIONS

As observing other European countries, Italian cities are interesting themselves into the reality of urban manufacturing. Among them, Milan is the most active city, which public administration continuously dialogue with international actors and foreign cities in order to be able to develop what is defined the city of the future. Among the many challenges for the future of the city, regarding sustainability, city self-sufficiency or housing issues, there is also the implementation of a strategy to diversify the economy of the city, capitalizing on the potential of urban manufacturing. In fact, observers analysed for some time the strategies and policies other cities were implementing, identifying the details of the examples presented in chapter one. Afterward, they were able to acknowledge the reality of Milan, which presents both an innovation side, led by the presence of excellent engineering universities, as well as a more traditional and less obvious artisanal tradition. Therefore, the public administration decided to capitalize on the already present strength of the city and it is currently developing policies to be able to enhance all of them and create its own model of behaviour. This chapter explores the potential of Milan and the ongoing policies in order to properly introduce the second part of this thesis, which will be the analysis of some examples of the excellence present in the city.

3.1 Milan and its growth

In Italy, Milan has the reputation to be a very vibrant city. Innovation and cutting-edge initiative that take place rise this status and the perception about career opportunities, universities possibilities, international climate and quality of life is generally positive. A milestone of this process has been the Expo 2015, which gave impulse to investment and draw attention on the city, which is forecasted to amplify with further future initiative, especially the Olympic games in 2026.

Milan is the active place of Lombardy, which places in the top five European regions in terms of productivity and employment. The analysis in this paper will consider the Metropolitan City of Milan as well as Milan itself, according to relevance the data available.

Milan's population and tourists

Looking at the metropolitan city of Milan, its inhabitant account for 3.234.658 in 2017, with a steady rate of growth. In fact, the city attracts immigrants from all the other Italian regions as well as from abroad. The growth rate have hold a particularly fast pace in the past few years compared to the rest of Italy. Between 2016 and 2018 Milan growth rate in terms of inhabitants was 0.8%, along with a decrease of 0.1% in the overall Italian peninsula¹⁵. Studies observed 2014 as turning point for this growth, with an especially important data as regards young population. Young people increased in the city as well, proving that the academic and job offer meets high requirements. In particular, private and public education institutions appear to be able to compete at international level, attracting foreign students from all over the world. According to the QS index, the city positions as 33rd in terms of university offer in the world. In the biennium 2016-2017, about 175.000 students enrolled in Milan universities, among which 8% were foreign students. Looking at trends, the rhythms is likely to proceed: in the past ten years the number of students enrolled increased by 15%.

The city does not attract solely students. Business and pleasure tourism is increasing as well, thanks to the international relevance of the events which take place in the city and its suburbs.

During the years 2000-2017 the number of tourists more than doubled: from about 5 million in 2000 to 12 million registered in 2017. Within this growth, the number of foreign tourists increased at a steady pace as well, composing about 67% of the total tourism.

Milan attracts mostly for business, even if in the last few years its offer is entering the map of leisure destinations, thanks to an important image change of the city and its still powerful title of *capital of fashion*. The city seems to be the main Italian attraction in recent

¹⁵ Data from Milan metropolitan city website
http://www.cittametropolitana.mi.it/statistica/osservatorio_metropolitano/statistiche_demografiche/popolazione_residente.html

years, overtaking Rome (which used to be entitled with this record). In 2018, 7.8 million arrivals were registered, which correspond to almost 50% of the arrival in the Lombardy region.

Moreover, the city accounts for 70% of the business fair offer of its region, attracting a wide number of visitors from all over Italy and abroad. Business tourists are an important segment of the market as they have a higher budget than the mass tourist.

Milan city data	
Inhabits	3 million
Inhabits growth rate	0.8%
Students present in the city	175,000
Foreign students	8%
Tourist increase in the period 2000-2017	140%

Table 3.1 - Milan city data

Milan and business: a knowledge-based economy

Milan is the economic capital of the country and according to many observations the only Italian city able to compete at a European and international level.

As many other international economic capitals, the city has a strong orientation toward the service sector. We already explored the characteristics of the knowledge-based economy in chapter one. A knowledge-based economy is an economy that focuses mainly on financial and business services.

Looking into data, we can see this clear orientation of the city of Milan. Service companies account for 51% of the total number of companies in the city¹⁶. This number is five times bigger than the number of companies pertaining manufacturing and other industries.

In 2016, almost 90% of employment was in the private sector. Despite the world economic crises, this number increased between 2012 and 2016 by 1.6 percentage points.

¹⁶ Number referred to the second quarter of 2019 according to the *Camera di Commercio di Milano Monza e Brianza Lodi* website <https://www.milomb.camcom.it/i-numeri-delle-imprese-per-settore>

Among the city's resident employed in this sectors, a vast majority is Italian. According to data, in the second quarter of 2019, 77% of the employed worked in the service and commerce sector.

Milan is very active in the start-up sector as well. Looking at the analysis, we can see that new companies open in higher numbers every year, despite the mortality rate typical of this form of business. Among start up, 84% are classified in the service sector. The same supremacy of the service sector can be found in the innovative small medium enterprises, which account to be 79% service companies.

The analysis highlight that the service industry is experiencing some internal changes. From being the traditional, mainly focus on bank and insurance sector, it is shifting toward advertising and communication as well as private healthcare and education. These sectors are closer to research and university world which is expanding and improving in the city.

Despite these data, we have already seen that a revolution is going on. As many other big cities, Milan was an industrial centre in the past, but in a few decades it turned its economy toward a service-based economy. Now, the so-called Fourth Industrial Revolution seems to take place in the city and institutional observers are collecting signs of the ongoing changes. In the next paragraph, we will then present data regarding the manufacturing sector to better understand the current situation and the thoughts that lead to the initiative about manufacturing in Milan Municipality.

3.2 The manufacturing sector in Milan

Bringing material production back to the cities seems to be an important aim for different service-based economic capitals of the world, and Milan is not different. The movement already naturally started, so that now we can observe data related to manufacturing in the city. They are the starting point for future decisions regarding policies to apply in the urban context.

Manufacturing companies account for 6.3% in 2016 by the number of employee. From the data regarding the second quarter of 2019, they appear to be almost 18%. In the

same period, manufacturing and other industrial activities appear to be 10% of the overall companies in Milan.

These data clearly display that the manufacturing sector is still much smaller compared to the service one. Also in the start-up area, just 9.5% of start-up pertain to industry or craftsmanship, whereas almost 12% innovative small and medium enterprises enter in these sectors.

In Milan, manufacturing's strongest sector among manufacturing SMEs is the electronic, electric and machinery, aligning with general Italian data, for which mechanic and electronic are the strongest manufacturing sectors and best performers in terms of export. Furniture and other manufacturing hold the second spot in the manufacturing department¹⁷.

Despite this, the number of employed people in manufacturing in the period 2012-2016 decreased, especially in the peripheral area of the city, where lower-income population tend to live. In fact, middle and low income population who live in this area works probably in the city or in the industry outside Milan. With the decrease of manufacturing jobs, the population lost an important source of income. Plus, the population group characterized by a lower level qualifications suffers more than all the other groups the loss of jobs. Social inequalities widespread, creating complicated situations. In the meanwhile, the suburbs host an increasing number of foreign populations, requiring to give a suitable solution to live and have an acceptable quality of life. Between 2010 and 2016 the foreign population increased by 18.4% in the suburb area.

In the past few years, the request for labour by the manufacturing sector appears to focuses on not qualified professions, which are majorly taken by foreigners. The highly specialized qualification suffer instead an important loss.

Despite this, looking at foreign cities and the success of initiatives such as Fab Labs and makerspaces, as well as the manufacturing tradition from the past, the city gathered the signals of the manufacturing renaissance" in a comprehensive program that will be explored in the next paragraph.

¹⁷ Rapporto sulla competitività dei settori produttivi, Edizione 2019 - ISTAT

3.2.1 The city hall project Manifattura Milano

Milan manufacturing data	
Manufacturing companies	36,000
Craftsmen	13,000
Number of jobs in the sector	350,000

Table 3.2 - Milan manufacturing data

In the city, there are 65 co-working spaces, 12 makerspaces and Fab Labs and 3 accelerators. Furthermore, universities and private realities (businesses but also citizens), are very involved in the revolution of new technologies that these initiative express interest about. Talking about an urban manufacturing initiative in the city is not out of place. Milan accounts for about 36.000 manufacturing companies, 13.000 craftsmen and 350.000 jobs in the sector. Furthermore, the city has a tradition both for industry and high level manufacturing, as the country itself.

Observing the examples of the other European cities, Milan Municipality, together with other private and public institutions, decided to create a multi-year program to gather the value of the evolution ongoing. The program names *Manifattura Milano* and it inserts in the *Direction for Urban Economy and Labour* in Milan City hall. Quoting the words of Annibale D’Elia, who holds the direction of the *Direzione di Economia Urbana e del Lavoro*, where the idea is developed and transformed into practice:

“[Manifattura Milano] is an action that aims to facilitate the formation of a new urban manufacturing community, to support the development of an open ecosystem of places and services for the materialization of goods, and to stimulate the integration of technological, social and design-driven innovation.” (D’Elia, 2018).

Before we display the characteristic of the program, it must be underlined that the initiative is not isolated but tight together with other transformation ongoing in the city. They mainly regard sharing economy, circular economy, sustainable development and network with other European cities. The common thought is that cities are the suitable place to run tests about urban initiatives that regard urban agriculture and food, digital

technologies, energy and telecommunications, healthcare and of course manufacturing (D'Elia, 2018).

As the other cities, Milan is trying to create its own model according to the changes ongoing. The authorities in charge started the process a couple of years ago observing what was happening in the cities. As exposed in the chapter one, these examples are namely Paris – focus on high level craft, New York – focus on innovative manufacturing and Barcelona – focus on the concept of smart city.

From the observation regarding Milan, a mixed reality appears. The institutions were able to spot three communities that mixed the characteristic of a traditional and an innovative manufacturing, showing Milan as a dynamic case itself. The three communities together create an emerging ecosystem on which realities hope for a new, more inclusive future development (D'Elia, 2018). They are the following¹⁸:

- Start-up, incubators, universities and research centres that develop and implement the right technology for Industry 4.0
- Small medium enterprises and new craft in Milan and its metropolitan area
- Makers, new artisans and designer who operate in co-working spaces and Fab Labs

Manifattura Milano is a multi-year program of urban policy created with the aim to support the return of manufacturing within the city. The main focus of the program is innovation, as we can see from the community included. Yet innovation does not mean just technology. It embraces the concept of integration of technological, social and design-driven innovation, which characterize the revolution ongoing in Italy. The program pursues the aim to improve social inclusion, innovation and sustainability in the city, amplifying job opportunities, especially for young people. Then, the program works toward the support of the digital transition for mature companies that may also not have the proper funds, knowledge or human capital on their disposal. Creating a vibrant and evolving scenario will help Milan to attract international investment and help the city to be account among the global connected cities of the current evolution. Increase the role of Milan internationally

¹⁸ Based on the communities exposed in the slides about Manifattura Milano Camp Project 2018 accessed during internship at Milan municipality.

have important repercussions also on the type of customers the city can aim for in terms of urban marketing.

Throughout the program, the public administration wants to support already existing companies that create added value to the city and quality jobs. Furthermore, it aims to enhance the outstanding realities of the City of Milan, like fashion, furniture and food of course but also other less “shiny” fields, like light mechanic.

An important point tackled by the initiative and events within Manifattura Milano is related to the network between the existing realities. In fact, the different communities present in the city do not necessarily know each other and/or create synergy together. As we have seen, the network is one of the main point of urban manufacturing, both at an empirical studies’ level and in practice. Creating connection can add value to each activity but also allows to find potential room for expansion, new suppliers or customers. In this way, the self-sufficiency of the city as a system may increase. These synergies could help the proper commercial and marketing strategies to attract tourist and highlight to them the extremely high quality of the city offer (Studio Stefano Micelli e Centro Studi PIM).

So far, the public administration mapped the actors and stakeholders present in the city and the general feeling within them. At the same time, it tried to confront and dialogue with other international cities. Furthermore, the institutions are working to create proper areas inside the city and in abandoned ground where new initiatives could take place.

The project run two major events: *Manifatture Aperte* (open door in manufacturing companies) and the *Manifattura Milano Camp*. A public-private collaboration allowed to run both the events. Using this partnership is another common feature with the global cities already examined.

Let’s see a brief summary of the events. The first event aims to open the manufacturing places and innovation places to the community, in order to create awareness among citizens about the urban reality. During the time of the event, workshops and small demonstration are held in educational spaces or co-working spread in the city and its hinterland. The event creates an important occasion to get to know traditional and innovative jobs present in the city, as well as advertising a little some of the companies involved.

The *Manifattura Milano Camp* could be defined as an “insiders’ event”, as it evolves around discussions with firms and experts (institutions, university professors and other professional roles). During the event, the intentional aim of the institutions was mostly to create an occasion for successful networking between traditional and innovative artisans and other stakeholders.

In the future, the city aims to widen these initiatives to create a more inclusive model able to compete and interact with the other big cities. In taking action, the City of Milan and its municipality have to comply with some downsides, in particular the one regarding the autonomy of decision making and issues regarding financing typical of public administration.

3.2.2 Observations regarding Milan urban manufacturing scene

The observation about what is happening in a city are currently going on. In fact, urban manufacturing is a quite recent issue, developed in the last ten to fifteen years. In the cities analysed and other examples, the intervention is currently ongoing. Experimentation are led day by day by policy makers and institutions. At the same time, the scenario is changing and different realities emerge and need to be reported.

Milan characterizes in this way as well. The city is in fact is a young and evolving scenario from this point of view. Throughout the different initiatives of *Manifattura Milano*, the institutional observers and scholars describe the urban scenario as a multi-faced reality.

According to an article published in March 2019 by Cristina Tajani, current *Assessor for work, economic activity and human resources policy*, and Stefano Micelli, management Professor at Ca’ Foscari University of Venice, in the city of Milan we can encounter three different types of companies that are benefitting by the evolution and ongoing internationalization of the economic capital.

Starting from that article, we acknowledge then the presence of three “pushes toward the growth”. These three allows us to depict the urban scenario in terms of manufacturing companies, giving us a ground for the analysis that will be run in the next chapter. We are proceeding then to illustrate the category, briefly describing each of it,

linking it with what was presented in chapter two as an introduction to the modern concept of manufacturing.

Craftsmen

Characterized especially by master craftsmen, this category is then composed by high-level artisans which usually come from a long tradition of presence in the city. They produce typical *Made in Italy* crafts, such as leather products, ceramic, furniture. Usually, they have an affluent, refined clientele. According to the article, the way to benefit them is to create a widespread awareness of the expertise and the quality present in the city. This category is current benefitting from the international fair offer and the rising orientation toward tourism of the city.

Innovative manufacturing realities

In this category, we are talking about start up and Fab Labs, as well as innovative manufacturing companies that combined technology and design to create a new offer. They create new combinations for product and processes that lead to these innovative results. As they are the main focus of reborn urban manufacturing around the world, they have been the centre of different public policies of the city hall during the last few years. Part of this category the innovative manufacturing companies even if they do not engage in the use of industry 4.0 technology in the production, but they produce an innovative product in terms of materials use, process of production and eventually engage in design innovation. In fact, according to international literature, the innovative urban manufacturing does not include just the use of technology, but an overall generation of companies that produce innovative products with usually advanced and sustainable processes.

Large companies and synergetic projects

This last category is more diverse, as it includes combinations of companies and other realities, such as universities and research centres, in order to exploit the common resources and set up innovative ideas, experimentations and solutions in a city that has much to offer at a European as well as international level. These manufacturing companies are usually big and international and in this way they get the chance to rethink their presence in the city and be in touch with potential stakeholders.

BOX 3.1

Milan is attracting big companies for new initiatives in Italy thanks to its education programs and the possibility to cooperate with modern institutions. Furthermore, it is the place for new and experimental initiatives, like the *Heineken Bier University* (<https://www.universitadellabirra.it/>), an hub specialized in teaching the brewery art that exploit the microbrew interest typical of the past few years.

Furthermore, thanks to partnerships and joint ventures, other realities are growing. Among the bigger ones, the *Polihub* (<https://www.polihub.it/>), an incubator related to the *Politecnico di Milano* university, is growing and setting up partnerships with international competitors like *Vodafone* for the experimentation about 5G.

These three category depict well the Milan scenario and give us the starting point for the research run in this thesis.

3.2.3 The outline of this research

As the literature underlined, there is no unique definition of urban manufacturing, nor clear analysis of the characteristics and needs of each actor present in the city. The majority of the academic literature indicates innovative manufacture as the most important actor involved in the process of bringing manufacturers back in cities. The hopes about the creation of better employment possibilities and the improvement of social inclusion rely on it, and it is included in the projects of sustainable city development.

Despite this, Milan is a peculiar reality and its study is quite recent.

The most important cases of urban manufacturing in the world are being documented and codified, especially the ones regarding New York Brooklyn Navy Yard, which is the virtuous example for the topic. For this reason, it is possible to hypothesize the existence of “*Model New York*”, a “*Model Paris*” or a “*Model Barcelona*” to look at when policy makers and scholars are studying the best actions to pursue. These cities present a vision of their current situation, therefore they are observed by other countries’ researchers.

As Milan has a differentiated pool of manufacturers and artisans, able to value artistic crafts as much as innovative one and sometimes the two mix as well), it is interesting to observe how the categories presented in the previous paragraph interact with the city. In particular, this analysis will focus on master craftsmen and innovative manufacturing companies. The large multinational companies attracted by the city are an interesting category that should have its own study, as they follow different indexes than the small medium Italian manufacturers.

Hence, the first part of the analysis is going to highlight the main characteristic discovered during the research, comparing the two different realities in order to give a clear outline of the main features common and not to each category. This analysis will continue highlighting the peculiar critical issues that the two groups face and their relationship with the urban context.

A second part of the study is focused on the chances for growth of both artisans and innovative small manufacturers, underlining how they can develop toward a competitive business model. Once these solutions are identified, the discussion will focus on the possibility or not to carry on this development path in the city, based on the observations of scholars regarding the advantages and disadvantages of placing in a city and the how the chances of success are influenced by this ecosystem.

Considering the literature and the previous information gathered from the examples of other cities, it is safe to hypothesize which are the main critical issue that each of the two groups is facing. Therefore, the main finding expected are the following.

Master Craftsmen

Considering the literature about craft niche markets and the feature of master craftsmen, we hypothesize that the presence in the urban context benefit from the access to local market with higher purchasing power. Furthermore, the flow of international tourists attracted to the city for business (and partially for leisure) could grant the access to a global affluent clientele.

Innovative manufacturers

As regards innovative manufacturers (which are partially already developed firms and partially manufacturing start-ups), we hypothesize that this category's main needs regards the availability of technology in terms of space and costs, the availability of suitable spaces in terms of physical space and cost of rent and the creation of a proper network among manufacturers.

Furthermore, the analyses will cover how a company can pass from a small dimension to a bigger and structured dimension, hypothesizing that design and technology are essential, based on previous literature regarding Italian cases. Furthermore, it is easy to imagine that Milan is the best ecosystem where to place thanks to its large pool of experts and schools and funding.

Analysing these two category, we want to contribute in building a literature about Milan's urban manufacturing example and therefore propose to future researcher to create a characteristic "*Model Milan*". Considering its numbers, the city has some potential to place itself among the debate and it is the most outstanding and representative city in Italy in these terms. In the next chapter we will proceed with the explanation about the methodology use and discuss the implication of the research before presenting the most interesting case studies gathered during the researches.

PART 2

4 NEW AND OLD CRAFTSMANSHIP IN MILAN

The second part of this work focuses on the research run for this thesis. The research involves the interview to a group of actors present in Milan coherent with the actors presented in the first part according to the literature on urban manufacturing.

The first category presented is the one of master craftsmen, who own the values of traditional manufacturing. However, as it will be expressed during the analysis, these traditional values do not have necessarily to be mistaken with a backward conception of business. While it is true in many cases, it is not real for others. Which present a dynamic and interesting reality of how a traditional production and know-how can dialogue with the future of craftsmanship.

Afterward, the presentation will move toward a more innovative type of artisan, which is part of the small manufacturers' group still holding the same spirit and elegance, but being able to innovate in its process.

These two groups have the know-how necessary to compete in the international market, implementing strategies necessary to march the model of the small but global Italian firm. According to their feature, the chapter will close identifying the key features for success, which will be the initial point of analysis for the last chapter regarding the ecosystem of Milan and how it can provide the resources needed.

4.1 Introduction to the research topic

This chapter will present the case studies selected and encountered during the research in the city of Milan. At first, there will be an extensive presentation of the most extended category analysed, the one of master craftsmen, thanks to three cases of successful stories and their analysis to highlight the elements that brought to a long lasting business activity.

The second section will then introduce the innovative artisans and manufacturer through other two case studies seen during the research. Adding these cases will allow a

comparing between two different types of manufacturers present in the city, the peculiarities and the common characteristics, in order to understand if the evolution toward an innovative path is the only street for success of Italian artisans.

At the end, we will consider three case studies of different companies, which are not manufacturers to be able to have a comparison sample for the final discussion regarding the city ecosystem.

4.1.1 Methodology

In this first section there is a small summary of the methodology used to build the case studies' research.

The research consists in qualitative research through a multiple case-study analysis of firms present in Milan urban area and its hinterland.

Sample methodology

To sample the firms useful for this research, the methodology followed was based on the analysis and selection of the companies present in two organizations' databases (Ritchie & Lewis, 2003). The two organization involved were *Milan Municipality, Direction Urban Economy and Labour, Unità di Innovazione Economica* and the *Fondazione Cologni per i Maestri d'Arte*. Thanks to the interaction with these two entities, it was possible to gain access to a list of suitable candidates for the interview.

Regarding *Milan Municipality*, we selected companies among the participant to three event regarding the project *Manifattura Milano*, namely the events *Manifattura Milano Camp 2018* and *2019*, plus *Manifatture Aperte 2018*.

Regarding *Fondazione Cologni per i Maestri d'Arte*, companies were selected from their database of master craftsmen participating to the foundation's initiatives.

Prerequisite for the choice of the companies

Before choosing the companies, we list some prerequisites regarding geographic location and type of activity.

Regarding geographic location, the companies need to be located within Milan municipality, entirely or which the headquarter is in the city and the production is located

in the Metropolitan City of Milan. Despite different studies on urban manufacturing do not clearly distinguish the urban area and the region, talking about overall economic effects, in this research we prefer to limit the approach to the city itself, as a more convenient and clear option.

Regarding the activity run by the company, we gather the principle from the literature (especially *City of Making* report) as to base the definition of urban manufacturing. For this reason, the company has to match the following characteristics:

- Involve transformation of physical materials;
- Employ labour, tools and/or machines in the process;
- Have a product as outcome;
- Having a structure consistent enough so that “making” is a business activity;

The company selected were enlisted in a spreadsheet with contact information regarding email, phone number and address.

Data collection

The method chosen to collect data was semi-structured interviews aimed to explore the entire dimension of the company (see interview in Appendix). The interviews were developed after exploring the literature about craftsmanship, urban manufacturing and innovative artisans. The question were divided in three categories. The first regarding general company information, type of product, market and history related to the presence in the city. The second exploring the use of technology in production, communication and sales. The last part focusing on the reasons for the non-adoption of technologies and the competitive advantage of the product and the company.

Before the interview, we collected data about the company through the company’s website and their social media channels with the aim to build a preliminary case history about the company and its products and gather information about their approach to the use of online technology (website, e-commerce and social media).

The interviews lasted 30 to 50 minutes and they were recorded after obtaining the permission of the company. After the end of the interview, the notes we transcribed in a unique document.

During the interview some pictures were taken after the consensus of the company, in order to document the design process, the method of production, the final product and the overall environment. The photos will be part of the documentation of the research as well.

Get in touch with interviewees

In order to get in touch with the company to ask its availability for an interview, the process followed include two steps. At first, the entitled institution (either the *Fondazione Cologni per I Maestri d'Arte* or the *Milan Municipality*, according to which of them was the direct connection with the company) informed the interested company through a phone call, briefly presenting the interviewee, the university of origin and the purpose of the research.

Afterward, in order to better introduce the topic, an email was sent, with a quick introduction of the ongoing thesis research. According to the companies' availability, a time and date were set up for the interview, which took place at the workshop of the interviewed firm.

During the period *May 2019* until *July 2019*, the twenty interviews to the companies reported in the Appendix took place.

Data analysis

After the interview, it has been possible to acknowledge if the company could be classified as a master craftsmen or an innovative artisan. To analyse the interviews, it has been used a cross-case synthesis (Yin, 2009) adapted to the need of this study.

First, the companies has been divided between the three categories. For each category, the data collected from the interview has been elaborated in tables divided for each question. Afterward, a general set of answers has been obtained. Thanks to it, it has been possible to build a pattern and eventually highlight the most interesting answers. After a deep analysis, the most useful case studies have been chosen to be presented completely and analysed as successful models for the discussion of the topic.

Therefore, in the following sections there will be a deep analysis of eight case studies, while the general results are used to better generalize the analysis of each

category. The position in the city of the case studies presented in the chapter is illustrated in Figure 4.1. To them it is added the company *Fontana Milano 1915*, which will be considered for the analysis in the second part of the chapter. Its position is therefore relevant to the topic.

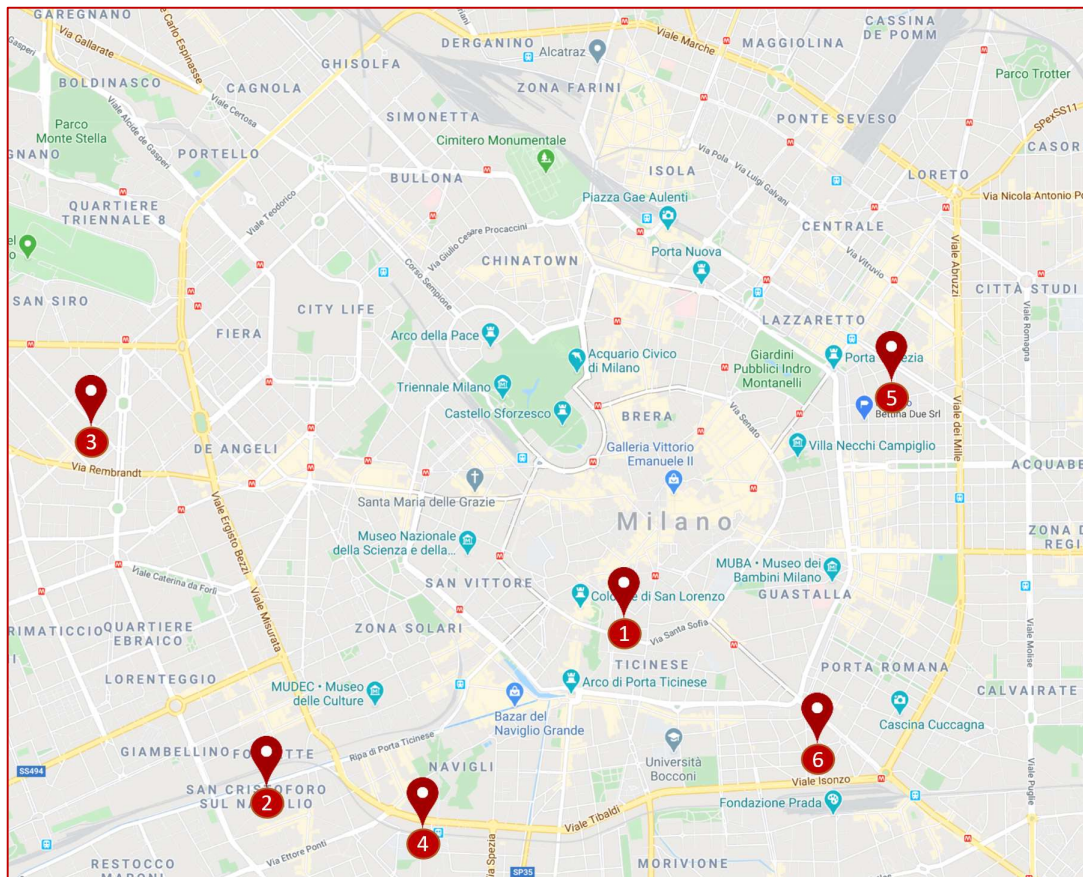


Figure 4.1 - The position of the companies analyzed

Legend

1. *Leu Locati*
2. *Lorenzi Milano*
3. *Selleria Pariani*
4. *Manifattura macchine soffici*
5. *Jannelli&Volpi (showroom)*
6. *Fontana Milano 1915*

4.2 Analysis of master craftsmen

In the chapter regarding urban manufacturing in Milan, the article identified three categories of manufacturing companies operating in the city. The first is represented by the traditional, high-level master craftsmen who still work in the city and maintain a tradition that is appreciated throughout the world. In this first section, we will present the business structure and highlight the flaws and the potential for intervention to renovate the company and bring it to a higher competitive level.

4.2.1 Production, cost structure and customers

Businesses run by artisans follow a traditional manufacturing formula, in which value is created during the production process thanks to the ability of labor and the high quality of materials involved in the production.

The core business: bespoke manufacturing

Master craftsmen base their activity on the transformation of raw materials into usable goods, the same as the traditional manufacturing model. However, master craftsmen differentiate themselves from their high-volume counterparts by the fact that their finished products are much higher quality and nearly always priced at a high mark-up. In order to warrant such prices, artisans create products that leverage two factors – specialized skills and high-quality materials. The first factor that artisans utilize, their unique skills, commonly involve handwork that few others can perform at the same level. The second factor, premium materials, are too expensive for more widespread products and require specialized knowledge in handling them. Furthermore, these raw materials are commonly imported – a skill that Italian manufacturers learned from the past due to the lack of natural resources present in the territory.

Adding to these characteristics, the master craftsmen products naturally differentiate themselves by their ability to be customized for the client. The bespoke design is one of the pillars of craftsmanship. Thanks to a continuous and strong relationship with the customer, it is possible to match his or her desires and needs much more precisely than in any other mainstream form of production, until the point in which the product is actually made *on* him.

This production can be characterized as long-lasting due to the nature of the product itself and the relationship between the maker and the customer. The products' designs are long-lasting, if not eternal and are usually unaffected by trends. Furthermore, the high quality of construction allows a longer lifespan. Additionally, the relationship that is created between the artisan and the customer is central, since the product is built on its request. The customer loyalty that is derived consequently can continue for generations of families.

Considering that the value proposition is highly focused on the quality of the product, the most important resource for artisanal companies is skilled labour. Therefore, as it will be explained in the next section, the cost structure is mainly focused on this topic.

Cost structure

The majority of the cost sustained by companies are incurred during the production stage and, as such, the cost structure is highly focused on raw materials and labour inputs. For this reason, fewer resources are allocated to research and development and to technical or aesthetic renovation of the design, which follows a quite stable model. A final characteristic common among master craftsmen is typically a lack of investment in publicity. The marketing division is quite usually non-existent or amateur approached by the artisan himself or other craftsmen who do not have any specialization or know-how in marketing.

Regarding one of the main issues touched upon in the analysis of urban manufacturing, the cost of rent, there is a common exception in these cases. Many master craftsmen benefit from the ownership of the workshop where they run their activity. In fact, as the business is mostly historical (it was passed down through time by the artisans' family), they do not have to support the cost of rent. Cutting this cost is an important advantage for master craftsmen and allows to keep the production in the city, despite the fact that fiscal pressure by public authorities is one of the main problems reported by the artisans.

Customers

The target market segment ranges from high level to premium luxury consumers with a high spending power. Moreover, the ideal customer seems to be characterized by a

refined taste and sense of culture with less attachment to brands and trends, which draws him or her into seeking out handmade, bespoke and high quality pieces.

The customers are usually international because, while the domestic market has suffered a decline of the wealthy segment of the population due to emigration and reduction of large Italian corporations, the richness is allocated in other parts of the world. Therefore, the majority of clients today come from places such as the United State, Switzerland and England, even if there is a growing interest toward the acquisition of Emirati and oriental clients.

However, despite the international orientation of the clientele, an important point to underline is that a physical presence is often required to purchase the product in many of the artisanal firms. This, paired with the sometimes long time necessary to compose the product, represents one of the primary challenges of the artisans in acquiring a wider market. As an example, a bespoke suit requires multiple fitting in the workshop over a period of several months.

Next, the acquisition of customers, in the majority of cases is not centred around an actual strategy, but instead commonly occurs by the word-of-mouth from long-time customers. The main source of advertisement with which new customers can get to know the artisan is through the company's website, or thanks to the participation to sector events. However, despite this, there is no coherent marketing structure. This flaw can lead to missing different opportunities during the transformation and internationalization of the city.

The majority of the revenues derive from the sales of the final product, while very few is related to after-sales services or other additional, non-core services, for example post sales assistance, explanation of product use or installation of it. In the majority of cases this is not useful or requested. There are some forms of assistance throughout time (as an example, readjusting a suit according to the new trends) but they stretch throughout time and do not guarantee a stable revenue stream.

The distribution channels most commonly used are traditional as well. The majority of sales occurs in the showroom of the company, which is typically located in the same building of the workshop. This characteristic attracts the clientele in a positive way, making

the purchasing process related to an experience more than just the acquisition of the product. We will explain this feature more in depth thanks to one of the case studies in the upcoming section.

Moreover, there is an openness toward e-commerce that is equally divided between the company's own e-commerce platform and third party platforms. Despite this willingness to sell online, majority of the artisanal products require a certain amount of interaction between the customer and the artisan itself and, as such, these products are usually not suitable for the online sales.

4.2.2 Stories of artistic crafts

As said different times, Italian artisans hold an important reputation in the world, especially in niche luxurious markets. Despite this, the rate of closing workshop is high and the competition of other countries like France is intense. For this reason, we ask ourselves: how can Italian master craftsmen survive? In this part, we will go through the stories of three master craftsmen and their companies that have a good track record in the business and demonstrate some important characteristics. Among the many artisans interviewed, this paper wants to underline how this business can be led successfully even without integrating any new technology into production.

Company name	Sector	Product	Type of production	Market	Target	Clientele
Leu Locati	Leather	Bags and Shoes	Bespoke Small standard production	International	Luxury market	B2C B2B
Selleria Pariani	Saddle	Saddles and equestrian accessories	Bespoke Small standard production	International	High-level market	B2C B2B
Lorenzi Milano	Objects	Men objects and accessories in natural materials	Bespoke Small standard production	International	Luxury market	B2C B2B

Table 4.1 - Master Craftsmen case studies

4.2.2.1 *Leu Locati: the traditional luxury of artisanal production*

Leu Locati is an artisanal company with a very long history. It was born in 1870 in Milan close to the current workshop (Via Cosimo del Fante), in the very centre of the city. For more than a hundred years, the company has dressed clients ranging from royalty to Hollywood stars, being able to hold to the ancient name and the tradition of Made in Italy.



This company operates in the leather market, producing bags, shoes and accessories, with handbags being its main focus. Its products place in the luxury market and they are handcrafted in the workshop, which employs 23 staff plus a few of freelancers and interns. The revenue from sales for 2018 was 1,282,000 euro¹⁹.

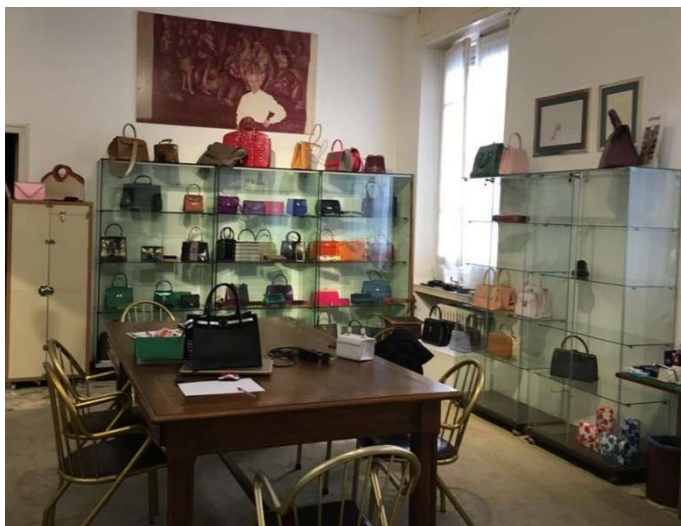


Figure 4.2- *Leu Locati's showroom*

Inside the workshop we can see people of different age working in a bright environment, which is a very entertain view. In fact, the activity inside as well as the presence of leather everywhere recalls the blurred image that each of us holds of an artisan when we read about them in school. The material present are very precious and imported from

the world. Due to the current debate ongoing on sustainability, the use of leather in the fashion industry is a sensitive topic. For this reason, when the current owner of the company Paolo Amato holds some lecture in schools, he tries to involve the explanation of the use of leather, regarding the supply chain of the material itself but mostly regarding the no-waste mentality in the use of it.

¹⁹ Data from AIDA (aida.bvdinfo.com) for latest available balance sheet of LEU LOCATI SRL – 31.12.2018

Its clientele are divided between private customers and big companies. In fact, *Leu Locati* is supplier for different main fashion luxury *maison*, producing bags for them. Furthermore, the company has some permanent collection pieces, which are displayed in the reception/showroom room. Despite this, when selling to singular customers, the most important feature they offer is the chance to personalize the bags according to the person's needs. For this reason, we can see the traditional tendency at artisanal hand making and bespoke production.

The company's customers are international. As many other artisans, there is a strong part of Italian (especially Milanese) customers, while the foreign clientele are mainly from the United States, Japan and England. The foreign markets for master craftsmen locates where there are individuals with a high purchase power and the customer themselves generally dived between nobility and businessmen. Despite this, we can not consider the presence of the company as international, due to the absence of a strategy focus on the international market presence as other artisans present.

The production technique

Most of the people employed in the company's workshop are artisans. The production is almost entirely handcrafted and the use of basic machines is just related to "dead" part of the process, meaning the steps that would not add value to the composition if handmade but just create more expenses and raise the price of the product. For this reason, the use of machine does not limit the denomination of a handmade product.



Figure 4.3- Making a gold filament bag

Commercialization

During the interviews, we were able to understand that this company has an esteemed reputation among affluent society. Important companies and celebrities alike recognize them for their high quality bespoke bag production. Due to this already high brand recognition, the company is probably not pushed to conduct a heavy marketing campaign. In fact, advertisement is not a factor in the company's functions. The company

chooses not to invest in any form of marketing, from the most traditional form of advertisement, i.e. the presence on related magazines, moving to the most recent techniques of online marketing and social media, because the word of mouth and reputation have been so far enough for the company.

This is not to say that the company does not promote its reputation. *Leu Locati* has a good looking and well curated website, where the storytelling of the company holds an important dimension. This characteristic is very relevant, as it emphasizes its most important features: artisanal product, long storied tradition, and proud presence in Milan. Despite this, the website does not present an e-commerce section nor does it display any prices of the products. Furthermore, the website is not linked to social media, presenting an area for future growth. This is because, even if the potential target of the company for consumers' market might not be interested in social media, raising the awareness of this luxurious brand could bring a new type of clientele for the company.

To date, effort selling its products online have been rare and unfruitful. The only current relationship with an online selling platform are with *Barròco*²⁰, where the company presents a few standard products. Despite this, online orders are not common and the venture does not appear to be very appealing or significant to the *Leu Locati*.

More of these modern tools for communication and selling techniques are used for the owner's son, who has created his own line of shoes and bags under his own brand. Technically, from an organizational standpoint is still in the same company, but is managed independently by the son. *Daniele Amato* has a strong presence online and in social media. The production is still in the company and the online and market presence is bounded with the identity of the brand *Leu Locati*.

To close this part, we can report that the international leather fair holds in Milan (MIPEL), of which the company was among the founders, is still a fundamental channel to meet old and new clients. As a rather traditional channel, it is highly rated from the sector. As for many artisans, fairs are still the most important chance to create a network of customers and suppliers and therefore make business.

²⁰ <https://barrocoitalia.com/artisans/leu-locati/>

The value of visiting a workshop

The experience of seeing the production of an artisanal piece can be powerful for customers and has been recognized as an upcoming trend over the past few years. When the awareness about the artisanal work behind important *maison* (especially fashion and jewellery companies) raised, so did the curiosity to see how these ancient and almost gone jobs



Figure 4.4 - Artisan cutting crocodile leather

were carried out. In the beginning, the focus was mainly on advertising, with a big change from the hedonistic vision of the 1990s and early 2000s to a more structured idea in recent years, including tours, meeting and demonstrations. The appeal of seeing a master craftsman's workshop as a service/touristic offer has a niche but relevant potential in the luxury world, where the high purchasing power and the interest of customers is higher.

In *Leu Locati's* case, tours are not a specific offer yet, but due to the showroom being located in the same rooms of the workshop, the client can easily ask for a visit and is a normal practice of selling the product. Visiting a working artisan workshop seems to especially attract Asian (in particular Chinese) clients. This tendency is well exploited by another Milanese handbag and leather accessories company, *Fontana Milano 1915*. Recently, the company invested in an heavy advertisement campaign as well as in fashion influencers and print advertisement. When visiting their store, customers actually visit the workshop and have the chance to create an experience.

Despite the fact both *Leu Locati* and *Fontana Milano 1915* manufacture the same type of product, the two companies have taken completely different routes. The different is related to the goal of creating a strong brand and brand awareness in the company. While *Fontana Milano 1915* embraced a strategy based on building a brand around its name and the independence from being a suppliers of other fashion brands, *Leu Locati* choses to keep the name silent and maintain an important role as third companies' supplier.

When considering how to create an experience, it is important to consider practical factors like safety compliance and the required investment. Nonetheless, it can be very

rewarding. The visit to a workshop can create a magical sensation and true amazement in customers, especially if from a completely different reality. For this reason, a company with such a dense history, bounds with important clientele, and its important location in the city centre should consider to implement its offer.

The value proposition: tradition

I chose to explain the company *Leu Locati* because it is the best representation of what traditional master craftsmen do in Italy today. The most I saw have been the one related to the brand awareness, almost completely lacking in the mainstream world, the high quality of the products and preparation of the owner in explaining their use during the tour of the workshop he gave after the interview. The reason why this company still works after a hundred years is the excellence of craftsmanship and raw materials used. The creations are very classic and some bags have the same shape as in the 1930s. Despite this, the appreciation for them is still alive.



Figure 4.5 - Example of handbags' models

This company is also the perfect example of an Italian artisan which is still independent but also supplier to bigger *maisons*. Saying if this is a successful choice or not is hard at this stage of the relationship, but considering the number of employees and the revenue of the company we can consider it as positive right now.

The city and the administration

Leu Locati is located in a central area of Milan. The workshop is located in almost the same spot since its inception and easily reached from all the main hotels. This is a very important feature as the customers (consumers or businesses) are from abroad and need to be able to reach places comfortably.

The main problem the company find and blame on the public administration is related to the heavy norms regarding taxation and the difficulty of the apprenticeship contract. These problems are common to almost all the artisans interviewed. The first one regards security compliance and taxation imposed to artisan firms, while the second is

mostly focused on the difficulties imposed by the current legislation to hire and form an intern, making it expensive for an artisan to find a new apprentice.

4.2.2.2 *Selleria Pariani: regaining market share through social media marketing*

Selleria Pariani is a company located outside close to the San Siro racecourse the ring road of Milan. The reason for this peculiar location is that the artisanal firm produces saddles for horse riding and other equestrian-related accessories.



Like most artisans, the history of *Selleria Pariani* dates back to more than a century ago as a reseller of saddles that were imported from England. During time and with the support of a few customers the original founder started to build them in the new upcoming style, becoming one of the pioneers in the industry. Despite its pioneering view in the beginning, the artisanal firm lost a big part of the market during the past decades. In fact, a few years ago they realized that although they still hold a relatively strong market share among the horseman aged 50+ due to their loyalty and the company's past reputation, but they were lacking in popularity with new and young riders. However, over the past three years, the company has implemented a structured social media marketing technique and regained much of their lost market share. Before exploring the choices that they took to regain market, I will briefly illustrate their products and the market.



Figure 4.6 - Showroom of Selleria Pariani

As previously stated, the company produces handmade saddles and horse accessories. The products greatly vary in terms of costs depending whether or not it is of their bespoke more high-end offering or standard production. Nevertheless, their main product is saddles, which are crafted

according to the needs of each rider. Within the overall market segment, Selleria Pariani's products place in a high range, as the price of a saddle goes from 1.000 to 4.000 euros. The handmade production and the small number of artisans working allows the company to produce around only 300 pieces per year, in contrast to some of its larger competitors that can produce up to 15.000 saddles per year. This difference between *Selleria Pariani* and its

higher volume competitors is possible thanks to the integration of the technologies in the production.

The main markets are European and they are related to the diffusion of horse riding in the specific country. Northern Europe, Belgium, France, Switzerland and Germany are all active areas for the company, where there is a strong interest for the sport and the company has the core of its clientele. Italy is less present as customer compared to these countries, due to a lower interest in horse riding. In Italy itself, Milan constitutes one of the most active areas, making it the main Italian market of the company. As regards Asia, China is an interesting market but, due to its dimension, it would require a stable agent in the country to represent the company. At the moment, the resources required to be invested for this kind of agent are too high to be supported by the company, which is already facing other innovation costs. The Arabic Emirates are an interesting market, where the interest for horse riding is quite ancient and developed. Despite this, it is not as immediate to approach for technical reasons regarding the characteristic required for the saddle, slightly different from the one produced by the company. The company is currently establishing contacts in the country for future business opportunities.

Facing the crisis: acquire a new target through social media

Some years ago, the company realized that they were too absent from the world of new equestrians however. The firm was losing market share and was not able to enter the youngest market segment. Lacking to have a younger clientele would bring the company toward an inevitable decline in the future, as soon as the current loyal customers retire. For this reason, three years ago, *Selleria Pariani* decided to go through a radical change in their marketing techniques and implement a strategy to compete more effectively in this segment.

In order to get the expertise necessary to implement a marketing strategy, *Selleria Pariani* started a partnership with two other companies in the same field, which produce clothing for horse riding. Together, they hired a person specialized in marketing. The group is based in Milan, as well as this new employee. Finding a marketing expert in such a niche field is not easy. It arises one of the needs that artisans have when searching for such a

human research- The person hired by *Selleria Pariani*, a former horse rider who has skills in marketing, especially social media, was selected specifically for his experience in the field and the ability to understand the particular needs of master craftsmen, which face different challenges than the one usual in larger realities.

The first changes focused on the use of the social media to better attract the younger rider. In order to do that, they chose to use *influencers* as mean to reach the new target. Sponsoring worldwide champions is very expensive, far too so for the budget of the company. Despite this, there are a number of lesser known champions in the horse riding world who have a good engagement and number of followers. These minor but still relevant *influencers* were accessible with the company's finances allowed *Selleria Pariani* to partner with them. Thanks to these agreements, the company raised its reputation among the younger population, bringing new customers and becoming much more relevant again.

This new and improved online presence has been paired up with a few other changes. First, the artisan decided to gain a better visibility at small and medium tournaments with a stand that displayed its products. It is a common practice in the horse riding world for a company to display its paraphernalia during contests so that before and after the ride there is the chance to visit and get in touch with potential customers.

Today social media accounts are very well taken care of as is the website. The latter has been created in partnership with the other two companies of the group. It is a professional-looking and complete website, where the history of *Selleria Pariani* is written. In the e-commerce section it is possible to purchase horse accessories and clothing. Yet it is not much in use. This is due to the fact that this the type of product is more suitable to be seen in person at the workshop or in a display after the game; therefore, ordering online is not common.

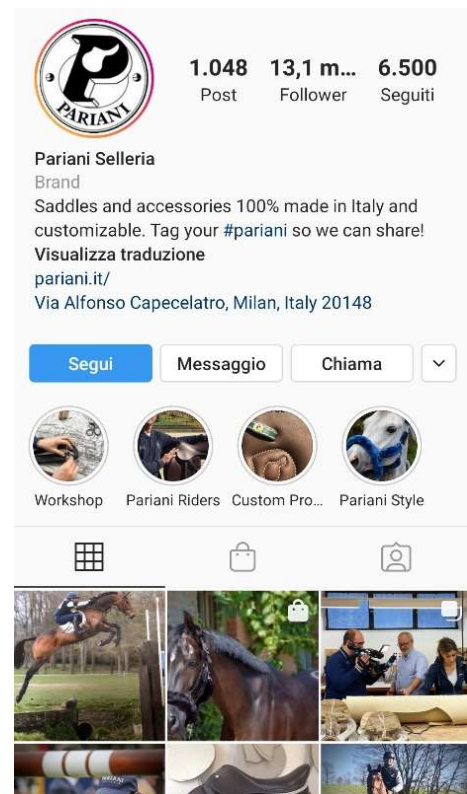


Figure 4.7 - Sellerie Pariani's Instagram

The production and selling of the product



Figure 4.8 - Artisan sewing a saddle

Selleria Pariani's sales are carried out in the workshop, which is partially used as a showroom. In there are all the products of the company, including prominently displayed saddles. The production takes place in the workshop, where there are three artisans working

entirely by hand. The company does have a certain interest in innovative technologies, especially for the production of equestrian accessories. However, the investment necessary to create a more advanced saddle production is too high for now, especially considering the low number of saddles produced. Furthermore, the fact that the saddles are handmade is one of their most appealing characteristics. As such, the innovation in the production is focused more on the material used to produce the saddle and how to model them. As with many artisans, there still interest in continuing the practice that characterised the innovative dimension of artisans along the years.

From the design side, not many changes are possible due to the technical requirements of the company's products. Despite this, the company has tried a small innovation by starting to personalize the saddle through the colour of the seams. This type of "decorative changes" is motivated by the need to attract the younger segment, especially at the exhibition stand at the events. Even within the simplicity of the detail, it has been welcomed well by the newly acquired young clientele. Of course, the product is still based on the classic artisanal characteristics of high quality materials, refinement of technical characteristic, and high expertise in the manufacturing of the product. This is especially true for saddles and bespoke ones in particular. Studying with the customer the best features for its physical persona is what includes them in the classic artisanal bespoke productions.

The selling is carried on mostly in person, using agents or inviting customer to the workshop. It is located in a strategic area for visitors. In fact, even if it is outside the city centre, it is strategically accessible but especially it is in proximity of the San Siro riding

track, located in the west side of the suburbs of the city. Milan and Lombardy region are the most active area in Italy for horse riding. Of course, this company suffers from the problem of the high cost of producing in Milan. Despite the outsider location, the cost of living in the city are raising and expanding to the suburban areas.

According to what explained in the previous chapter, there are some problems in this company due to the lack of labour. In fact, in Italy there is no school that prepare for producing handmade saddles. In Europe there is just one school (located in England and similar to a university) which is suitable to learn this craft. Training a new artisan is a long and expensive process due to time required to teach and the financial resources to invest into the new person. For this reason, hiring an apprentice is currently not part of the short terms plans.

Conclusion

An important prerequisite for the evolution of this company is the ability to understand their problems before being forced out of the market. From the prospective of a corporate marketing director or a marketing expert, the approach of *Selleria Pariani* to social media marketing can be considered elementary. However in the case of a master craftsmen (especially this small) it is outstanding. In fact, among the interviewed, *Selleria Pariani* was the only one able to open up to the potential of online marketing and social media marketing.

The choice to set up a group with other two companies in the same field proves another winning strategy. Thanks to the common funding, it is possible to invest in the correct acquisition of a new resource entitled with the necessary skills. Furthermore, choosing to hire someone close to the specific company field is not irrelevant, because it reveals a necessary strategy for artisans. The common knowledge on marketing and management earned through academic studies are just partially applicable to them. It is necessary to understand the different issues master craftsmen face compared to corporations or bigger companies, firstly the lower funding at their disposal for investments, the lack of possibility or desire to expand the production, but also a closer mind-set (i.e. toward technologies or new markets) of which artisans are sometimes guilty. Find a resource able to understand deeply the field or already close to it is a key factor.

At the end, the aesthetical interest in the product underline a peculiar feature of Italian manufacturer, that is the desire to create a product that is creative and appealing even in a very technical field. Misquoting the company, there is an advantage in being in Milan also for design and trend related influence.

4.2.2.3 *Lorenzi Milano: renovation of an historical master craftsmen*

In this paragraph, we will see another example of historical master craftsman in crisis who was able to rethink its activity and transform it in a successful company.

Lorenzi
MILANO

Lorenzi Milano was born as a cutlery in 1929 in the Montenapoleone Street area of Milan. Originally, the Lorenzi family had a retailing activity and occasionally handcrafted small pieces on behalf of other artisans. Over time the shop developed in a workshop where the artisan produced grooming accessories for men and other décor objects besides knives (glasses and platter for example). A few years ago the shop closed. The closure happened to be very noticeable for the Milanese customers, due to the historical presence and reputation of the workshop. For this reason, the owner and his family decided to open their activity again, with radical changes in the customer segment and the manufacturing system, implementing a structured strategy that allowed them to grow from five to fifteen workers (including the owners) in a few years.



Figure 4.9 - Lorenzi Milano products display

Their main product are grooming accessories and objects, focused on the male segment. These products are handmade using natural materials, which include horns, bamboo, cane and other natural hard materials. The high-level quality of the production and materials places them in the luxury market, where they characterize for a niche position due to the particular design of their products, which are made for yacht and villas. During the production phase innovative technologies are not applied. As

the handmade production is one of the most appreciated features of the company, which

helps the firm allocate in the luxury market, there is no interest in implementing new machinery.

The company produces a standard set, but most of the output is bespoke. The personalization can space from small features, like the initials of the customer and its family, to the entire product's design process developed together with the customer. Furthermore, the company produces also pieces entirely designed by interior designer or architects and sent to the company.

Changing customer segment for the grow

As said before, *Lorenzi Milano* was born as a retail shop and further developed into a small workshop in the city where the products were sold to the public. When the Lorenzi family decided to reopen the company, they changed strategy, starting a big transformation based on the know-how gained in many decades of activity. The new business opened as a B2B company. Interior designer and architecture firms form the main customer segment. Among their customers there are then online retailer (like *Net-a-Porter*), which purchase and resell their products on the platform. Changing the customer segment lead to a change in the market geography. In the past, when there was the store, the artisanal firm was well-known in the Milanese market, where most of its customer were. Now 90% of the market is foreign. The main resellers of the company locate in the USA and in China, while the architects and interior designers are mainly in Europe (especially England) and in the United States.

After the first phase, during which the focus was on setting up the business appropriately, the company administration decided to set up an e-commerce opened for the final consumer, in order to be able to test the interest in purchasing *Lorenzi Milano's* products and their potential for widening their market. After several observations, it was recorded the success of the e-commerce. Relying on this positive feedback, they decided to open again a store in the city in June 2019, as their production still captures the interest of the public.

In this case, the use of technology is limited to the commercialization stage. E-commerce platform, website and social media channels are managed by an entitled person with specific marketing skills acquired and inserted inside the company. The online

communication is continuously updated thanks to a specific investment done when the new activity was opened. As a mean of advertising, international design fair are still the main channel of contact. Therefore the company is present to Milan Design Week and Paris fair *Maison&Object*. In Milan, the events related to design (i.e. the *Design Week* and the *Fuorisalone*) are a fundamental appointment to access the worldwide market. The development of the city in the last decade allows a flux of suitable customers. For this reason, the main desire address to the city administration is to be able to communicate events more, in order to be able to attract potential new customers, but also develop awareness regarding artisans working the city.

Location in Milan

When the company opened again its activity, they moved from the old location in the centre of Milan to an outsider location in the Navigli area. The group of building where the company locates now is a former ceramic factory, which closed after the decline of manufacturing in the city. Now it has been renovated as a group of offices and activities related to design, architecture and craftsmanship. The choice for this area is then due to its historical bound but also to its inclusiveness. Many potential partners and customers work in the area. Lastly, the location allows a bigger space to create a spacious and bright showroom where clients are welcomed, while the workshop is displayed behind glass doors, making it a pleasurable visit for the customer.



Figure 4.10 - The company showroom

4.2.3 An overview of the to master craftsmen's model

In this paragraph, we will draw some general conclusions regarding master craftsmen, from the three case studies presented in the previous paragraph and the interviews to other companies (see Appendix) that participated to the research. This analysis will start with a

brief analysis of the flaws encountered in artisans' firms, based on less successful examples than the one presented. The following section will then try to propose some possible improvement master craftsmen can implement to reach the level of a successful company. These conclusions will be based on the case studies analysed and the theoretical part presented in the previous chapters, thanks to which we have insights from other successful manufacturers in Italy and in the world.

As seen in the case studies, successful artisan firms place their products in a niche luxury market, usually among an affluent and international clientele. Some common features of their products can be underlined. Firstly, the bespoke production is fundamental to satisfy the taste of consumers. Afterward, even if the production process does not involve advanced technological tools, the use of high quality raw materials and the handmade production - combined with the Made in Italy etiquette is an important reason that allows companies to place in the high-level market.

Furthermore, what allowed these companies to grow (or maintain an important role) in recent years is the ability to understand necessary changes. A first important factor to mention, common to all the three firms, is that dealing with other business as supplier instead of just selling to the final consumer, is a winning strategy, which can grant a positive revenue stream. Secondly, the companies decided to leverage on the online marketing possibilities, including social media marketing as a fundamental part of their strategy. Even if the history of the company and its longevity play an important role in maintaining the traditional customers, it is not sufficient in an open world to gather new potential customers from farthest markets and youngest consumers.

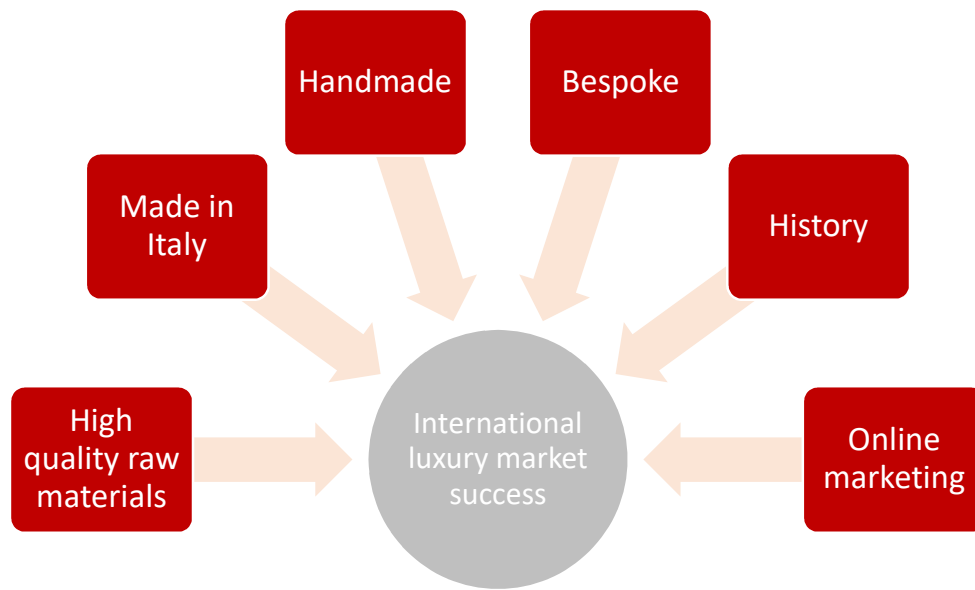


Table 4.2 - Key success factors

The flaws present in master craftsmen businesses

The master craftsmen model seems to hold an excellent know-how but be unable to fully exploit it. The major problems at the eyes of an external observer is the lack of managerial attitude. The traditional artisan firm model sees the artisan at the head of the company and a family administration, while there is no external management involved. Despite the expertise of the master craftsman in his job (the technique to produce the craft product), there is a lack of knowledge in how to run a business. This deficiency was overcome by a simpler commerce stream in the past, but it is not sufficient to succeed today. In order to overcome this problem, there are different solutions. The simpler one, where possible, is to include younger member of the family in business decision, who are usually more open minded and aware of the market changes occurred in the past decade. In fact, the companies in which a younger generation stepped by the side of the older artisan, improved in terms of business orientation and creation structured strategy.

Another smaller but significant tendency that undermine Italian artisans is the inability to create a strong network to obtain common advantages. Traditionally, artisans tend to isolate themselves and this mentality is still present. Despite this, as seen in the

example, creating groups brings more resources to the company, opening up the possibility of new strategic decision, such as common marketing campaigns.

Artisans tend to have low consideration of technologies both in production and in communication or sales.

Regarding the latter, artisans are not prone to invest in a consistent communication strategy using modern technology, i.e. online opportunities. In fact, many companies do not have a marketing role in their organigram or, if they do, it tends to be handled by one of the employees aside of his main job (the artisan work). Sometimes an external agency is entitled to design the website but there is not a continuous relationship, obtaining just a partial result. At the origin of it, there is the inability to understand the opportunities of online marketing and sales and therefore invest in it.

The use of technology in production is instead controversial, as the handmade production is one of the characteristics that place the artisans in the luxury market. Despite this, we can insert the lack of consideration the use of technology holds in artisanal firms. In fact, while most do not actually need it for their production, some companies could improve their business by implementing it or at least experimenting. The general low awareness of master craftsmen for innovative technologies can leave them behind compared to competitors. This flaw, if it is so, can be easily overcome thanks to the *Competence Centre*, the *FabLabs* and other realities well established in the city open to educate about technology, especially 4.0 technology and its opportunities.

In conclusion, master craftsmen businesses hold an important know-how but demonstrate the inability to exploit it, adapting to the evolution of today's market. The main reason for this is the lack of business mentality. The problem can be extended to a lack of financial resources due to the lower income in present times and the unwillingness to apply for funding. Moreover, the overall perception of the actor in this field is to be not supported by the public administration, due to a perceived disinterest in craftsmanship and its status, especially compared to countries like France. A direct cause for this is the high fiscal pressure on artisans, which enhance the negative perception and therefore the feeling of abandonment.

Flaw	Solution
Low managerial attitude	Younger generation intervention
Isolation tendency	Creation of a network
Lack in online marketing and sales	Marketing role in the organigram
Lack of interest in innovative technologies	FabLabs, Competence Center (Made 4.0)
Low fundings	Request for financing

Table 4.3 - How to improve the business: flaws

Business improvement: Opening up to mainstream luxury lines

After this brief analysis of the main flaws presented by artisans, we can try to propose some basic integration they can implement in their activities following the examples of successful experiences analysed and the previous literature analysis.

A typical technique followed traditionally in the high fashion industry is to introduce a popular and more affordable line besides *haute couture*, which supports the brand and creates a revenue stream while exploiting the reputation already gained by the brand. This

technique has been applied successfully by some master craftsmen. Master craftsmen still produce the same product they were producing at their birth. Even if this production is still successful, sometimes it does not create growth for a modern artisanal firm. In order to pursue a certain growth, the company should carry out studies to understand if its know-how is suitable to be exploited in order to create a line on which to invest to enlarge the market. To this solution, mass customization principles can be applied.

This is not a revolutionary path for the growth but if successful can give important results in terms of financial income. In order to succeed, the new line should focus on a different production method. The integration of technologies (industry 4.0 technologies and others) to manufacturing process can benefit in terms of fastness and volume of the outcome. At a larger scale, the integration of a CRM software brings a greater control and ability to satisfy customers' needs.

To implement this change, a company needs new financial and human resource. At first, to run an evaluation regarding the possible new exploitation of the know-how and the resources present in the company, the company can rely to external consultants, mostly coming from the university sphere. Thanks to the already developed ecosystem of the city of Milan, gather these resources should be possible. Moreover, many artisans already entertain relationships with universities and other learning and training institutions, where new talents gather every year. In the beginning, it could be useful to launch a group project with some classes in a specific institute or university, in order to collect ideas and perception from a fresher point of view.

Business improvement: creating an experience – focus on tourism

The touristic aspect of Milan is growing, drove by the attraction for the city and due to the many events that have international visibility in various fields. Among all, the two most important ones are the *Fashion Weeks* held throughout the year and the *Design Week* in spring. During these events, an international wealthy crowd is attracted to Milan for several days. At the same time, the continuous stream of businessmen that arrives during the whole year is increasing, especially from Europe.

This type of visitors are potential customers for master craftsmen. Despite this, they sometimes fail in attracting their attention. While a consistent crowd already knows the

artisans in Milan, especially the one related to the business world (suits, shirt and shoe producers), there are some problems in capturing new customers. The origin of it is the lack of a proper marketing campaign, as most of the advertisement is carried by word-of-mouth. In the light of lack of resources of master craftsmen, creating a network of Milan artisans could be a beneficial possible solution to gain visibility in the city. Milan counts on an outstanding offer regarding luxury hotels where numerous wealthy tourists in the city for business or for pleasure check in. Partnerships with the hotels can be a fast way to attract the clientele toward the workshop. Placing a window inside a hotel can result quite expensive, but worth the investment to gain visibility. At the same time, addressing these touristic possibilities requires a very integrated campaign with the cooperation between different artisans themselves, public institutions and private one, especially interested foundation or the necessary business partners.

In order to attract tourist, an artisan firm can leverage on the very popular trend of the experience created around the shopping moment, focusing on the visit of the workshop. Most of the artisans already have an obligation to do so, due to the presence of the workshop within the showroom. However, creating a structured visit allows to build a strong marketing revolving around it and transforming it in one of the signature of a workshop. Thinking forward in the future, the creation of specialized tours in partnership with luxury hotels and proper touristic agency, specialized in high-level private tours, can be an interesting attraction from a foreign tourist.

Business improvement: the importance of the online presence

As already stressed in the case studies, communicating properly the value of an artisan is fundamental. Nevertheless, most master craftsmen are not interested in approaching this dimension with more than amateur skills. For this reason, their presence results fragmented or rough.

Thinking that a website or the presence on social media is not relevant is an outdated idea, which cuts off opportunities regarding new market segments. Especially true for foreign customers, the access to the information regarding a company online validates the firm. Before that, it allows a person to find the artisan in the city and gives an important first impression of the company. Neglecting this part of the business can lead to

lose customers. In fact, in the two most successful cases analyse we see a well thought approach to social media marketing and online presence, making it a crucial piece of the growth of the company.

Mass customization	<ul style="list-style-type: none">• Mainstream product line• Integration of production technologies
Experience the workshop	<ul style="list-style-type: none">• Tourism attraction• Create network and partnerships
Online presence	<ul style="list-style-type: none">• Marketing campain• Aquire proper human resources

Table 4.4 - How to improve the business

4.3 Analysis of innovative artisans

The second section will explore the group of innovative manufacturer present in the city through two case studies. After presenting the two companies interviewed, the section will try to generalize the main characteristics of this group and compare them to the previous one. Afterwards, a discussion will be started on how a company can evolve from a manufacturing start-up to a successful manufacturer.

4.3.1 Two cases presentation

Company name	Sector	Product	Type of production	Market	Target	Clientele
Manifattura Macchine Soffici	Interior	Decorative wall panels	Bespoke Small standard production	Domestic	Medium/ high-level market	B2B
Jannelli&Volpi	Wallpaper	Wallpaper	Bespoke Standard production	International	High-level market	B2C B2B

Table 4.5 - Innovative artisans case studies

4.3.1.1 *Manifattura Macchine Soffici: the idea of a new artisan*

The firm *Manifattura Macchine Soffici* is quite recent. It was born in 2017 from five associates. The founders come from different work experiences and academic backgrounds. After a period of analysis and market studies, they decided to found the company.



Their product is a panel obtained from cellulose which is able to absorb noise. It is based on natural fibres, in particular from cotton and wood. Usually, this product is used in meeting rooms and common areas where a large number of people is usually around. The product itself is not an innovation, as many other suitable options exist, but the company is able to differentiate from the competitors for two features: materials and design. The first is a technical characteristics regarding the materials, as most of the competitors do not use the natural materials. The second one is related to the aesthetic component,

therefore the attention for the design of the product. This second dimension is so relevant for the company that is their websites the panels are advertised firstly as “decorative panels” instead of noise-absorbing panels. Nonetheless, the characteristics of *Manifattura Macchine Soffici*’s production are able to differentiate the company from its competitors and place it in a medium-high level market segment.

As the company is still young, it operates only in the domestic market, but in the future it plans for an international expansion. The customer segment includes mostly designer and architectural firms, while the product is not sold to the final consumer so far.

The product: between tradition and innovation

The product of *Manifattura Macchine Soffici* is deeply bounded with another traditional artisanal sector, the one of cellulose processing. In fact, the product is made out of the same material and follows the same manufacturing process of paper production. For this reason, the founder of the company spent some time with artisans in Fabriano, in order to learn how to appropriately work cellulose. This experience underlines the continuity from older to newer experiences in terms of manufacturing.

The manufacturing process inside the company does not imply the use of innovative technologies and most of it is handwork. As the process involves the use of natural materials (in particular cotton) obtaining certifications regarding the chain is an important part of the job of the company. There is a certain level of attention to the sustainability issue, which is particularly present in the disposal of the product once customers decide to dismiss the panel. As it is similar to a coloured papier-mâché made with virgin raw material, it is possible to melt it and use it for a new panel, especially if light colours are used. Thanks to this, the company is able to set up an after-sales service and ensure a continuous relationship with the customer.

The design relevance of the product underlines another choice of *Manifattura Macchine Soffici*. Competitors usually use plain colours or simply white for their panel. In order to differentiate, the company decided to produce panels which have an aesthetic component. The design created can space in terms of



Table 4.6 - One of the founders with two of their panels

simplicity: from a colour block combination to the actual representation of scenarios, to a Karl Lagerfeld face (hung in the showroom), it is possible to create a decorative and pop option to improve the environment. This fun and colourful creation is mostly designed internally of the company, but is also created with some external collaboration. The expansion of external collaboration will depend on the success of the product thought the years.

Therefore, we can state that the design dimension is an original trait of the company. The design used by *Manifattura Macchine Soffici* is bounded with the Italian territory and spirit, as the founder declare himself during the interview. They would not move the production and the concept outside the borders of Italy, as a product is deeply connected to the territory and Italy's strong identity.

The organizational chart is composed by the founders, who have different backgrounds and, therefore, different knowledge relevant in running the business plus the labour who works with the paper cellulose in the workshop. As one of the head of the company comes from the academic world, the bound with Milan university is particularly strong, as well as the knowledge about innovation ongoing in the manufacturing sector.

The city of Milan and the relationship with other institutions

For *Manifattura Macchine Soffici* is particularly important to get in touch with designers, who are potential partners but also customers. In this area, Milan is the best place to be. A company whose main customers are designers needs to be close to the largest pool available. In the city, not only there are many designers, but also there are

international events to participate to in order to advertise the firm. For this reason, the showroom and the offices are in the Milan urban area. The current location near the Navigli area hosts both showroom and the workshop in the same space, but the prediction of the founders see the workshop moving outside the area of Milan. If the company will be able to grow, the cost of a bigger space to produce in Milan is too high to be supported. Other industrial areas outside the city and its suburbs will be a suitable option for the company, which is willing to move the production site in case of volume increase. This statement highlights the difficulties to create a manufacturing return in the city, as stated in the analysis of the literature.

4.3.1.2 *Jannelli&Volpi: craftsmanship in a managerial prospective*

Jannelli&Volpi is a manufacturing company producing wallpaper born in 1961. The showroom is in Milan centre, while the production is located in Tribiano, due to the dimension of the factory. In the beginning, the production took place in Peschiera del Borromeo.



Afterwards, it had been moved to China, until 2008, when it was brought back to Italy, opening the new and bigger factory in Peschiera. The company accounts for 165 employees.

The company was founded in the second part of the past century, in 1961 and it is still led by the founders' family. It is an icon in the wallpaper industry. Their product places in a medium high to luxury market segment. Therefore, mass distribution brands have been rejected as potential customers. Currently, it is a contractor for important home decor brands, like *Armani Home* and *Missoni Home*. Moreover, they sell using their own brand *Jannelli&Volpi*. The company covers an international market and 90% of its turnover comes from foreign markets.

The location of the showroom in the centre of Milan is fundamental, as the city is a focal point for the design and fashion industry and the company is looking for a deeper bound with the fashion world. Regarding the design of the product, there is an internal design division. Furthermore, the company has external commission from its contractors and is very active in setting up collaborations with external designers and artists. A good example of experimentation is the CODE experiment held during the *Salone del Mobile*,

when 15 designers were invited to propose a vision for a wallpaper that the company then realized.

The production process: technique innovation

The wallpaper production process is done traditionally through rotary print and it still do. However, in the pst decades *Jannelli&Volpi* introduced an innovation: the digital print. The company was able to understand the potential of digitally printed wallpaper and decided to invest in the acquisition of the machinery and the know-how necessary to master its use in 2006. The investment did not paid off immediately due to the shift necessary from rotary to digital print, which is a completely different technique.



Table 4.7 - Jannelli&Volpi wallpaper

Now, most of the production is done through digital print. The advantages of the new method compared to the previous one are mainly two. First, digital print does not require printing in modules, which means repeating the same pattern. Second, it allows a bigger flexibility as it does not require the implementation of scale economies. Therefore, it allows to create smaller batches. Lastly, thanks to the bigger flexibility and the non-modularity, it is possible to create customized

products on the customers' requests, even in small amounts. Of course, digital print presents some disadvantages as well. The cost of the product is higher due to the cost of ink, while the production time is slower. Furthermore, the amount of labour request is not lower enough to gain a cost advantage from this side.

The introduction of digital printing brought some changes in the company. A new area entirely dedicated to the new type of production was set up. Then, as the customization became a competitive factor, a new marketing strategy revolving around it was required. The company is well presented in the social media and it gives a lot of importance to digital marketing. Furthermore, the internationalization and the possibility

of customization required the introduction of a CRM software²¹ within the company. The use of a CRM software makes it possible to satisfy the specific requests of the customers but also address problems related to the distance of foreign customers and the different time zones. The software applied was designed for fashion companies therefore it includes requests related to materials, patterns, sizes and so on. It was adapted for *Jannelli&Volpi*. During the process, the firm had an active role, working together with the software company to understand how to adapt it better to their needs. Thanks to the CRM software, the customer can now access to the database and the information regarding the product and its availability, as well as send clearer requests about what he wants.

Implementing the digital print brought ongoing changes in the company and the cooperation with the CRM software factory was one of these. In general, new suppliers have been introduced and new areas of the company created. The implementation of the software for customer relationship management was suitable for some public incentives, but the company supported the majority of the investment.

4.3.2 Analysing innovative artisans' business models

In this part, we will analyse the different features of innovative artisans comparing them with master craftsmen characteristics, in order to better understand which are the common trait and what is different among them.

²¹ A CRM (customer relationship manager) is a system able to connect sales data to customer data. The tool is used by companies to handle their relationship with the customer. It can track general content information, communication with the client, behaviour in order to segment the customers per group of behaviour and personalize conversations and offer for each customer.

4.3.2.1 Analysis in light of the differences with master craftsmen

	Master Craftsmen	Innovative Artisans
Volume	Small volumes	Big volumes
Market	International market	International market
Design	Bespoke Tradition	Bespoke Innovation and dynamism
Production technology	None	Innovative technology 4.0 technology
Communication	Traditional advertisement and fair Social media marketing Online presence	Traditional advertisement Sector fair Online marketing Engagement during events
Sales	None Platforms, E-commerce	Platforms, E-commerce CRM

Table 4.8 - Confrontation between master craftsmen and innovative artisans

The case studies show two companies in different moments of their life cycle. The first is a newly born company, which is still developing and yet already well structured, while the second one is an older company with an important history and an already built reputation. Despite this, we can recognize some common traits from which to depict a general image of what differentiate the new manufacturer from the more traditional master craftsmen. However, despite the distinction made in this analysis, many traits overlaps, creating unique hybrids, which could be classified as new artisans.

What classifies a company as a master craftsman instead of a manufacturing company is partial an attitude. Master craftsmen produce their products following ancient knowledge and applying few changes in their production process, which is mostly handmade. An innovative artisan derives its product from the tradition (in this case, Italian

artisanal tradition) but incorporates it in a business model design for an evolution toward a manufacturing company. The volume produced is different as well. While the aim of master craftsmen is to produce smaller amount of the product to maintain both the exclusivity and the handmade characteristic, the innovative artisan covers a big portion of the market. This feature reflects also the market segment of each type of company, which is both cause and consequence of it. While both the type of companies addresses a high-level market, master craftsmen place mostly in the luxury market. Lastly, the approach to design is different as well, as one revolves around a traditional and immutable design, while the other experiments more and set up collaborations with external designers and artists.

There are no structured differences in branding the product. Both the category are homogeneous in selling with their own brand or being suppliers of bigger companies. As well, there are few differences in the relationship with the customer. The need for a dialogue is differently interpreted, taking a deeper level in the case of master craftsmen due to various factors (the absence of CRM software and online orders, the long-lasting relationship with the customer and the need for physical encounters in the workshop).

Lastly, the clear difference is the approach to technology and innovation in production, sales and communication. As already said, master craftsmen exclude completely the use of technologies in the production, except for small steps done with basic machinery. Innovative artisans are aware of the type of technologies present in the market and willing to implement them in their production if beneficial. The research department is generally developed in these companies, to study materials, technologies and new production processes, which could be useful for the company. Therefore, they are more prone to the application of mass customization principles.

As regard communication and sales, innovative artisans embrace the use of online tools, creating an online marketing strategy. The more investment the company can access to, the more this side developed, culminating in the application of innovative manufacturer tools like the CRM software.

4.3.2.2 A peculiar way to communicate: events and experiences

The manufacturing of the product is usually related to a traditional Italian sector. For this reason, the companies invest in research, in order to understand better the

techniques used and the historical roots of the sector. The dialogue with the expert is able to create a sense of continuity. At the same time, the value delivered to the customer is quite innovative in the delivery itself. Social media communication and interactive events and experiments are becoming one of the most attractive trends to participate to the traditional international sector fairs. The participation to events is not limited just to sector-specific events but includes cross-sectoral events and especially cultural ones. Installations are now used by famous high fashion groups and they are expanding to smaller companies in different fields. An important example of this is the choice of *Fornasetti*, an Italian interior décor company which is focusing its communication strategy on the participation to cultural events and the installations which are a mixture of art and their artisanal production (see the event at *Fondaco dei Tedeschi* in Venice in spring-summer 2019).

Furthermore, these events focus on collaborations with designers and artists. Even if the majority of the companies have an entitle designer or design division inside their organigram, there still is a big interest for the eco of an external collaboration. Both the companies exposed in the previous paragraph used this method to create a special collection. These collaborations are many times built as special events advertised for international fairs.

In fact, in the traditional artisanal world sector fair are still used as one of the main way to find new customers. Innovative artisans and manufacturers are now focusing on the creation of something able to attract a lot of attention on them during these events, like performances and expositions. This can happen through the collaborations with the public as well, invited to participate in many forms. For example, to build a piece of an entire product during the visit; to assist to the performance of an artist decorating a product of the company during the fair; to see the demonstration of 3D printing of small samples.

The focus on these actions breaks the classic manufacturing-selling model and it is able to draw attention on a traditional artisanal production and its ability to put itself in a new light.

4.3.2.3 The presence in the city

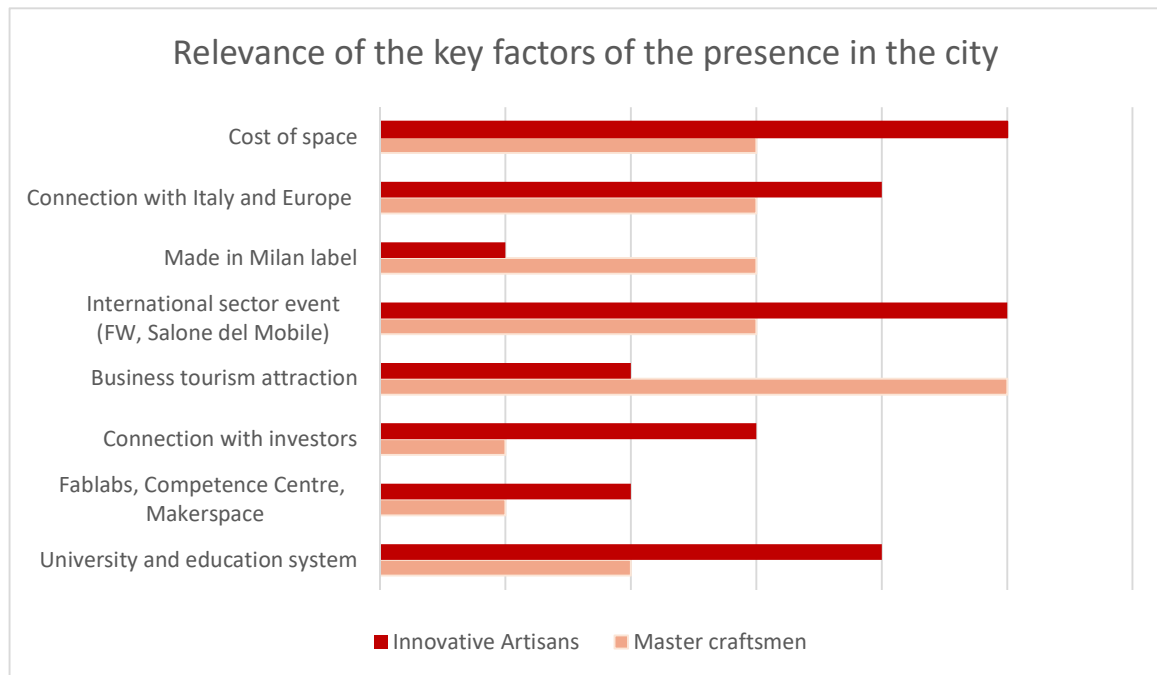


Table 4.9 - Confrontation between master craftsmen and innovative artisans: presence in the city

As stated before, Milan ecosystem is dynamic and innovative. This status is reached thanks to many factors, each of which has a different impact on the companies present in the city. This paragraph will consider each factor identified and its relevance for master craftsmen and innovative companies, drawing a comparison between the two.

The education and university seen in Milan is very active, as presented in chapter three. The major actor in the city (important private and public schools) tend to form synergy to create a better offer and attract national and international students to the city. Moreover, the research department of them attract funding and resources from foreign countries. In this research, it is particularly relevant the role of the *Politecnico di Milano*, as its professors are working in contact with the city administration to develop the *competence centre* and help the transition toward technology 4.0. In general, the presence of universities and education institution is relevant for all the actors present in the city. However, innovative artisans tend to benefit more from it, as they find human resources among graduates and students as well as external consultants, partners and potential customer. Furthermore, this dimension extends to the hybrid reality of fablabs and makerspaces, which are very relevant in other European cities and have a solid presence in

Milan as well. Despite the attraction of them for a newly born experimental company, they appear not to be as relevant for the manufacturer business activities analysed, limiting mostly to smaller and more experimental realities.

At the same time, master craftsmen would benefit more from the presence of training schools specific to learn the craft (*ITS – Istituti Tecnici Superiori*), which are not present in the city. The lack of labour they encounter is not balanced by the offer of Milan education system and they can not find support from these realities. Master craftsmen benefit more from other institution, like the public administration initiatives and private institution focused on their specific field (among all, the *Fondazione Cologni per i Maestri d'Arte*).

The second important highlight of Milan is the growing bound with visitors and tourists. While there is a growing interest in visiting the city as shopping capital for a few days, the majority of the incoming people come from business visitors and the attraction for international events held in the city. The first group is stable along the year, while there is a pick of visitors for the *Fashion Weeks* and the *Design Week* with the *Salone del Mobile* and the *Fuorisalone*. Of course, the international affluence of wealthy tourists is beneficial for both artisans and manufacturers. However, business tourists directly benefit master craftsmen the most, as they are one of their main customer segment. To attract them, the marketing measures described in the previous section should be implemented. At the same time, innovative artisans and manufacturers benefit from the international events held in the city for two reasons. First, because they have an active role in the participation to the fair. Second, because the crowd attracted and the events held during this time allows to establish new business relationships and find potential partners, suppliers and customers. However, these advantages highly depend on the field a company operates in as well as its customer segment (B2B or B2C). Therefore, for *Lorenzi Milano* the event *Salone del Mobile* holds a primary importance as it does for *Manifattura Macchine Soffici*.

The focus on Milan as attraction pole leads to the question if customers are more interested in the *Made in Milan* label than the *Made in Italy* one. The answer to this is still uncertain but, considering the link of Milan with high fashion and design, master craftsmen can benefit from the use of it. At the same time, it is not relevant form bigger manufacturing companies, whose production is spread in the Metropolitan City of Milan.

Lastly, there is an important difference in the relationship as regards the use of space of the city for innovative artisans and manufacturers compared to master craftsmen. As their production grows bigger, the workshop transforms in a factory, which cannot find space in the city. The cost of setting up a production activity in the city would be too expensive in terms of rent, or not possible as a matter of space, noise production and pollution. Therefore, the tendency is to place the showroom in the centre of Milan (or at least its urban area) while moving the production outside the city, in an industrial area. In this way, there is separation between the two dimensions, with the administrative roles and the showroom/customer welcoming area in a reachable place for clients. This underlines another difference compared to master craftsmen who own their workshop and its displays to the customer is part of the purchasing experience and a necessity as well.

After the analysis in this paragraph, we should be able to answer the question if the presence in the city is a relevant competitive factor for the two types of company analysed. As predictable, the answer is positive. The presence in the city is a discriminatory factor of success for the resources it gives access to and for the strong touristic affluence. Despite this, the high cost of the city risk to push away the production activity, which will reallocate in the smaller satellites cities, which are becoming Milan suburbs.

4.3.2.4 Which is the formula to succeed?

This section closes with some consideration regarding the formula to succeed in the market as artisans, trying to determine the critical factor for it.

At first, the use of a structured marketing strategy with a dedicated role inside the company is able to raise the awareness about the company and leads to the acquisition of new customers. Among master craftsmen who succeed, there is a strong engagement in online marketing and social media marketing, therefore a consistent investment in communication technologies.

The investment in production technologies is the means for success if a company wants to expand its production. In this case, the need is to be able to research and invest in a technology that does not compromise the crafts element appealing for customers.

The last element involved is the design and aesthetic of the product. According to the company, a strong aesthetic element is what allows placing in a high-level market and competing at an international level. The design can be traditional or innovative, but the main characteristic to maintain is an aesthetic, which maintain the Italian values of beauty.

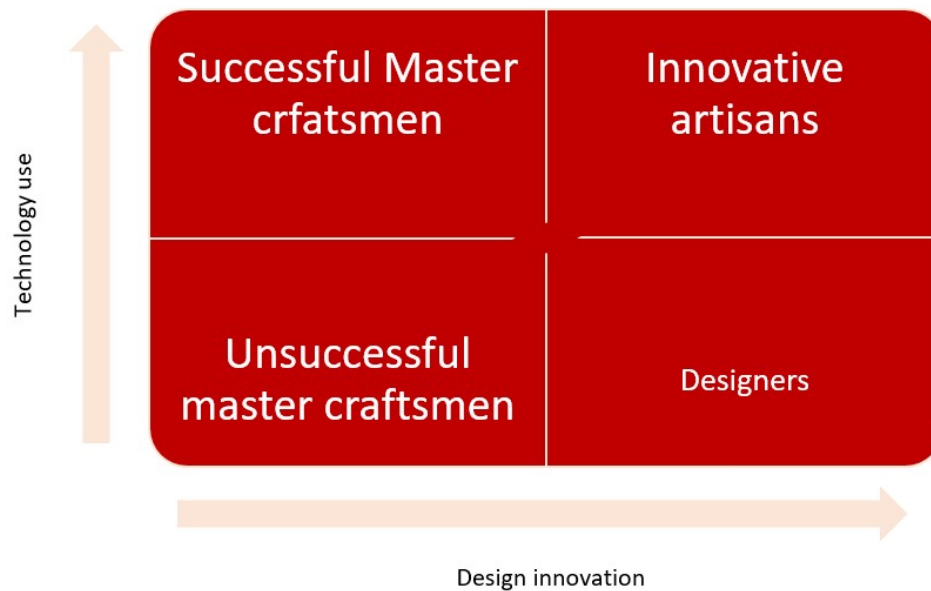


Table 4.10 - Matrix of successful combinations

In the next section, we will briefly analyse three case studies of other important realities present in Milan, start-ups and designer, and the elements of the city they benefit from, in order to be compare them with artisans and manufacturers and try to understand who has a more beneficial placement in the city.

4.4 The strategy for artisans' development

After this confrontation, it is necessary to analyse what differentiates a successful manufacturer from a not-growing one. Even if the processes for development of artisans and manufacturers are many, try to explain a strategy outline will give suggestions about the main traits to thrive.

This paragraph will summarize the main model used based both on the literature and on the observation carried out for this research. In the graph below, there is a summary presentation of the strategy discussed in this section.

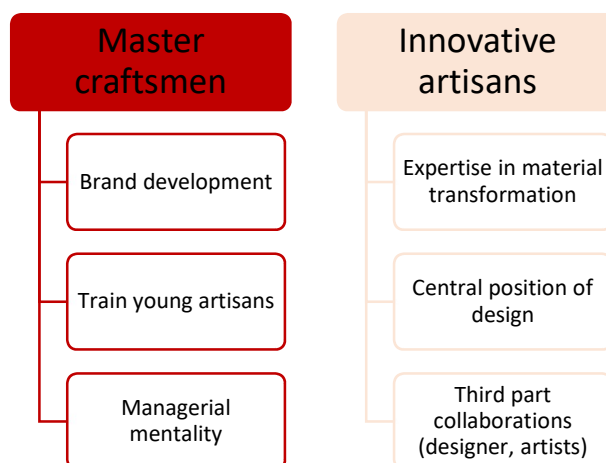


Table 4.11 - Main strategy elements for artisans' development

4.4.1 The evolution of a master craftsmen toward a brand

The development of artisans is primarily based on the high level of labour and the quality of materials used, both characteristics that enable to place in the luxury market. This is especially evident in the fashion accessory industry (leather accessories, shoes, partially jewellery), where the material used and the craftsmanship holds a prestigious reputation on the international market. However, equally important is the awareness created among consumers by a brand and the reputation along with it, which enables small artisans to be appreciated in the international market and especially in new markets.

As the fashion accessory industry is such an explicit case as regard brand reputation, the case of *Leu Locati*, presented in the previous sections of this chapter, is a suitable example to discuss the possible evolution of a master craftsman, especially if compared with a similar, yet differently structured, artisan company. Despite the international high-calibre personalities customer of *Leu Locati*, the company does not hold the same awareness as many other brands, even if they have a similar expertise and taste. One of the best examples is Fontana Milano 1915, an artisan company born in Florence, which moved to Milan in the early years of its activity. Their main product is a classic-style, refined bag for women and the firm produces as independent brand as well as third part supplier

for luxury fashion companies. They produce 850,000 pieces per year, majority of them intended for other firms.

The similarities of the two companies in the expertise and the type of production, as well as the customer structure (both B2B and B2C), are evident from the first analysis, but so are the differences. Firstly, their dimension is very different, as Fontana Milano 1915 counts almost 300 employees compared to the 26 of *Leu Locati*. The differences are also in revenues and number of pieces produces, so that Fontana Milano 1915 can be defined as “industrial craftsmanship”, while *Leu Locati* is classified as master craftsmen.

The next two brief sections will underline two main characteristics which determined the evolution of one artisan to a managerial-structured company. These features, which are the fundamental change to implement in order to grow, are, as underline in the following graph, building a brand, adopt a managerially-oriented mentality and be able to hire and train more labour force, especially younger generations. Instead of comparing the two companies, the discussion in the next section will generalize the observations.

4.4.1.1 Hiring a manager and building a brand: mentality change from the traditional control model

A fundamental difference between the two companies is the management style. As proved by the case of Fontana Milano 1915, an external, business-driven manager is more effective for the growth of a company over time, compared to the traditional artisan mentality, which is mostly focused on the actual craft of the product and manages a small business in a rather flat form. A managerial approach to the production is not part of the core expertise of the head of the company, who thus needs an external person or even a younger member of the family to advise him on the topic. Nevertheless, the core of this transformation is the ability to either see the need for change from the head of the company (as happened in many artisans’ firms), or be able to step back, trusting a third person whose expertise is closer to the managerial development of a small business.

As regard the brand, Fontana Milano 1915 is a good example for a master craftsman evolution. Its name is well-known to the public, thanks to the marketing campaigns that are launched by the company through newspapers advertisement with a relevant amount of pages and controversial messages; shooting with famous models; and lastly, the focus

on the bound with artistic craft and the city of Milan (the role of the city in advertisement will be better discussed in Section 4.5 of this chapter). Developing an independent brand is essential to compete in a market where most of the attention is captured by labels of main luxury brands. Many cases of artistic crafts can be referred as example, not just in the leather accessory industry, where the obvious comparison is the Hermes brand, its expertise and the value of their products. In the jewellery industry, the same phenomenon occurs. While the techniques used to produce from a brand like Cartier are at the same level if not lower than a jewellery artisan, the former has a huge market value and turnover based on the brand and its reputation, while a jewellery artisan who does not create a brand is unable to generate the same development²².

Generalizing, the mistake of artisans tends to be remaining anchored to the past glory and not taking into account the differences of the market today. While in the past, in the period when most artisans were active, the value of a piece (being it clothing, accessories, shoes, but also carpet and furniture) was mostly linked to its quality and its taste, while the fashion tendency were less widespread than today. At the same time, most of the customers were in Italy, while now the pool of possible customers is global due to the movements of wealth. The value of a brand is nowadays much larger and, while real luxury tends to be exclusive, to grow it is necessary to invest in a reputation and marketing strategy appropriate to reach consumers in different countries, who may not be well aware of the differences between Italian compared to France craft if it is not properly displayed.

Social media marketing: a way to reach a new customer segment

As seen in the case of *Selleria Pariani*, investing in a marketing strategy is essential to escape the standstill phase. Developing a proper social media strategy allows the brand to enter a new market segment and break down barriers for new markets, exploring an international presence. However, as already clarified, the turning point is the choice of an expert close to the field of the artisan, who therefore able to understand the needs of the company, the differences compared to bigger companies marketing strategy and the

²² Among the interviews for this research, this sector has been briefly analyzed as well thanks to the interview to *Gioiellerie Merzaghi* (see Appendix) and an interview to Franco Cologni, founder of the *Fondazione Cologni per i Maestri d'Arte*, who collaborated for several years with the *Cartier* brand, which gave him the impulse for building an institution to protect artistic crafts.

product and customer segment. Being him an external presence which already has insights on the market, this figure can create an important innovation strategy for the company. During the research, it emerged more time the problem of master craftsmen in interacting with specialized web agency and advertising agencies, as they are not fully able to understand a sector that is slightly different and more complicated than a general manufacturing company with an aim for development. Moreover, many artisans still tend to underestimate the importance of a structured marketing strategy and how it can be a game changer in the path for growth, leaving the duties to occasional interventions of an employee, whose job is unrelated to marketing.

Developing a brand is also a matter of brand advertisement, which must be carried on by a properly prepared person, not as some amateur experiment, which gives a very irrelevant or unprofessional image. To close, the quality of the product and the expertise involved are fundamental, but part of their value is wasted if not adequately advertised.

4.4.1.2 Training new artisans inside the company

Despite the turnover that is possible to build from selling to the public is relevant and based on the brand, producing for third parts is still a not indifferent source of income to survive as a small company. However, being a supplier requires the capacity to produce larger volumes, which can be reached in two ways: integrating machinery and/or hiring new labour. As this paragraph concentrates on the transformation of a master craftsmen in a small artisan company, the second option is now considered, while the first one will be discussed in the following section.

Investing in new labour forces is expensive and when a low number of artisans is available, the task of training new people is can be a bother and take time (and therefore money) away from the production. Despite this, investing in new labour forces in craft and manufacturing is essential to grow and produce a number of pieces sufficient to satisfy the demand. Young artisans, model makers, cutters, depending on the type of production the company is involved in, are an excellent asset for the company, which allows the company to enlarge the volume of production maintaining the same level of quality and the artisanal features.

Furthermore, as indirect advantages, hiring new, younger resources can present a positive effect on the company due to the freshness of opinions and the general positive and encouraging climate that creates. Working with younger generations can also give insights on the market, discover new talents and new approaches if the company management is able to open to the contribution of the most talented employees.

The lack of suitable schools where to learn crafts expresses here the problems. First, young people may not be aware of the choice if they are not in some ways already bounded with the sector through the family or the area of origin. Second, most important in this discussion, is that is difficult to find people willing to learn and artisans willing to teach. A company that wants new highly specialized labour forces has to invest on them on its own through apprenticeship. The lack of specialized schools expresses here all the harms that this cause, in a country where manufacturing is still very important for the economy. In this frame, the work of Fondazione cologne per I Maestri d'Arte, as an example, is very appreciated, as they are able to find young people and put them in contact with artisans. Even if apprenticeship is the traditional way to train a person in craftsmanship, the large number of rules that reduce the flexibility of the method requires a bigger investment by the artisan and for this reason, many artisans chose not to invest in new labour force, even when necessary.

4.4.2 The evolution of a manufacturing start-up toward a managerial approach

While the previous section focused on the transformation of a pure craftsman into a successful artisan-based company, this one will go along the category of the more innovative Italian artisans and manufacturers, who, even if preserving their artisan spirit, can leverage on other characteristics to grow. In particular, this section is based on the successful example of *Jannelli&Volpi*, which was able to evolve thanks to two main factors: the design behind the product and the technology innovation implemented in the production. In order to discuss these two factors and how they are essential for new Italian manufacturers, the case of *Manifattura Macchine Soffici* is kept in mind as a new manufacturing start-up related to the craftsmanship world, which is able to leverage on the same two features. The elements detected in the successful case of *Jannelli&Volpi* confirm the literature explored in the first part: a deep analysis and application of relevant

technologies for the business and a cleaver use of the design element, which is a peculiar characteristic of Made in Italy and expression for Italian taste and expertise.

4.4.2.1 *The designer spirit: a competitive advantage for Italian manufacturers*

For Italian companies, compete on volumes in the current state can be harmful, due to the general lack of multinational corporations and large manufacturers in the country, especially compared to the Asian giants. However, Italian businesses are able to compete on the value of beauty, quality and originality of their production, placing in niche markets, in which the demand cannot be satisfy by mass production. In this frame, the design is an essential component of the appeal. The element is not approached just in most obvious sectors, like fashion and furniture, but also in less predictable ones²³.

In fact, there are sectors in which design is not considered relevant yet. While at first glance the irrelevance of product's design in a product's category might look like a weakness, it can instead be exploited as a differentiation opportunity for an Italian company, allowing it to conquer a niche market or be a game changer in the sector.

In the case of *Jannelli&Volpi*, the company was able to grow a reputation in its sixty years of activity, but after the 1970s-1980s the wallpaper field was in decline. Despite this, the management was able to develop and thrive in its sector, creating a respectable and extremely well-known brand. To do so, they engage in an excellent design, which transformed the wallpaper into a luxurious, decorative product. Also *Manifattura Macchine Soffici* has the same attention to the design of the product, where it expresses the Italian expertise and is able to distinguish from competitors. In fact, there are other companies that do the same type of product using natural fibres, but just a few add an aesthetic developed feature, related to the origin and influences of the company.

Engaging in product design differentiates fundamentally the competitive chances in the international market and, even if they require commitment and research, it appears naturally innate of the Italian mindset.

²³ On this topic, the example of *Ca' Foscari University* Professor Tiziano Vescovi is particularly expressive, referring to the elegance (which is equivalent to what this thesis refers as design) of the *Irsap* heaters, product of a Veneto company which was able to implement an aesthetic element into a common and not usually fancy house accessory.

Engaging in external designer collaborations

We can question if the design function is better internal or external, but the answer is hybrid. The research conducted for this thesis shows a pattern in the collaboration with external designers. The companies prefer to have an internal designer or a design department, if the company structure is more developed. This role is able to understand the essence of the company and propose the general line to follow for the company aesthetic. It is entitled to research for innovations and inspirations and study consumers' tastes. They develop the product design according to the owner's vision and there is a close collaboration that looks much on the tradition of the company as well.

With the development of the business, collaborations with external designers are common and they prove success in creating an engaging product, from something new and attractive, to a reinterpretation of the tradition. This type of collaboration intervenes in a more mature phase of the company if the collaboration is with internationally important people, while a start-up manufacturing company should focus in creating synergies with smaller, local designers and artists, as well as experiment in collaboration with universities' students, which can be more financially sustainable and create brand awareness in the possible partners and buyers of the future.

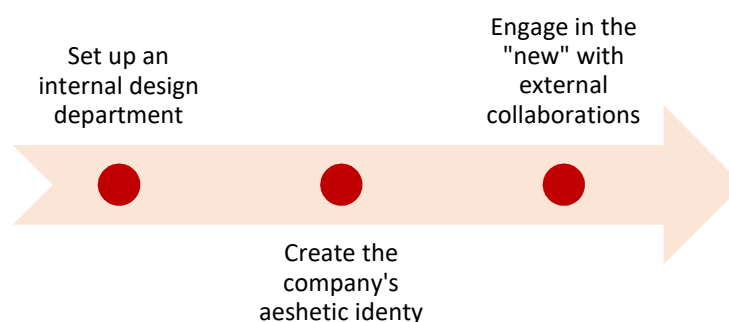


Table 4.12 - The integration of designers

4.4.2.2 Investing in technology for innovative production and design

Is technology essential? The answer is tough and it strictly depends on the sector involved. It is true that it is not possible to reach high numbers without technology in manufacturing, but the Italian manufacturing model is not necessarily based on high numbers. However, if successful, a firm eventually grows and will need to be able to

respond quickly and effectively to the customers' orders. This is the common path of manufacturing companies that develop into proper industries.

Nevertheless, the implementation of technological solutions can serve other important purposes. First, it can benefit the product in terms of quality. Second and most relevant in this discussion, it allows experimentations with the product's design and materials not possible otherwise.

Therefore, the research for the right technology to introduce in the manufacturing process, instead of solely focus on finding the most efficient solution in terms of productivity, the research can focus on adopting a technology that enables to create a better product or, especially, an innovative product. Clearly, this investment cannot pay off immediately, as it happened in the case of *Jannelli&Volpi* and the adoption of digital print. With time and persistency, the company was repaid and it was able to place ahead of competitors. The new product available is more suitable to respond to market changes occurring with time, while the use of technology does not change the level of excellence and the artisan spirit beyond the production.

For an external consultant, it is now impossible to know which technology is the right one to invest in to improve a production, but a deep analysis with an expert can enable to evaluate if there is an advantageous technology to adopt and at which phase of the production. For example, in the case of *Manifattura Macchine Soffici*, the company is already conscious about the existing technologies, but right now it is not interested in their introduction, keeping the production entirely handmade. However, they do not present a close mindset toward technological advancement, due to the youth of the company, the experience of the founders and their professional backgrounds. If the company is able to grow in the future, a proper study of the suitable solution will be needed in order to proceed further.

As argued by some interviewed artisans, there is the possibility to outsource the use of technology, finding third part suppliers for it. However, the successful examples analysed in this research and in the literature show that the technology has been studied and adopted inside the company, as this solution allows to better understand the peculiar needs of the company and integrate the technology in order to develop the proper formula.

Outsourcing parts of the production is possible for standard steps of the process, while the complete integration of innovative technological solutions leads to create a personal and unique formula, which reflects to the uniqueness of the product and its spirit.

Lastly, the part of technology which does not regard the physical production of the company but also the relationship with the market is fundamental to compete at international level as well. As seen in the *Jannelli&Volpi* case, the use of a CRM software allows to reach an international market and establish proper relationships with customers all over the world, overcoming problems related to time zones, availability for meeting and travel costs.

5 THE ROLE OF THE CITY AND THE POLICIES FOR INNOVATION

The chapter about urban manufacturing presented different reasons to support the return of manufacturing companies in cities, explaining in the meantime the difficulties that could be encountered during the process. Looking at the specific case of Milan and the type of companies present, this section will discuss the suitability of the city as ecosystem for the growth of manufacturing enterprises and artisans. In other words, this section wants to answer to the question: does a manufacturer need to be in Milan to implement the growth just explained in the previous section?

Different factors influence the decision. As from the literature, among them there are the skills availability in the city, the tourism attraction of a city and the overall advanced urban system. The literature tends to focus on the advantages for the city in manufacturers' comeback, listing the development of its resilience and the inequality overcoming, but this section will focus on the reasons why a manufacturer or an artisan needs to be in Milan and what advantages can it gain from the already existing system for its own growth. Even if the city is considered a more advanced, and therefore more competitive, area, Milan strongly links with multinational companies and service companies, especially as insurance and finance, attracting mostly jobs in these two categories for young people. Moreover, as a city, it presents some flaws that may harm the activity of manufacturers there.

However, as this section will prove, there is a general positive feeling toward Milan. During the interviews for this research, the sentiment of appreciation for Milan has been many times expressed stating that *"Milan is the only European city in Italy"*.

5.1 Milan's talent pool for manufacturing, design and communication

5.1.1 Is it difficult to find specialized labour force in the city?

As main roles necessary to develop, manufacturers and artisans need specialized labour. Therefore, the first question is if in Milan there is specialized labour force suitable

both for innovation-related manufacturing jobs and artisans' jobs. As regards the most traditional categories, finding highly specialized labour is not easy due to the lack of schools and training programs. In Milan's specific case, there are not many educational institutes able to satisfy the demand. Many schools are in different territories than Lombardy, near traditional districts for the specific craft they teach (like the *Politecnico Calzaturiero* near Padua, related to the Riviera del Brenta shoe district), therefore talents need to be attracted from that territory to Milan.

If questioning why a company does not move to its suitable territory, the obvious answer is market dictated. These areas are not nearly as attractive as Milan. Not just private customers who go there for work and tourism and stop for shopping, but also companies customers would have more difficulties to reach the artisan and entertain relationships with them.

At the same time, Milan's area offers a good proposal for new manufacturing techniques, which are studied and taught in university and available in the many makerspaces and fablabs. Because of that, experimenting, finding consultants and access to technology is easier. Still, the type of highly skilled innovative labour of which articles and scholars talk about is not very present in Italy in general, therefore, this is not a strict factor that determines the presence in Milan or not.

5.1.2 External consultant for innovative artisans and design roles

Artisans and manufacturers who want to develop their business toward a managerial level do not need just labour, but also other professional profiles, among which there are designers, both to hire or to set up freelance agreements, and marketing and managerial figures to introduce in the company.

As regards the first, Milan is a suitable pool to find the right skills. The design scene in the city is central and there are different universities that prepare for the job (among all, the *Politecnico di Milano* is very involved in cutting-edge design and Industry 4.0 technology). Moreover, designer firms tend to concentrate in Milan, as many international artists and artisans are connected to the environment there due also to the importance of *Salone del Mobile*. Thanks to the wide variety of the offer and the different styles available,

the Milan pool of talents in the design department is wide enough to represent a competitive advantage in positioning in the city.

Furthermore, it is now well-known that in Italy, Milan is in a leading position for economics, management, marketing and financial studies due to a high-level reputation able to compete in the European market. It is therefore easier to access profiles in the consulting and marketing area, as already stated in the literature review. Despite this, there are some downsides to take into account. Depending on the activity, master craftsmen may need a specific marketing profile to suit their company. During the research, many master craftsmen said that, even if they had an agreement with web agencies, abundant in the city, these agencies were not able to fully understand a craftsman's world and how to express it, tending to standardize the company in the classic *Made in Italy* narrative. However, the most successful path seems to be to find someone that has close look or insight on the specific sector, which is not linked to the city or a school and education institution as much as the sector's areas of attraction.

Lastly, to implement a focused transformation toward a managerial approach to craftsmanship and create a successful manufacturing company, there are different paths. The first is to have the ability to do it from themselves, meaning the ownership of the company is able to understand the need for change, look at the possible improvements, start researching and gather the resources to implement the change. However, a company may not know how to approach a managerial prospective, due to the different experiences and the lack of knowledge about it. For this reason, the use of an external consultant can be a very effective strategy. Consulting is a wide and diversified field, from the more generalist consultancy carried out by large companies bestow to corporations, to smaller, sector-specific consultancy (for example, consultancy for *Made in Italy* products from the agro-food sector). Milan offers a wide market for consultancy, but the tendency for both management and consultant education is to focus on medium-large to multinational enterprises. For this reason, find the most suitable alternative for a small manufacturer or artisan, who is a person able to understand the different needs of such companies, may not be as easy in Milan. The focus of the biggest universities is addressed to international big corporations, while the local manufacturers can be better understood by other profiles,

which can allocate in other productive areas of Italy, determining Milan not as the best place to offer these skills at the moment.

However, even if field specific talents and suitable skills are not already in the city, it is easier to attract them to Milan, especially younger generations, due to the appeal of the lifestyle of a dynamic metropolitan area and the different career possibilities bounded with the orientation toward innovation and creativity. Therefore, even if Milan does not entirely satisfy the need for resources in the current moment, it is the best place for a company to place and search for professional profiles to attract there.

Fablabs, Makerspace and competence centre

As a topic touched by experts and the academic literature, a quick word to comment the phenomenon of all the spaces that are present to help artisans, small manufacturers, new entrepreneurs and others to approach new technologies, especially 4.0 technologies and software for design. These centres are quite popular in the city, thanks to the international contaminations, the high quality of universities and research institutions and the general interest due to the wide number of start-ups and experimentations carried out in the city.

From the observations, the artisans and manufacturers interviewed do not seem interested in these realities and tend to carry out their research by themselves or interacting with university professors and researchers. However, the institutions can present the advantage of forming possible external consultant and they can be a good place to collect the right information. Moreover, their future development can be oriented toward artisan-based activities if the sector will express interest for that. Even if they are not a determinant factor to decide if the city offers more advantages than other parts of Italy (and *fablabs*, *incubators*, *makerspaces* are present in all the main productive area of the country), they add value to the already wide offer of skills present in Milan.

Attracting talents to Milan

Even if some of the human resources described in this section are not present in the city as much, Milan has a high attraction rate. Hence, it is not difficult to convince a young worker to move to the city and, at the same time, talents are already present in the city because they decided to move there regardless their current working situation.

Metropolitan areas are highly attractive not just for career opportunities, but for their lifestyle as well. While other productive regions offer jobs, Milan (as many other cities in the world) offers also a wider choice in terms of leisure. This feature enables a company to captivate people there. It goes without saying that, due to the higher cost of life, the salary necessary has to be adequate as well, reflecting on the cost of a company in acquiring new human resources.

5.2 The flow of people to Milan

From the analysis of the advantages of a city, especially to master craftsmen, it is clear that the touristic attraction is an important added value to the city. However, when talking about touristic attraction, the focus is mostly not on the average tourist but the group of business tourists that arrives in the city for specific events or meetings and has both the purchase power and the culture necessary for this type of purchases. Moreover, Milan is a relevant hub for art, culture and fashion trends, which benefits in many ways the crafts scene. A company that decides to move to the city benefits from the vibrant atmosphere for inspirations, for collaboration and for the international attraction of it.

5.2.1 Made in Milan: a label that can overshadow Made in Italy?

For master craftsmen in particular, maintaining the presence in the city is an expression of prestige, accessibility to a culturally elevated scene and thus customers. In order to enhance the value of the city, leverage on its reputation and elevate it among the main European metropolises, Milan public administration is considering the chance to launch the label *Made in Milan*, already informally used by different companies.

The use of a city-related label enhances the already ongoing phenomenon of city's hegemony in a country, in which the value tends to centralize in the city and its region, leaving the rest of the country less able to compete for talents, funds and attractiveness.

The use of the label will help master craftsmen to capitalize and benefit from an already mainstream reputation and enlarge the market segment. However, there is the risk of harming every other production which is from other Italian districts. Moreover, while for example, Paris is already working with its own brand as it holds a prestigious reputation

linked to the luxury world, Milan is mostly connected to the fashion world internationally, risking to cut off every other field from the common imaginary.

5.3 Benefits and downsides of Milan and how to overcome them

5.3.1 Facing Europe: connection inside and outside the city

Positioning in Milan is advantageous also due to the optimum connections with the rest of Italy and Europe. This characteristic has been underlined as important by almost all the interviewees, both artisans and start-ups, who recognize the necessity of being in the city for the well working urban and interurban connections. Urban infrastructures are developing very fast in order to be able to efficiently cope with the raising number of inhabitants and the upcoming events. Moreover, the expansion of public transportation to the suburbs areas creates even more the perception of a unique metropolitan area.

Thanks to its physical position, Milan is closer to the rest of Europe than the other Italian cities, which tend to be further to reach. From the city, it is easy to travel abroad using different transportation methods, from airplanes to trains. Even if at a first glance it may look like, this is not a marginal characteristic because, as for entrepreneurs, managers or consultants is easier to reach the city quickly, it is easier for foreigners to visit as well. Once in the city, as underlined during many interviews, reaching a specific showroom or workshop is quite comfortable.

5.3.2 Rent, cost of living and production outside the city

Despite these advantages, the inner city presents a major problem, especially for new activities: the cost of life and the cost of real estates, both in terms of rent and purchase. The first harms companies due both to the budget necessary to live in Milan as well as the higher salary standards needed to recruit resources. Due to it, engaging in an apprenticeship with an aspirant artisan is less affordable compared to the past. The second, related to the cost of rent, is the main problem for a start-up or for a manufacturer that wants to grow. Acquiring space is many times too expensive to maintain the production in the centre.

Milan is growing and it offers many spaces for rent to small companies, especially designers and small manufacturers, like the one where *Manifattura Macchine Soffici* or *Lorenzi Milano* are located. Mostly, they are ex-factories renewed to be suitable for smaller activities, located in the marginal districts of the city (like the Navigli area). They are suitable for whom has a small production and needs a space for showroom and workshop to display. These kind of organisation offers advantages thanks to sharing the building with others, like sharing the cost of a security service 24h or taking advantage of the business connections that creates inside the area. However, the growth of production requires a bigger space which cannot be found easily in the urban perimeter. Aligned with the debate of scholars about land conversion and destination, it is not possible now to change land destination within Milan to convert land for manufacturing enterprises. Therefore, a company that wants to grow tends to move outside the city, to one of the many towns that are just part of Milan metropolitan area (like the Peschiera del Borromeo factory of *Jannelli&Volpi*), while maintain the showroom in a suitable area inside the city. Thanks to this technique, the production is able to expand in a territory that allows it. The debate of land conversion in the academic literature is therefore correct in the sense that if public administrations wish to focus of manufacturing comeback, they need to seriously consider if the territory is suitable for this choice.

As a conclusion to this section, it is clear that the choice of Milan is the most suitable for pursuing development. The problems that arise from the city can be overcome and the wide presence of financial institutes make the financing process smoother. Moreover, the city has much more access to investors and events where to meet potential partners. The ecosystem of Milan is currently and will be in the future suitable to welcome manufacturing companies as well, not just services start-ups and other financial, insurance and real estate institutions.

5.4 Conclusion

Urban manufacturing is a complicated phenomenon and its newness makes it not easy to analyse from both the academic and research point of view. Future researches will probably try to develop an index to understand if the location in or close to a city are advantageous compared to the countryside. However, as presented in this paper,

manufacturing has positive consequences in placing its activity in the city and everyday observations confirm so. For Italy, the power of Milan in catalysing resources, foreign investments and growth is evident from everyday news, even if other Italian areas are trying to compete. The city can have a very positive effect on the country, driving its economy to a better situation but also creating good vibes and a spirit of hope for Italy.

The intervention of public administration has a central focus in the topic of urban manufacturing, due to the necessity of urban planning to modify the tendency of cities to focus on services and finance. On the other hand, public administration tends to acknowledge the trend of craftsmanship and manufacturing in the city and its surrounding area, while the phenomenon already naturally arose. After a studying phase, the city administration intervenes in order to support it, as positive effect have already been acknowledged in the world. In the specific case of Milan, the city administration is being very active. Nonetheless, it is facing major problems due to rules and funding for appropriate initiatives, as well as the problematic issue of state versus regional versus urban competences. In this sense, the comeback of manufacturing toward a city has a political relevance as well, which is currently underestimated in the political scene. Due to the narrower space for manoeuvre of Milan city hall compared to Paris or New York, it is difficult to pursue the same goals. In Italy, there are many restrictions to public-private agreements for funding compared to these cities, which harms the possibility for a bigger intervention. The risk is to have a good disposable potential and not be able to exploit it due to bureaucratic reasons. This topic is very delicate also in the sense that Milan grows and can compete in a different category compared to the rest of Italy. Therefore, the natural request and reaction is the desire to grant more power to the city. Even if at a first glance this idea may look appealing, the risk to centralize all the funds, talent and power to just a region can ideally lower the value of other actives and productive areas of Italy, which would be driven to be the periphery of Milan. In this frame, the label *Made in Milan* it's a clear expression. However, it has a positive value, as it expresses a real interest for artistic crafts, which is partially overshadow by big fashion companies, but also, in the policy, by the interest to innovative, cutting-edge manufacturing, which can benefit from it too.

Artisans: to protect or do develop?

During this research, most of the artisans interviewed were classified as artistic craft or master craftsmen. Their creations are a deep journey into beauty and a level of expertise that not only is not common anymore, but it is not as appreciated as in the past too. However, among them, there are cases of artisans able to become aware of the change, understanding that society would not have been the same anymore, as their customers with it. While interviewed, both a jewellery maker and an embroidery artisan (*Gioiellerie Merzaghi* and *Pino Grasso Ricami*) both recalled the time in which in Milanese women used to go out for dinner and evening events with beautiful *parure*, cocktail dresses, gloves and hats. In this society, a master craftsman was the centre of the shopping experience, a real luxury that is nowadays much more niche.

A flaw of many artisans is to be still attached to these memories and look with melancholy to them, which is understandable from a human and personal point of view. However, this mentality drives them toward an incredible loss. Two are the ways possible. Their activity can barely survive or be bankrupt and disappear, as happened already to many. Otherwise they can be protected, risking to be transformed in a touristic attraction or a museum piece.

For this reason, a path toward transformation and development is the desirable destination for a master craftsman. Understanding and accepting the need for this change is not easy in the beginning, not just for the sentimental reasons just listed but also for pure disorientation toward the right steps to make. For this reason, specific skills of a consultant expert in the area of development of *Made in Italy* is a suitable option and an interesting career path for management studies. In this era, approximation is not an option anymore, as well as using word-of-mouth communication is much more irrelevant than in the past. Taking managerial oriented decisions pays off, as seen in the case analysis. Among them, a serious consideration of investments in technology and young labour forces means advancement, as well as positive impact on the society.

However, this does not mean that an artisan has to lose its deepest characteristic. The artisan spirit is an intrinsic value for a manufacturer, expressed in many forms. Maintaining the bespoke characteristic of the production is still essential for the

development, as well as preserving the elegance of the product and the Italian spirit of design that differentiates from competitors is one of the strongest asset available. Likewise, the handmade production, if possible, is advantageous and can lead to a great appreciation, but the integration of technology in production should not be demonized. Lastly, transmitting the knowledge and leaving space to the younger generations is generally very positive for the company. On the social level, the exchange of values that incurs in the younger-older artisan training scenario has a big value and impact on society, teaching the appreciation and the tradition while enhancing the continuity of a craft.

Italy has in itself beauty and expertise that enable to keep being present in the world in a more modern and appreciated way. It is necessary to understand that this is not a fight of modernity against tradition, but a continuous passage from one to the other. Like in the example of *Manifattura Macchine Soffici*, which studied from paper master craftsmen in Fabriano and went back to Milan enriched of a deeper expertise, every company has to remember that there is someone to learn and someone to teach to, to ensure that centuries of expertise will not vanish.

Lastly, many themes are not extensively discussed in this theses, but they are a matter of interest for scholars and worth to be studied. Among them, the theme of the lack of knowledge and skills regarding both traditional and innovative manufacturing, which is object of intensive studies in the country, as well as the touristic approach to artisans, both as a cultural and responsible touristic attraction and as to deeper investigate the bound between tourism and artisan companies' turnover. These, as other researches are delegated to future studies.

Appendix

In this appendix there will be all the materials used for the research, including the interview structure and the companies participating. As the interviews were done in Italian, they will be reported in this language.

Interview questions

The following are the questions used for the qualitative interviews for this research. These questions have been agreed during the preparation phase based on previous works and the preliminary researches. These questions were just a track to follow during the interview. It is divided based on the approach to technology to explore the division between master craftsmen and innovative artisans.

- 1) Può descrivere brevemente l'attività dell'impresa, i suoi prodotti e il mercato di riferimento?
- 2) Quali sono le tecnologie digitali che la sua azienda ha adottato e quali le più influenti?
(Spunti: e-commerce, siti web, social media, ERP, SCM, CRM)
- 3) Potrebbe cortesemente indicare quali tecnologie dell'Industria 4.0 sono state adottate dalla sua azienda?
- 4) Quali sono le motivazioni che vi hanno spinto ad investire nella/e tecnologia/e Industria 4.0? *(Spunti per stimolare la risposta: richiesta di un nuovo servizio/prodotto da parte di un cliente, essere più veloci sul mercato, curiosità, imitazione dei competitor)*
- 5) Quali risultati avete ottenuto dall'utilizzo della/e tecnologia/e Industria 4.0?

Nel caso di risposta negativa chiedere quali siano le ragioni della mancanza di risultati.

- 6) L'introduzione delle tecnologie Industria 4.0 ha comportato dei cambiamenti organizzativi interni?

- 7) Quanto sono importanti le competenze interne per l'adozione delle tecnologie 4.0?
- 8) Come viene gestita l'innovazione all'interno dell'impresa?
- 9) L'introduzione delle tecnologie Industria 4.0 ha comportato cambiamenti nella gestione delle relazioni con i propri fornitori e con la filiera in generale?
- 10) In che modo gli investimenti pregressi in ICT (*software gestionale, sito web, social media, e-commerce, ecc.*) si sono rivelati importanti per sfruttare il potenziale delle tecnologie Industria 4.0?
- 11) Gli investimenti in tecnologie Industria 4.0 hanno modificato il vostro modello di business?
- 12) L'azienda ha usufruito o perlomeno fatto richiesta degli incentivi governativi (e/o regionali), o intende richiederli?
- 13) Cosa si aspetta dal Competence Center del *Politecnico di Milano* e in generale dalle politiche pubbliche?
- 14) L'azienda ha spostato parte o tutte le sue funzioni all'interno del tessuto urbano? Quali sono state le motivazioni che hanno spinto a questa decisione?
- 15) Quale valore aggiunto porta la posizione geografica all'attività?
- 16) Come mai, fino a questo momento, la vostra azienda non ha ancora investito in tecnologie dell'Industria 4.0?
- 17) La recente crescita del vostro business è dovuta più a tecnologie produttive distintive oppure a peculiari competenze ed abilità legate alle risorse umane?
- 18) Investite nella formazione ed istruzione delle nuove generazioni? Se sì, come favorite il trasferimento di conoscenze e competenze all'interno dell'impresa?
- 19) La vostra crescita è dovuta in particolar modo ad un'offerta di prodotti unici e distintivi?
- 20) Il successo della vostra impresa è dovuto all'unicità del design del prodotto?

- 21) Se nella domanda precedente è stata sottolineata l'importanza della collaborazione con designers, quali sono le motivazioni che vi hanno spinto a tali collaborazioni? Com'è strutturato il contratto?
- 22) La vostra azienda prevede una mirata strategia di marketing e comunicazione?
- 23) La vostra azienda ha sviluppato una particolare strategia nell'area delle vendite?

Participants to the research

The companies participating to the research were in total twenty. In this box there is a brief presentation of each of them, while the next part will include all the interviews done for the research.

Leu Locati

This company operates in the leather market, producing bags, shoes and accessory since 1908. The company is located in the heart of Milan. The products place in the luxury market segment. They are sold both as direct retailer and as supplier of luxury fashion brand. *Leu Locati* produces both a permanent line as well as customized products.

Fosca Campagnoli

Fosca Campagnoli is an artisan that produces textile for interior design and tailored fashion. She works directly with the fabric creating new patchworks. She produces customized products for both categories. She started operating in 2003 and her workshop is located in Milan's suburbs. The production is sold both to end clients and occasionally to some retailers.

Vi.Mas di Virzi Pietro

This company deals with tapestry in both fabric and leather. It was founded in 1981. The production is mainly customized and include creation of new pieces (sofas, chairs, bed, tents, ...), as well as the renovation of old ones. The product place in a medium/high market segment, equally divided between private customers and supply of interior design or architect studios (including the home line of important fashion brands).

Gioiellerie Merzaghi

This artistic artisan locates in the heart of historical Milan centre and it is born 150 years ago. They produce handmade jewellery, majorly on clients' orders, as well as renovation of older jewels.

Pino Grasso Ricami

Artisanal activity in fashion industry. The company is composed by few seamstresses who embroider fabric for high fashion brands. The fabric is decorated according to fashion designers vision and needs for the collection, entirely by hand.

Sartoria F. Caraceni

This tailor born in 1967 in Milan and it manufactures men suits since then. The tailor offers a high-level service, placing in the luxury market.

Laboratorio Costanza Paravicini

This company born from the passion of its owner 30 years ago and it is currently family run. They produce decorated ceramic plates, both hand decorated and using silkscreen printing. The decorations' creation is up to the company with a very refined taste and they allocate in a high-level market segment.

Liuteria Carlo Chiesa

The artisan produces handmade lutes in its laboratory since 1990s. He also offers a repair and renovation services of older lutes and ancient ones. In its field, he allocates in a medium-high market segment.

Camiceria Siniscalchi

Currently called *Maison Siniscalchi*, they manufacture men undergarments and shirts. The products place in the luxury market segment.

Selleria Pariani

The company is very old and it was a pioneer in the beginning of its activity in creating handmade riding saddles. After some decades of crisis, it is currently renovating the business and gaining market position in the manufacturing of the same product. It places in a medium-high market segment.

Lorenzi Milano

The company originates from a cutlery born in Milan in 1929. After years of retailing activity, they closed and just recently reopened. Despite this, the production of the

company is the creation of objects and home accessories with natural material such as bamboo and many types of horns. They place in a niche luxury market segment for the particularity of their products.

Stivaleria Savoia

The historical workshop produces handmade menswear. After different ownerships, it is now part of the bigger brand *Marinella*. For this reason, its activity in terms of marketing and branding is tight to the headquarter decisions. They place in the luxury market segment.

Fornasetti

Fornasetti is an interior design company, which hand decorate and sells furniture and ceramic plates. They allocate in high-level market segment. They place both their showroom and production in Milan since the beginning of the past century.

Jannelli&Volpi

The company is born in 1961 in Milan and they produce wallpapers. Since their birth, they placed in luxury market segment creating a leading reputation for the brand. Currently, their production is in Milan Metropolitan region.

Manifattura Macchine Soffici

The company is a newly born start-up manufacturing firm which core product is a sound-absorbing decorative panel. The product id handmade in Milan, where the workshop and showroom currently is.

Bica Goodmorning Design

Bica is a startup that creates furnishing and personal accessories decorated thanks to laser cutting. It was founded in 2016 by two architects with previous experiences in design, home décor and event preparation. The company locates inside The FabLab, the fablab space of the Talent Garden.

Fera Libens

The company was born in 2015 in Milan and its activity is the design and sale of shoes produced in eco-sustainable materials, while the shoes have a very classic shape. The manufacturing stage is outsourced. The product places in a medium-low market segment.

Revo – mOOve

Revo Lab is a startup born in 2018 from a group of four people who were participating to an MBA program in *Bocconi University* in Milan. Their project is called *mOOve* and it is focused on creating an innovative and technological bike path within cities.

PCUP

PCUP is a startup company newly born in Milan that proposes an alternative to the classic hard plastic glasses used in big events. The glasses are made out of a resistant resin on which it is possible to print logos and place a chip in the glass to create data for the related app.

Domenico Orefice Studio

It is a small designer firm whose founder was born and studied in Milan, at the *Politecnico di Milano* university. He designs decorative pieces for interiors, like vases, carpets and bookshelves. Its designs are related to the tradition of Milan and they are created in partnership with Milanese artisans.

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